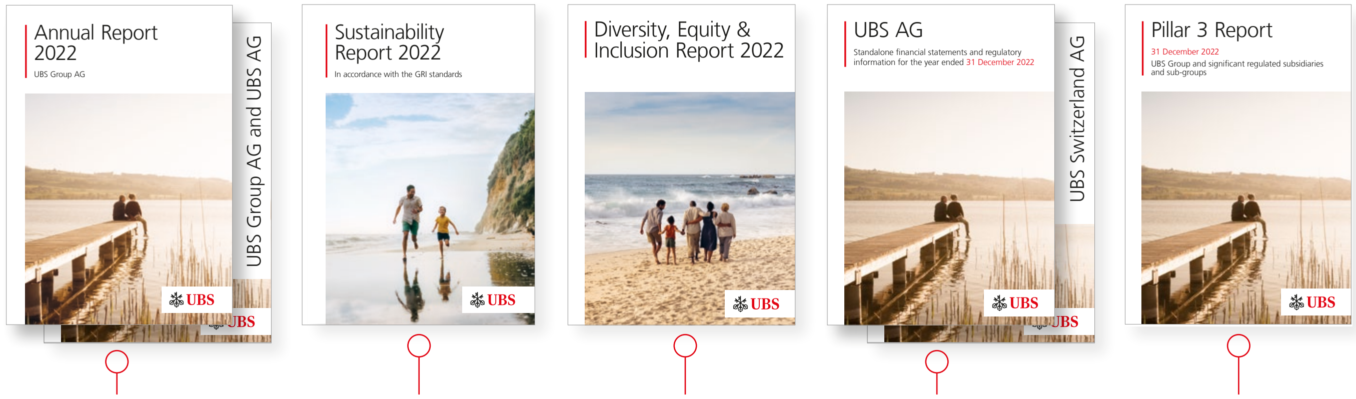
Annual Report 2022

UBS Group AG and UBS AG

Our external reporting approach

The scope and content of our external reports are determined by Swiss legal and regulatory requirements, accounting standards, relevant stock and debt listing rules, including regulations promulgated by the Swiss Financial Market Supervisory Authority (FINMA), the SIX Swiss Exchange, the US Securities and Exchange Commission (the SEC) and other regulatory requirements, as well as by our financial reporting policies.

At the center of our external reporting approach is the annual report of UBS Group AG, which consists of disclosures for UBS Group AG and its consolidated subsidiaries. We also provide a combined annual report for UBS Group AG and UBS AG consolidated, which additionally includes the consolidated financial statements of UBS AG, as well as supplemental disclosures required under SEC regulations, and is the basis for our SEC Form 20-F filing.



Annual Reports | Sustainability Report | DE&I Report | Standalone reports of significant regulated entities | Pillar 3 Report

Annual Reports

The 2022 Annual Reports (the UBS Group AG Annual Report 2022 and the combined UBS Group AG and UBS AG Annual Report 2022) include the consolidated financial statements of UBS Group AG and UBS AG, respectively, and provide comprehensive information about our firm, including our strategy, businesses, financial and operating performance, and other key information. The reports are presented in US dollars. The UBS Group AG Annual Report 2022 is partly translated into German, with the German translation available as of 10 March 2023 under "Annual reporting" at *ubs.com/investors*.

The consolidated financial statements of UBS Group AG and UBS AG have been prepared in accordance with International Financial Reporting Standards (IFRS). The sections within "Risk, capital, liquidity and funding, and balance sheet" include certain audited financial information, which forms part of the consolidated financial statements. The Annual Reports also include the statutory financial statements of UBS Group AG, which are the basis for our appropriation of profit and the proposed distribution of dividends, subject to shareholder approval at the Annual General Meeting.

Sustainability Report

The Sustainability Report, which will be available from 6 March 2023, provides disclosures on environmental, social and governance topics for UBS Group. Selected information on environmental, social and governance is also included in our Annual Report.

Standalone reports of significant regulated entities

We publish separate standalone reports for UBS AG and UBS Switzerland AG. Selected financial and regulatory key figures for these entities, as well as for UBS Europe SE and UBS Americas Holding LLC, are also included in our annual reports. The UBS Europe SE 2022 financial statements and complementary disclosures will be published on our website in the first half of 2023.

Pillar 3 Report

The Pillar 3 Report provides detailed quantitative and qualitative information about risk, capital, leverage and liquidity and funding for UBS Group and prudential key figures and regulatory information for UBS AG standalone, UBS Switzerland AG standalone, UBS Europe SE consolidated and UBS Americas Holding LLC consolidated.

Diversity, Equity and Inclusion Report

The first global Diversity, Equity and Inclusion (DE&I) Report, which will be available in the second quarter of 2023, details our DE&I priority areas of focus, our strategic goals and our approach to achieving them at UBS.

A firm driven by purpose

We have to constantly adapt, innovate, create and simplify to bring the best to our clients. But one thing never changes. Our purpose. Our purpose guides us, challenges us, excites us. It tells our clients, investors and communities who we are and what we stand for.

Reimagining
It is about proactively finding ways to fundamentally change how the world looks at finance and investing.

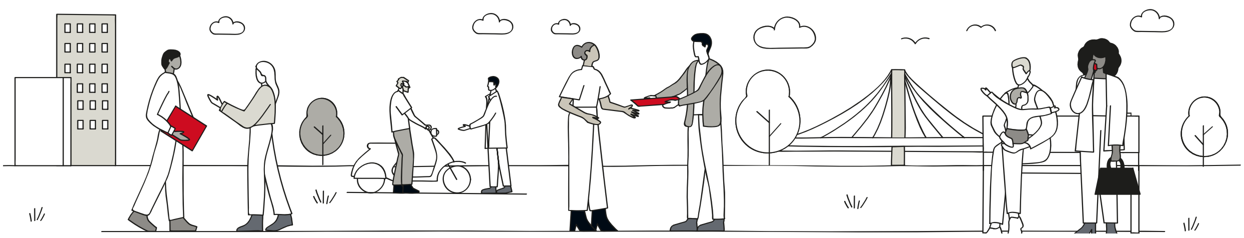
The power of investing
We know finance has a powerful influence on the world. We believe it is something we can leverage as a positive force as stewards of capital for our clients and, together with them, for society and for our planet.

Reimagining the power of investing. Connecting people for a better world.

Connecting people
It is about more than just us. It is about convening a global ecosystem that connects people and businesses to ideas, partners and opportunities, so they can achieve more together.

For a better world
It is about contributing, in both the short term and long term, to a more prosperous economy, a healthier environment and a fairer society.

What our purpose means for our stakeholders



For clients, both existing and potential, it means that our focus is clear. They know who we are. They know what we stand for. They know what is important to us beyond traditional financing. And they know our promise: to deliver products and services that are personalized, relevant, on-time and seamless.

For investors, it means there is clarity behind our decisions. All initiatives are aligned with our purpose and executed with discipline.

For employees, it means that everyone – from those who advise clients, to those who research investments, to those who manage technology platforms – knows why we do what we do, and how they can contribute to our purpose and use it to drive decision-making.

For society, it means that our role is broader than finance. We act responsibly and are committed to our communities, to sustainability and to supporting the world in tackling its biggest challenges.

ubs.com/purpose

Our approach to long-term value creation

As of or for the year ended 31 December 2022

What is put into the equation
Input

Financial capital
- **14.2%** common equity tier 1 (CET1) capital ratio
- **4.42%** CET1 leverage ratio
- **5.7%** going concern leverage ratio
- **USD 105.3bn** total loss-absorbing capacity
- **USD 45.5bn** CET1 capital

Relationships and intellectual capital
- **160 years'** experience in banking
- Presence in major financial centers worldwide
- Around **USD 4bn** spent on technology in 2022
- Automation, simplification and digitalization of processes (a scalable operating model)
- Dedicated research, differentiated insight and content offerings, and bespoke solutions

Human capital
- **74,022** employees (72,597 FTE) across 48 countries and 150 nationalities
- **12,693** new hires in 2022 (**>1,900** in junior talent programs)
- **59% men and 41% women**
- A high-performing workforce driven to create positive impact for their colleagues, clients and communities
- A collaborative culture and inclusive work environment
- Training and career development to help ensure employees are ready for a more agile future

Social and natural capital
- Committed to net zero across our business by 2050
- **288** employees (FTE) globally work in the field of sustainability and impact
- UBS Social Impact and Philanthropy offering that makes it possible for clients to engage in impactful philanthropy via the UBS Optimus Foundation network and our donor-advised funds
- Sustainability and climate risk standards governing client and vendor relationships worldwide
- ISO 14001-certified environmental management system

What we do
Business activities

Purpose

Reimagining the power of investing.
Connecting people for a better world.

Client promise

Personalized
Relevant
On-time
Seamless

Vision

Convene THE global ecosystem for investing where thought leadership is impactful, people and ideas are connected, and opportunities are brought to life.

Strategic imperatives

Clients, Connections, Contributors
Focus
Technology
Simplification & Efficiency
Culture

What we offer

Wealth and asset management services, along with personal, corporate and investment banking capabilities

The results we deliver
Output

How our stakeholders benefit
Outcome

The impact we create
Impact

Investors

Output
- **USD 7.6bn** net profit attributable to shareholders
- **USD 2.25** diluted earnings per share
- **17.0%** return on CET1 capital
- **USD 3,957bn** invested assets
- **72.1%** cost / income ratio

Outcome
- **USD 7.3bn** total capital to be returned to shareholders for the 2022 financial year, amounting to a 95% payout ratio of our net profit attributable to shareholders
- **USD 0.55** proposed dividend per share for the 2022 financial year
- **USD 5.6bn** of our shares were bought back in 2022
- We intend to buy back more than **USD 5bn** of shares by the end of 2023

Impact
- Increased value for our investors through attractive risk-adjusted returns and sustainable performance, targeting cost- and capital-efficient growth

Clients

Output
- Simple and scalable processes and interactions through digital tools and platforms, such as UBS Neo, key4 and wealth management platforms
- An investment ecosystem with around **USD 4.0trn** in invested assets, bringing thought leadership, products and investable solutions to individuals and businesses around the world
- Partnership for a seamless client service accompanying clients all through their lives
- Established procedures and policies to handle, process and incorporate feedback and any potential complaints
- Providing high-quality execution, market access, bespoke financing, global capital markets, private markets, and portfolio solutions, delivered as one firm and with selected external partners

Outcome
- Long-term relationships built on mutual trust and integrity
- Access to tailored financial advice, solutions and services from around the globe; striving for attractive and risk-adjusted investment performance
- Improved satisfaction through the offering of personalized products and services, combined with convenient access and customer journeys
- Services accessible across various channels: traditionally through our branches and client advisor network, well complemented by our constantly evolving remote and digital channels

Impact
- An outstanding value proposition for our clients: understanding their evolving needs and expectations, focusing on convenience and personalization, serving their best interests, and being well positioned to capture growth in global wealth pools
- Securing a better future: we do this by providing funds to help finance the economic transition toward a more sustainable tomorrow
- Bridging between generations: as an organization in constant evolution, we stay relevant by adapting to the emerging needs of future generations, striving and working toward being their trusted advisor of choice

Employees

Output
- Numerous business and employer awards that highlight our expertise and innovative solutions
- Fair and equitable pay, confirmed by EQUAL-SALARY Foundation certifications in all major locations
- An engaged and committed workforce, as evidenced by regular feedback and survey scores
- Women hold **27.8%** of Director and above roles
- Ethnic minorities hold **20.4%** of Director and above roles in the US and **23.0%** in the UK
- **More than 1,327,000** learning activities build skills and digital and agile capabilities

Outcome
- Wide-ranging talent management processes mean employees can build skills, capabilities and satisfying careers
- Employee flexibility, including hybrid work options, promotes engagement, increased productivity and commitment
- Agile@UBS transforming how we work and increase our speed in finding solutions for clients
- Health and well-being initiatives foster resilience and ensure we maintain a cohesive culture
- Wide recognition as an employer of choice
- Commitments to fair pay and people management ensure employees have equal opportunities to achieve success

Impact
- An inclusive culture, where diversity in gender, race, ethnicity and other factors is valued and appreciated
- Employees are sought-after talent as a result of our multi-faceted approach to talent development and learning
- Employees worldwide benefit from working for a high-quality, responsible employer
- A workplace that offers flexibility, career growth and holistic support for employees' health and well-being

Society and environment

Output
- **USD 268bn** in sustainability focus and impact investments (6.8% of total invested assets)
- **USD 10.1bn** private clients' money in SDG-related impact investments
- **USD 76m** donated to local programs by UBS, including affiliated foundations
- **177,000 hours** invested by UBS staff in community projects
- **USD 274m** donations raised by the UBS Optimus Foundation network in 2022
- **99%** of electricity sourced from renewable energy

Outcome
- **7.5%** exposure to carbon-related sectors on our banking balance sheet
- **13%** total reduction of our greenhouse gas footprint (scope 1 and 2 emissions) compared with 2021
- **370,916** young people and adults across the regions in which we operate benefited from our strategic community investments
- Committed **USD 150m** in grants from the UBS Optimus Foundation network
- **5.9m** people received support thanks to the UBS Optimus Foundation network

Impact
- Impact of our net-zero commitment
- Setting standards across the industry, challenging ourselves to raise the bar and inspiring others to join
- Contributing as a taxpayer and an employer
- Within Switzerland, our size, scale and reputation contribute to economic stability and reliability
- Supporting the transition to a low-carbon world
- Helping clients and employees to maximize their philanthropic impact

Contents

Dear shareholders,

In 2022, the world was impacted by Russia's invasion of Ukraine, which led to a humanitarian crisis and wide-ranging sanctions. The war contributed to higher commodity prices, adding to inflation, which reached multi-decade highs in most major economies. This prompted central banks to tighten monetary policy at a pace not seen since the 1980s.

As a consequence, equity and bond markets fell in tandem. Global equities delivered a total negative return of 18.4%, and global GDP growth decelerated to 3.1% from 6.4% in 2021.

Our 2022 financial performance

Our globally diversified business, with strong positions across Switzerland, Asia Pacific, EMEA and the US, allowed us to deliver value for both our clients and you, our shareholders, in this challenging environment. Our outstanding client franchises are underpinned by a balance sheet for all seasons, a strong risk culture and an intense focus on costs. This enabled us to deliver good results in 2022 and achieve our Group financial targets for the full year, with a net profit of USD 7.6bn, a return on CET1 capital of 17.0% and a cost / income ratio of 72.1%. We also maintained a strong capital position, ending the year with a CET1 capital ratio of 14.2% and a CET1 leverage ratio of 4.42%, both significantly above our guidance.

Throughout 2022, our clients turned to us for stability and advice. We helped them reposition their portfolios and take advantage of longer-term opportunities. This resulted in USD 60bn of net new fee-generating assets in 2022. Net new money from our asset management clients reached USD 25bn for the year. And we saw continued interest in our separately managed account (SMA) offering in the US and in alternatives, contributing to our strong momentum.

Leveraging our position as Switzerland's leading universal bank

In our home market of Switzerland, we benefited from the stability of the economy and strengthened our position as the country's #1 universal bank. In 2022, we expanded our offering, with a focus on real estate, sustainability and pension solutions. Additionally, for our corporate clients, we launched a one-stop marketplace for partner products and services. All this helped us deliver above-market growth. And we plan to continue to do so. We will further invest in our strategic technology initiatives and support our clients' transition to mobile banking, where we have seen a 10 percentage point increase in active mobile clients. At the same time, we remain disciplined on expenses.

After the initial launch of UBS key4 in Switzerland, we continued to expand our digital product range. Increasingly, clients want to invest and manage their money more independently, preferably using their smartphones. With UBS key4 smart investing, clients can now do everything themselves – from opening an account to buying and selling selected funds – easily, intuitively and all online. Our focus on enhancing user experience has resulted in excellent client feedback and interest in engaging with our digital product range.

Building on our scale in the Americas

Regionally, more than half of our invested assets in wealth management come from clients in the US, which is the largest wealth pool globally. In 2022, we remained focused on delivering our entire firm to our core wealth, global family and institutional wealth clients by leveraging our investment banking and asset management capabilities as well as our thought leadership.

We will add to our scale and efficiencies by continuing to develop tailored solutions for global family and institutional wealth clients, expanding our banking capabilities with the long-term goal of becoming our clients' primary bank, recruiting highly productive advisors, and increasing the efficiency and effectiveness of our advisors, processes and controls.

Advisor recruitment is an important component of our organic growth strategy in the US. We have over 20% of Barron's Top 100 Private Wealth Management teams and we continued to recruit high-quality advisors in 2022 to support our industry-leading advisor productivity. By improving our use of digitalization, data and analytics, we are enhancing our financial advisors' ability to spend more time with clients, and offering a more personalized, relevant, on-time and seamless client experience. While we continue to simplify processes and invest in infrastructure and controls, we are also taking strategic and tactical actions on costs to strengthen profitability.

Capturing growth opportunities in Asia Pacific

Asia Pacific is the fastest-growing wealth market, and our long-term commitment to this region is a cornerstone of our strategy. UBS is by far the largest wealth manager in the region, and we are #1 in equity capital markets for non-domestic banks. In 2022, we delivered the best mergers and acquisitions year on record and were recently named both the Best Investment Bank in Asia and Australia by FinanceAsia and the Best Equity House in Asia and Australia by IFR. This gives us confidence in our ability to grow further. Our diversified business streams and multi-shoring capabilities enable us to mitigate short-term geopolitical and macroeconomic headwinds and focus on longer-term opportunities.

The easing of COVID-19 restrictions in China has led to a more positive outlook for 2023, and we are well positioned to support clients both onshore and offshore in China and the rest of Asia Pacific when client activity levels increase. Our launch of WE.UBS in October 2022 marked the first digital-led wealth management platform by a global wealth manager in China. Here, our goal is to be the provider of choice for digital-first wealth advisory for our targeted clients. And in Southeast Asia, we are expanding our global family and institutional wealth business to better serve family offices, entrepreneurs and Asian technology firms.

Driving focused growth in EMEA

In EMEA, we made further progress on improving profitability and driving focused growth. In 2022, we completed the sale of our domestic wealth management business in Spain, following the sale of our domestic Austrian business in 2021. We are continuing to pursue growth opportunities across Europe and the Middle East, especially by providing holistic coverage for entrepreneurs. In the Investment Bank, our Global Markets business had its best year on record, and we outperformed the fee pool in Global Banking.

Making technology a differentiator

We made further progress in leveraging technology as a differentiator, through simplification, automation and user-experience improvements. We removed around 39,000 legacy technology components and decommissioned over 600 applications in an effort to modernize our technology estate and enhance our cybersecurity position. As part of our approximately USD 1.1bn cumulative gross cost savings aspiration, we expect our technology strategy to help us achieve USD 200m in gross cost savings for 2023, which we intend to reinvest.

We are also supporting the development of new financial market infrastructure and are exploring new ideas to create better solutions for our clients. For example, digital assets and distributed ledger technology have the potential to radically transform our industry, and we expect the market for digital assets to continue to grow and evolve. In 2022, we launched and issued the world’s first digital bond that is publicly traded and settled on both blockchain-based and traditional exchanges. Investors can buy this bond regardless of whether they have blockchain infrastructure, removing a hurdle in the adoption of the new and disruptive technology that can make issuing bonds faster and more efficient.

Investing in talent and new ways of working

In 2022, we focused on hiring talent with the right capabilities and agile mindsets. And our adoption of flexible ways of working has made us an even more attractive employer. As of year-end, around 18,500 employees across the firm are working in agile teams, which is helping us deliver faster, better and in a more connected way.

We are also making progress toward our aspiration of increasing female and ethnic minority representation. Five of the twelve members of our Group Executive Board, and four of the twelve members of our Board of Directors, are female. Women held 28% of Director and above roles globally as of the end of 2022, while ethnic minority employees held 20% of Director and above roles in the US and 23% in the UK.

We are committed to ongoing education of our workforce. We invested USD 78m in training in 2022, and our permanent employees completed an average of two training days each. We are also investing in the next generation. We welcomed more than 1,900 graduates, trainees, apprentices and interns to our firm through our junior talent programs worldwide. We also run multi-year apprenticeship programs in Switzerland, Australia and the UK, along with summer internship programs in numerous locations globally. In 2022, for the 14th consecutive year, we were recognized among the top 50 of the World’s Most Attractive Employers by employer-branding expert Universum.

Colm Kelleher
Chairman of the Board of Directors

Ralph Hamers
Group Chief Executive Officer

A leader in sustainability

The transition to net zero will be one of the most consequential trends in the coming years. Technological advances and the need for new infrastructure and new products in carbon markets and agriculture are just some examples of the opportunities ahead. Blended finance vehicles that leverage philanthropic capital bring public–private partnerships to the fore. We have made good progress on the execution of our sustainability strategy, as outlined in our Sustainability Report 2022.

Our progress is also reflected in feedback from our stakeholders. At our 2022 Annual General Meeting (AGM), our shareholders supported our climate roadmap, including our net-zero targets. And we have made progress toward those targets across many areas of the firm, from our lending business to supply chains to our own operations. At the upcoming 2023 AGM, we will ask you to express your view on our 2022 non-financial reporting in an advisory vote. This is set out in our Sustainability Report 2022, which describes our sustainability strategy, ambitions, governance and achievements.

A number of key sustainability ratings have reconfirmed our leading position. We were again included in the Dow Jones Sustainability Index and the CDP Climate A list. We maintained our MSCI ESG rating of AA, and saw an improvement in ESG risk rating by Sustainalytics, which now considers our firm as "low risk."

Our commitment to society and communities

UBS is committed to giving back to the communities where we live and work through long-standing partnerships and community-based engagement of our employees. We focus on education and skill development, which is where our resources can have the most impact. In 2022, 34% of our global workforce engaged in volunteering, and 45% of the 177,000 volunteer hours were skills-based.

In 2022, our UBS Optimus Foundation network raised USD 274m in donations, including UBS matching contributions, and committed USD 150m in grants. Donations and grants committed increased by 70% and 39%, respectively.

As of year-end 2022, the Ukraine Relief Fund had disbursed over half of the more than USD 50m committed by clients, employees, UBS and our strategic partner XTX Markets for relief and recovery efforts. The fund is supporting more than 25 organizations and their local partners in Ukraine and the neighboring countries of Poland, Moldova and Romania.

Our commitment to capital returns, today and in the future

We remain committed to delivering attractive capital returns and creating long-term sustainable value for our shareholders. For the 2022 financial year, the Board of Directors is proposing a dividend to UBS Group AG shareholders of USD 0.55 per share, an increase of 10% year over year. Having also repurchased USD 5.6bn of shares in 2022, we are returning USD 7.3bn of capital to our shareholders for the financial year.

Looking ahead, we will remain focused on the disciplined execution of our strategy to create value for our shareholders. We entered 2023 from a position of strength. We remain committed to a progressive dividend and expect to buy back more than USD 5bn of shares in 2023.

Thank you for your ongoing support. We look forward to your feedback and to welcoming you in person to this year's AGM, which will take place on 5 April in Basel, Switzerland.

Yours sincerely,

Colm Kelleher	Ralph Hamers
Chairman of the Board of Directors	Group Chief Executive Officer

Corporate information

UBS Group AG is incorporated and domiciled in Switzerland and operates under Art. 620ff. of the Swiss Code of Obligations as an Aktiengesellschaft, a corporation limited by shares. Its registered office is at Bahnhofstrasse 45, CH-8001 Zurich, Switzerland, telephone +41-44-234 11 11, and its corporate identification number is CHE-395.345.924. UBS Group AG was incorporated on 10 June 2014 and was established in 2014 as the holding company of the UBS Group. UBS Group AG shares are listed on the SIX Swiss Exchange and on the New York Stock Exchange (ISIN: CH0244767585; CUSIP: H42097107). UBS Group AG owns 100% of the outstanding shares in UBS AG.

UBS AG is incorporated and domiciled in Switzerland and operates under Art. 620ff. of the Swiss Code of Obligations as an Aktiengesellschaft, a corporation limited by shares. The addresses and telephone numbers of the two registered offices of UBS AG are: Bahnhofstrasse 45, CH-8001 Zurich, Switzerland, telephone +41-44-234 11 11; and Aeschenvorstadt 1, CH-4051 Basel, Switzerland, telephone +41-61-288 50 50. The corporate identification number is CHE-101.329.561. UBS AG is a bank. The company was formed on 29 June 1998, when Union Bank of Switzerland (founded in 1862) and Swiss Bank Corporation (founded in 1872) merged to form UBS AG.

Contacts

Switchboards
For all general inquiries
ubs.com/contact

Zurich +41-44-234 1111
London +44-207-567 8000
New York +1-212-821 3000
Hong Kong SAR +852-2971 8888
Singapore +65-6495 8000

Investor Relations
UBS's Investor Relations team manages relationships with institutional investors, research analysts and credit rating agencies.

ubs.com/investors

Zurich +41-44-234 4100
New York +1-212-882 5734

Media Relations
UBS's Media Relations team manages relationships with global media and journalists.

ubs.com/media

Zurich +41-44-234 8500
mediarelations@ubs.com

London +44-20-7567 4714
ubs-media-relations@ubs.com

New York +1-212-882 5858
mediarelations@ubs.com

Hong Kong SAR +852-2971 8200
sh-mediarelations-ap@ubs.com

Office of the Group Company Secretary
The Group Company Secretary handles inquiries directed to the Chairman or to other members of the Board of Directors.

UBS Group AG, Office of the
Group Company Secretary
P.O. Box, CH-8098 Zurich, Switzerland

sh-company-secretary@ubs.com

Zurich +41-44-235 6652

Shareholder Services
UBS's Shareholder Services team, a unit of the Group Company Secretary's office, manages relationships with shareholders and the registration of UBS Group AG registered shares.

UBS Group AG, Shareholder Services
P.O. Box, CH-8098 Zurich, Switzerland

sh-shareholder-services@ubs.com

Zurich +41-44-235 6652

US Transfer Agent
For global registered share-related inquiries in the US.

Computershare Trust Company NA
P.O. Box 505000
Louisville, KY 40233-5000, USA

Shareholder online inquiries:
www-us.computershare.com/investor/contact

Shareholder website:
computershare.com/investor

Calls from the US
+1-866-305-9566
Calls from outside the US
+1-781-575-2623
TDD for hearing impaired
+1-800-231-5469
TDD for foreign shareholders
+1-201-680-6610

Corporate calendar UBS Group AG

Publication of the Sustainability Report 2022:	Monday, 6 March 2023
Annual General Meeting 2023:	Wednesday, 5 April 2023
Publication of the first quarter 2023 report:	Tuesday, 25 April 2023
Publication of the second quarter 2023 report:	Tuesday, 25 July 2023
Publication of the third quarter 2023 report:	Tuesday, 24 October 2023

Corporate calendar UBS AG

Publication of the first quarter 2023 report:	Thursday, 27 April 2023
Publication of the second quarter 2023 report:	Thursday, 27 July 2023

Additional publication dates of quarterly and annual reports will be made available as part of the corporate calendar of UBS AG at ubs.com/investors.

Imprint

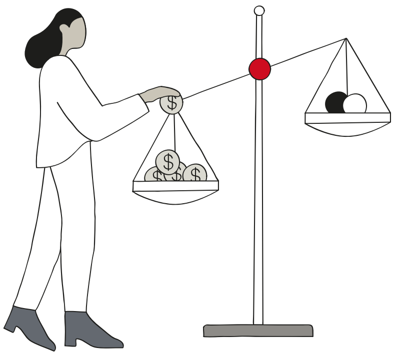
Publisher: UBS Group AG, Zurich, Switzerland | ubs.com

Language: English

Highlights of the 2022 financial year

We delivered good full-year results in a difficult macroeconomic and geopolitical environment.

Group results



USD bn

7.6

Net profit attributable to shareholders

(2021: USD 7.5bn)

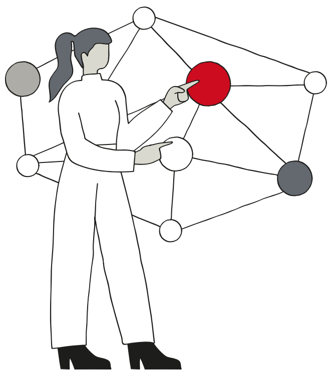
USD

2.25

Diluted earnings per share

(2021: USD 2.06)

Resources



USD bn

56.9

Equity attributable to shareholders

(2021: USD 60.7bn)

%

14.2

Common equity tier 1 capital ratio

(2021: 15.0%)

Profitability

%

17.0

Return on common equity tier 1 capital

(2021: 17.5%)

%

14.9

Return on tangible equity

(2021: 14.1%)

Our key figures

	As of or for the year ended		
USD m, except where indicated	31.12.22	31.12.21	31.12.20
Group results			
Total revenues	34,563	35,393	33,084
Credit loss expense / (release)	29	(148)	694
Operating expenses	24,930	26,058	24,235
Operating profit / (loss) before tax	9,604	9,484	8,155
Net profit / (loss) attributable to shareholders	7,630	7,457	6,557
Diluted earnings per share (USD)[1]	2.25	2.06	1.77
Profitability and growth[2]			
Return on equity (%)	13.3	12.6	11.3
Return on tangible equity (%)	14.9	14.1	12.8
Return on common equity tier 1 capital (%)	17.0	17.5	17.4
Return on leverage ratio denominator, gross (%)[3]	3.3	3.4	3.4
Cost / income ratio (%)	72.1	73.6	73.3
Effective tax rate (%)	20.2	21.1	19.4
Net profit growth (%)	2.3	13.7	52.3
Resources[2]			
Total assets	1,104,364	1,117,182	1,125,765
Equity attributable to shareholders	56,876	60,662	59,445
Common equity tier 1 capital[4]	45,457	45,281	39,890
Risk-weighted assets[4]	319,585	302,209	289,101
Common equity tier 1 capital ratio (%)[4]	14.2	15.0	13.8
Going concern capital ratio (%)[4]	18.2	20.0	19.4
Total loss-absorbing capacity ratio (%)[4]	33.0	34.7	35.2
Leverage ratio denominator[3,4]	1,028,461	1,068,862	1,037,150
Common equity tier 1 leverage ratio (%)[3,4]	4.42	4.24	3.85
Liquidity coverage ratio (%)[5]	163.7	155.5	152.1
Net stable funding ratio (%)[6]	119.8	118.5	119.2
Other			
Invested assets (USD bn)[7]	3,957	4,596	4,187
Personnel (full-time equivalents)	72,597	71,385	71,551
Market capitalization[8]	57,848	61,230	50,013
Total book value per share (USD)[8]	18.30	17.84	16.74
Tangible book value per share (USD)[8]	16.28	15.97	14.91

1 Refer to "Share information and earnings per share" in the "Consolidated financial statements" section of this report for more information. 2 Refer to the "Targets, aspirations and capital guidance" section of this report for more information about our performance targets. 3 Leverage ratio denominators and leverage ratios for year 2020 do not reflect the effects of the temporary exemption that applied from 25 March 2020 until 1 January 2021 and was granted by FINMA in connection with COVID-19. Refer to the "Regulatory and legal developments" section of our Annual Report 2020 for more information. 4 Based on the Swiss systemically relevant bank framework as of 1 January 2020. Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information. 5 The disclosed ratios represent averages for the fourth quarter of each year presented, which are calculated based on an average of 63 data points in the fourth quarter of 2022, 66 data points in the fourth quarter of 2021 and 63 data points in the fourth quarter of 2020. Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information. 6 The final Swiss net stable funding ratio (NSFR) regulation became effective on 1 July 2021. Prior to this date, the NSFR was based on estimated pro forma reporting. Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information. 7 Consists of invested assets for Global Wealth Management, Asset Management and Personal & Corporate Banking. Refer to "Note 31 Invested assets and net new money" in the "Consolidated financial statements" section of this report for more information. 8 Refer to "UBS shares" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information.

Alternative performance measures

An alternative performance measure (an APM) is a financial measure of historical or future financial performance, financial position or cash flows other than a financial measure defined or specified in the applicable recognized accounting standards or in other applicable regulations. We report a number of APMs in the discussion of the financial and operating performance of the Group, our business divisions and our Group Functions. We use APMs to provide a more complete picture of our operating performance and to reflect management's view of the fundamental drivers of our business results. A definition of each APM, the method used to calculate it and the information content are presented under "Alternative performance measures" in the appendix to this report. Our APMs may qualify as non-GAAP measures as defined by US Securities and Exchange Commission (SEC) regulations.

Terms used in this report, unless the context requires otherwise

"UBS," "UBS Group," "UBS Group AG consolidated," "Group," "the Group," "we," "us" and "our"	UBS Group AG and its consolidated subsidiaries
"UBS AG consolidated"	UBS AG and its consolidated subsidiaries
"UBS Group AG" and "UBS Group AG standalone"	UBS Group AG on a standalone basis
"UBS AG" and "UBS AG standalone"	UBS AG on a standalone basis
"UBS Switzerland AG" and "UBS Switzerland AG standalone"	UBS Switzerland AG on a standalone basis
"UBS Europe SE consolidated"	UBS Europe SE and its consolidated subsidiaries
"UBS Americas Holding LLC" and "UBS Americas Holding LLC consolidated"	UBS Americas Holding LLC and its consolidated subsidiaries
"1m"	One million, i.e., 1,000,000
"1bn"	One billion, i.e., 1,000,000,000
"1trn"	One trillion, i.e., 1,000,000,000,000

In this report, unless the context requires otherwise, references to any gender shall apply to all genders.

Our Board of Directors

1 **Colm Kelleher**
Chairman of the Board of Directors / Chairperson of the Corporate Culture and Responsibility Committee / Chairperson of the Governance and Nominating Committee

2 **Mark Hughes**
Chairperson of the Risk Committee / member of the Corporate Culture and Responsibility Committee

3 **Jeanette Wong**
Member of the Audit Committee / member of the Compensation Committee

4 **Jeremy Anderson**
Senior Independent Director / Chairperson of the Audit Committee / member of the Governance and Nominating Committee

5 **Fred Hu**
Member of the Governance and Nominating Committee

6 **Lukas Gähwiler**
Vice Chairman of the Board of Directors

7 **Claudia Böckstiegel**
Member of the Corporate Culture and Responsibility Committee

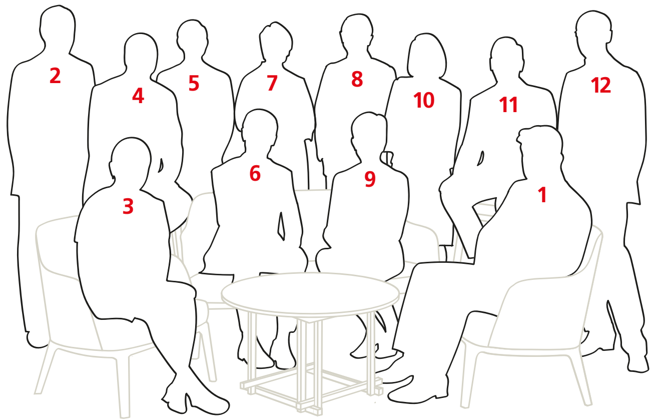
8 **Patrick Firmenich**
Member of the Audit Committee / member of the Corporate Culture and Responsibility Committee

9 **Nathalie Rachou**
Member of the Governance and Nominating Committee / member of the Risk Committee

10 **Julie G. Richardson**
Chairperson of the Compensation Committee / member of the Risk Committee

11 **William C. Dudley**
Member of the Corporate Culture and Responsibility Committee / member of the Risk Committee

12 **Dieter Wemmer**
Member of the Audit Committee / member of the Compensation Committee



The Board of Directors (the BoD) of UBS Group AG, under the leadership of the Chairman, consists of between 6 and 12 members as per our Articles of Association. The BoD decides on the strategy of the Group upon recommendation by the Group Chief Executive Officer (the Group CEO) and is responsible for the overall direction, supervision and control of the Group and its management, as well as for supervising compliance with applicable laws, rules and regulations. The BoD exercises oversight over UBS Group AG and its subsidiaries and is responsible for establishing a clear Group governance framework to provide effective steering and supervision of the Group, taking into account the material risks to which UBS Group AG and its subsidiaries are exposed. The BoD has ultimate responsibility for the success of the Group and for delivering sustainable shareholder value within a framework of prudent and effective controls, approves all financial statements for issue, and appoints and removes all Group Executive Board (GEB) members.

Our Group Executive Board

1 **Ralph Hamers**
Group Chief Executive Officer

2 **Sabine Keller-Busse**
President Personal & Corporate Banking and President UBS Switzerland

3 **Naureen Hassan**
President UBS Americas

4 **Edmund Koh**
President UBS Asia Pacific

5 **Barbara Levi**
Group General Counsel

6 **Markus Ronner**
Group Chief Compliance and Governance Officer

7 **Robert Karofsky**
President Investment Bank

8 **Sarah Youngwood**
Group Chief Financial Officer

9 **Suni Harford**
President Asset Management

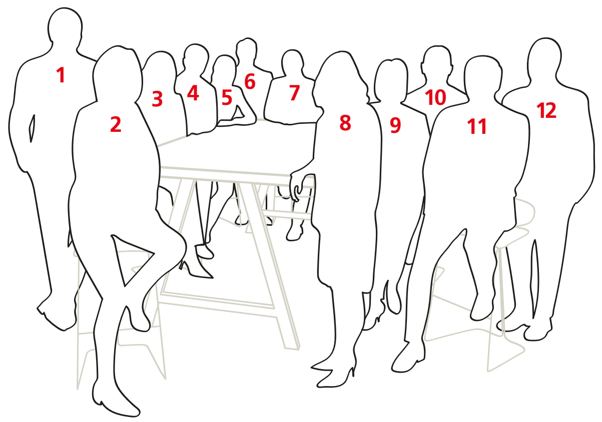
10 **Mike Dargan**
Group Chief Digital and Information Officer

11 **Iqbal Khan**
President Global Wealth Management and President UBS Europe, Middle East and Africa

12 **Christian Bluhm**
Group Chief Risk Officer

UBS Group AG operates under a strict dual-board structure, as mandated by Swiss banking law, and therefore the BoD delegates the management of the business to the GEB. Under the leadership of the Group CEO, the GEB was composed of 12 members as of 31 December 2022 and has executive management responsibility for the steering of the Group and its business. It develops the strategies of the Group, the business divisions and Group Functions, and implements the BoD-approved strategies.

› **Refer to "Board of Directors" and "Group Executive Board" in the "Corporate governance" section of this report or to *ubs.com/bod* and *ubs.com/geb* for the full biographies of our BoD and GEB members**



Our evolution

Since our origins in the mid-19th century, many financial institutions have become part of the history of our firm and helped shape our development. 1998 was a major turning point: two of the three largest Swiss banks, Union Bank of Switzerland and Swiss Bank Corporation (SBC), merged to form UBS. Both banks were well established and successful in their own right. Union Bank of Switzerland had grown organically to become the largest Swiss bank. In contrast, SBC had grown mainly through strategic partnerships and acquisitions, including S.G. Warburg in 1995.

In 2000, we acquired PaineWebber, a US brokerage and asset management firm with roots going back to 1879, establishing us as a significant player in the US. For nearly 60 years, we have been building our strong presence in the Asia Pacific region, where we are by far the largest wealth manager,[1] with asset management and investment banking capabilities.

After incurring significant losses in the 2008 financial crisis, we sought to return to our roots, emphasizing a client-centric model that requires less risk-taking and capital. In 2011, we started a strategic transformation of our business model to focus on our traditional businesses: wealth management globally, and personal and corporate banking in Switzerland.

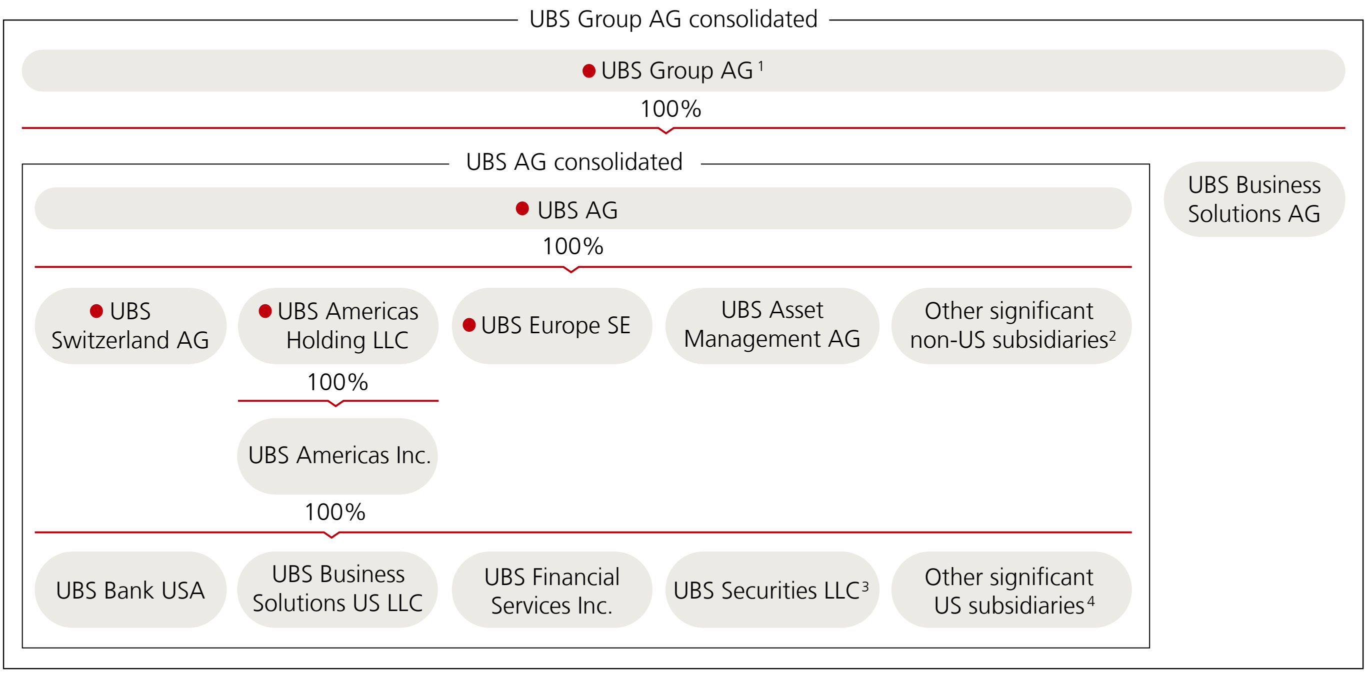
Today, we are a leading and truly global wealth manager,[2] a leading Swiss personal and corporate bank, a global, large-scale and diversified asset manager, and a focused investment bank.

In 2014, we began adapting our legal entity structure in response to too-big-to-fail requirements and other regulatory initiatives. First, we established UBS Group AG as the ultimate parent holding company for the Group. In 2015, we transferred personal and corporate banking and Swiss-booked wealth management businesses from UBS AG to the newly established UBS Switzerland AG. That same year, we set up UBS Business Solutions AG as the Group's service company. In 2016, UBS Americas Holding LLC became the intermediate holding company for our US subsidiaries and our wealth management subsidiaries across Europe were merged into UBS Europe SE, our Germany-headquartered European subsidiary. In 2019, we merged UBS Limited, our UK-headquartered subsidiary, into UBS Europe SE.

The chart below gives an overview of our principal legal entities and our legal entity structure.

› **Refer to *ubs.com/history* for more information**
› **Refer to the "Risk factors" and "Regulatory and legal developments" sections of this report for more information**

The legal structure of the UBS Group



● Holding company and significant regulated subsidiaries and sub-groups subject to disclosure in UBS Group AG annual and quarterly reporting.

1 Refer to "Note 28 Interests in subsidiaries and other entities" in the "Consolidated financial statements" section of this report for more information about UBS's subsidiaries. **2** Other significant non-US subsidiaries are generally held either directly by UBS AG or indirectly through UBS Switzerland AG or UBS Asset Management AG. **3** Of which 99% directly held by UBS Americas Inc. and 1% held by UBS Americas Holding LLC. **4** Other significant US subsidiaries are generally held either directly by UBS Americas Inc. or indirectly through UBS Financial Services Inc.

1 Private banking assets under management excluding China onshore in 2021, according to Asian Private Banker.
2 Statements of market position for Global Wealth Management are based on UBS's internal estimates and publicly available information about competitors' invested assets.

Our strategy, business model and environment

Management report

Our strategy

UBS – who we are

UBS is a leading and truly global wealth manager with focused asset management and investment banking capabilities, and the leading universal bank in Switzerland. We enable people, institutions and corporations to achieve their goals by providing financial advice and solutions. We have a capital-light, cash-generative and well-diversified business model, a strong culture, a balance sheet for all seasons, and a respected brand with over 160 years of history.

At UBS, we are driven by a common purpose: **Reimagining the power of investing. Connecting people for a better world.** This focus provides direction on the way forward and helps us build on our strengths.

We are focused on driving long-term growth while maintaining risk and cost discipline

Our objective is to generate value for our shareholders and clients by driving long-term growth. To accomplish this, we are building on our scale, content and solutions, while remaining disciplined on risk and costs. This will give us the capacity to invest strategically and will enable us to deliver against our financial targets and commercial aspirations, which are outlined in the "Targets, aspirations and capital guidance" section of this report.

Moreover, we are aiming to maximize our and our clients' impact to create long-term sustainable value. We also have a responsibility toward our communities and employees. We have outlined selected environmental, social and governance (ESG) aspirations, which should support our financial and commercial targets.

Our business model helps us to achieve our growth ambitions

In early 2022, we set out our strategy, which we have been executing on since. Our growth plans aim to increase the value of our network of clients, connections and contributors, in which UBS's scale, global reach and capabilities play a central role.

Our invested assets of USD 4.0trn are regionally diversified across the globe, making us a highly attractive partner to many sophisticated and specialized contributors. This enables us to give our clients access to a broader, more relevant and customizable range of solutions, which, together with our thought leadership and capabilities, position us well to become their partner of choice. Our plans are a reflection of the outlook on long-term demographic and social trends affecting wealth distribution, product demand and client experience. As we see clients' needs changing, we also expect continued growth in alternatives and ESG products.

Clients are at the center of everything we do

Helping clients to achieve their financial goals is the essence of what we do. We aim to differentiate our service by delivering a client experience that is personalized, relevant, on-time and seamless. This is our promise to clients.

With evolving client needs, we are adapting by making our wealth coverage more needs-based, digital and effective. In wealth management, our focus remains on our core wealth, global family and institutional wealth clients, while expanding our coverage of entrepreneurs, women and the next generation of wealthy individuals. We are launching and scaling digitally customizable services, enhancing personally advised wealth with digital support, and expanding our custom offerings for global family and institutional wealth to cater for the different needs of our clients.

› **Refer to "Clients" in the "How we create value for our stakeholders" section of this report for more information**

We have a global, diversified business model

Regionally, more than half of our wealth management clients' invested assets are in the US, which is the largest wealth pool globally. Here, we are focused on improving scale and profitability by deepening our relationships with core clients and by building out Global Wealth Management's digital-led capabilities and banking platform.

In Asia Pacific, which is the fastest-growing wealth market, we are by far the largest wealth manager[1] and are building on that scale to drive growth. We are further developing our onshore business in China and working to offer our capabilities in a more cohesive way to our clients in Southeast Asia.

In EMEA, we are focused on improving profitability and driving focused growth, by streamlining our domestic footprint and providing holistic coverage for entrepreneurs.

Finally, in Switzerland, we have a highly integrated business and aim to expand our lead as the #1 universal bank. We are driving the digital transformation, improving the client experience, and focusing on capturing selected growth opportunities.

Our growth plans are underpinned by our asset management and investment banking capabilities

Our asset management business provides clients with a broad offering and exclusive access to premium customized services, while our investment banking capabilities support our growth plans across the client franchise with unique insights, execution and risk management. Close collaboration between our businesses also adds value for clients, including in private markets, alternatives and ESG products, and we are actively looking for additional such opportunities.

Sustainability drives our ambitions and informs our purpose

We partner with our clients to help them mobilize their capital toward a more sustainable world. At UBS, we want to meet clients' demands for a credible sustainable offering. We want to be the financial provider of choice for clients that wish to mobilize capital toward the achievement of the United Nations Sustainable Development Goals and the orderly transition to a low-carbon economy. In Switzerland, as the leading universal bank, we are helping finance the country's transition to net zero.

We are investing in our technology

The trusted and personal relationship with our clients across our businesses is evolving. Today, our clients expect us to provide our services more seamlessly across the firm in a personalized, relevant and timely fashion, with increasing demand for services that are digital first, anytime and anywhere. This presents an opportunity for us to fully embrace technology and make it a differentiator for our firm. To support our ambitions, we have established our technology strategy based on five key pillars: (i) Agile@UBS, a unified approach to working in an agile way across the firm to become faster and more adaptable; (ii) engineering excellence, as, in order to succeed in making technology a differentiator for our firm, we must attract and retain the best engineers, which is only possible by creating and fostering an engineering and digital culture of excellence; (iii) quarterly business reviews and digital roadmaps that help us to manage our technology investment portfolio in a more strategic and flexible way; (iv) automation, which increases efficiency and effectiveness; and (v) modern technology, which accelerates digitalization and efficiency.

We are becoming simpler and more efficient

In order to continuously increase efficiency and our capacity to invest, we are working to become simpler, by further streamlining and standardizing our functions, processes, entities and general ways of doing business, including our Agile@UBS approach, to ultimately improve the client experience.

1 Private banking assets under management excluding China onshore in 2021, according to Asian Private Banker.

Our focus on technology

The world is faster, more digital and more data-driven than ever before, with clients increasingly demanding services that are digital first, anytime, anywhere, and underpinned by first-class technology. Through our technology strategy and five key pillars (Agile@UBS; engineering excellence; quarterly business reviews and digital roadmaps; automation; and modern technology), we aim to make technology a differentiator for our clients and employees, helping to deliver on our client promise. We are championing the adoption of a single, consistent, agile setup across the firm, driving transformational and sustainable approaches to our real estate and technology, building an engineering culture to be proud of, and fostering firm-wide operational resilience.

In 2022, our unified agile approach helped us drive greater business value, enhance the client experience and be more responsive and adaptable, with faster delivery of client digital solutions. Overall, approximately 18,500 employees transitioned to working in new Agile@UBS ways, and we continued our efforts to create and foster an engineering culture of excellence, in order to attract and retain the best engineers. Currently, approximately two-thirds of our global technology team within the Chief Digital and Information Office (CDIO) are engineers that are instrumental to responding to our clients' digital needs, while the remaining part of the technology team manages critical operational functions at UBS.

› **Refer to "Clients" in the "How we create value for our stakeholders" section of this report for more information about client digital solutions**

› **Refer to "Employees" in the "How we create value for our stakeholders" section of this report for more information about agile ways of working**

We are using the quarterly business reviews and digital roadmaps to help us manage our technology investment portfolio in a more strategic and flexible way. During 2022, we aligned 70% of our technology investments to agile teams that deliver incremental and continuous value to our clients. In addition, we also moved from multiple to one single UBS DevCloud toolchain and we are increasingly adopting an industry-standard set of metrics (DORA) to measure the efficiency of our software development process.

We believe the bank of the future will leverage a lean, modern technology estate and Cloud-based applications to provide clients with flexible, best-in-class service. As such, in 2022, we removed approximately 39,000 legacy technology components and decommissioned more than 600 applications, as a step to modernize our technology estate and enhance our cybersecurity position. We also announced the landmark expansion of our partnership with Microsoft, to accelerate our Cloud footprint over the next five years. As of 31 December 2022, 65% of our applications were on the public Cloud (i.e., servers not on UBS's premises) or on our private Cloud (i.e., servers on UBS's premises).

Targets, aspirations and capital guidance

We aim to create sustainable value through the cycle, which is reflected by our financial targets. In addition, we have outlined selected commercial aspirations, which support these targets.

Our capital guidance remains unchanged. We intend to operate with a common equity tier 1 (CET1) capital ratio of around 13% and a CET1 leverage ratio of greater than 3.7%. The Investment Bank is expected to represent up to one-third of Group risk-weighted assets and leverage ratio denominator.

Performance against targets, aspirations and capital guidance is taken into account when determining variable compensation.

The table below shows our targets, guidance and aspirations, based on reported results. Our aspirations on environmental, social and governance (ESG) are set forth in "Our focus on sustainability and climate" in the "How we create value for our stakeholders" section of this report.

› **Refer to "Society" and "Our focus on sustainability and climate" in the "How we create value for our stakeholders" section and to the "Corporate governance" section of this report for more information about ESG**

› **Refer to the "Compensation" section of this report for more information about variable compensation**

› **Refer to "Alternative performance measures" in the appendix to this report for definitions of and further information about our performance measures**

Financial Targets		Capital Guidance		Commercial Selected aspirations	
15–18%	Return on CET1 capital	~13%	CET1 capital ratio	>6trn	Invested assets, in USD *across GWM, AM and P&C*
70–73%	Cost / income ratio	>3.7%	CET1 leverage ratio	>5%	NNFGA[1] growth *GWM, over the cycle*
10–15%	GWM PBT[2] growth *over the cycle*	>5bn	Share repurchases, 2023 financial year, in USD		

1 Net new fee-generating asset. 2 Profit before tax.

Our businesses

Delivering one ecosystem

We operate through four business divisions: Global Wealth Management, Personal & Corporate Banking, Asset Management and the Investment Bank. Our global reach and the breadth of our expertise are the major assets setting us apart from our competitors.

We see joint efforts as key to our growth, both within and between business divisions. We combine our strengths to provide our clients with better, innovative solutions and differentiated offerings, for example, our Global Family & Institutional Wealth (GFIW) offering with integrated global coverage. Initiatives such as the *Group Franchise Awards* encourage employees to look for ways to connect across teams and offer the whole firm to our clients.

How we deliver the whole firm to our clients – examples

Global Family & Institutional Wealth	GFIW is a cross-divisional offering that leverages capabilities from the Investment Bank and client coverage from Global Wealth Management to address the execution, investment, risk management, financing and banking needs of family offices and their corporate entities, as well as entrepreneurs. Drawing on UBS's client ecosystem, we aim to connect clients with like-minded peers and recognized experts to exchange ideas and bring opportunities to life for a return and impact. Client coverage is managed via regional cross-functional teams (GFIW market pods).
Wealth management platforms	In our major booking centers outside the Americas, we use the Wealth Management Platform, which is shared between Global Wealth Management and Personal & Corporate Banking in Switzerland. In the Americas, we continue to build out our Wealth Management Americas digital capabilities. All our platforms can be navigated intuitively and support strong advisory capabilities across channels, helping our clients to benefit from a broader universe of products and services, simplified onboarding, and a better banking experience.
Separately managed accounts (SMAs)	We offer Global Wealth Management clients access to selected separately managed account strategies in the Americas with no additional management fees, including an extensive range of strategies managed by Asset Management. This enables our advisors to focus on delivering the best ideas, solutions and capabilities to our clients, regardless of where they originate.
Shifts and referrals	To best serve our clients according to their needs, and to foster growth, we operate a holistic collaboration framework within our universal bank delivery model in Switzerland. We initiate client shifts from Personal Banking to Global Wealth Management as their needs become more complex. Examples of referrals include corporate and institutional clients being introduced to Asset Management for mandate solutions or to the Investment Bank for capital market transactions, thus providing access to our global expertise, and entrepreneurs being introduced to Global Wealth Management, ensuring holistic coverage of their corporate and private needs.
Global Lending Unit	The Global Lending Unit delivers lending capabilities to clients of both the Investment Bank and Global Wealth Management. The unit provides product expertise to clients through collaboration with Investment Bank bankers and Global Wealth Management advisors. It is organized with a regional focus by grouping existing regional resources and competencies to best serve respective markets and clients.
Unified Global Markets	We continue to develop the cross-divisional strategic partnership between Global Wealth Management and the Investment Bank, focused on providing differentiated content that helps our clients identify the best trading opportunities, uncover new evidence, and generate fresh insights to meet their investment needs. Through our integrated approach, we provide structured, scalable investment products, asset and liability management solutions, financing alternatives and other value-added bespoke solutions that deliver a quality client experience and outcome by catering to specific coverage needs.

Global Wealth Management

As a leading and truly global wealth manager,[1] we help our clients pursue what matters most to them. More than 20,000 employees around the world help to manage our clients' finances from locations in the Americas, Europe, the Middle East and Asia. Clients look to us to provide them with the tailored advice, expertise and solutions that they need, to protect and grow their wealth, today, tomorrow and for generations to come. The size and diversification of our global franchise, our bespoke cross-divisional solutions, and our premium brand and reputation set us apart.

We have strong positions in the largest and the fastest-growing regions – respectively, the US and Asia Pacific – and clearly defined regional priorities: scaling our franchise in the US; capturing growth in Asia Pacific; increasing profitability in EMEA; and increasing market share in Switzerland, our home market. Our focus remains on our core client base of ultra high and high net worth individuals through trusted relationships with our advisors, while expanding our coverage of entrepreneurs, women and the next generation of wealthy individuals. We are also strengthening our capabilities to serve our clients with the most sophisticated needs through our Global Family & Institutional Wealth (GFIW) offering.

As our clients' needs are changing, we are adapting our capabilities and coverage. We are therefore launching and scaling digitally customizable services, enhancing our personally advised wealth management offering with digital support and expanding our custom offerings for global family and institutional wealth to cater for the different needs of our clients.

Organizational changes

On 3 October 2022, Iqbal Khan became sole President Global Wealth Management. Since joining UBS in 2019, Mr. Khan had served as Co-President Global Wealth Management with Tom Naratil, who stepped down after nearly four decades with UBS.

In April 2022, to better cater to our clients with institutional-like needs that require a more bespoke offering, we created GFIW, a cross-divisional offering that leverages capabilities from the Investment Bank and client coverage from Global Wealth Management.

In August 2022, UBS and Wealthfront mutually agreed to terminate the merger agreement first announced in January 2022, under which Wealthfront was to be acquired by UBS Americas Inc. The two organizations will continue to explore ways to work together, and, as part of that process, UBS purchased a USD 69.7m note convertible into Wealthfront shares.

In the second half of 2022, we completed the sales of our wholly owned subsidiary UBS Swiss Financial Advisers AG, our domestic wealth management business in Spain and our US alternative investments administration business.

How we do business

Our distinctive approach to wealth management is designed to help our clients pursue what matters most to them by offering advice, expertise and solutions and delivering on our client promise to be personalized, relevant, on-time and seamless.

Our Chief Investment Office (the CIO) produces the *UBS House View*, identifying investment opportunities designed to protect and increase our clients' wealth over the longer term, directing the investment advice for and management of more than USD 1trn in fee-generating assets globally. Close integration between idea generation and product development enables us to deliver to clients CIO-aligned investment solutions, such as the investment modules in *UBS Manage Advanced [My Way]*. In Asia Pacific and Switzerland, the *Direct Investment Insights* function on our online banking platform enables clients to trade directly based on CIO insights via their smartphones and other digital devices.

› **Refer to "Clients" in the "How we create value for our stakeholders" section and to "Our focus on technology" in the "Our strategy" section of this report for more information about innovation and digitalization**

Regional Chief Investment Officers leverage direct client feedback and insights from Client Analytics to deepen our understanding of clients' needs. Our product specialists deliver investment solutions, including our flagship investment mandates, as well as innovative long-term themes and sustainable investment offerings.

In addition to our investment products, we offer extensive mortgage, securities-based and structured lending expertise. We provide clients with advice on wealth planning, sustainability and impact investing, and corporate and banking services, while specialist teams also advise on art and collecting, family strategy and governance, philanthropy, next generation, and wealth transition.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about sustainability matters**

Clients
Listening to our clients' views, considering their risk profiles and their investment goals

Ideas in a UBS House View context
Well-researched investment advice, thought leadership

Design of solutions
Solutions aligned to the UBS House View: discretionary and advisory mandates, alternatives, structured solutions, etc.

Communications
Transmission to clients and advisors

Implementation & Execution
Positioning of solutions by advisors, seamless execution. Tailored advice to the clients

The investment advice for and management of more than USD 1trn in fee-generating assets globally, underpinned by robust risk management

Note: CIO develops a clear, concise and consistent investment assessment – the UBS House View, consisting of strategic asset allocation and tactical asset allocation.

Our private markets business gives clients access to investments in private equity funds, hedge funds and real estate. Furthermore, we have increased our offering of institutional-grade products, such as our *Co-Investment STRIPE* (strategic investments in private equity) opportunities, a feeder structure to enable clients to invest in closed-ended institutional private market funds. We have made it easier for private clients to access investment products and services suited to their individual preferences, e.g., by expanding access to our *Advice SI* and separately managed accounts (SMA) solutions in the US, and new targeted sustainability focus and impact offerings. Our Global Wealth Management clients have invested more than USD 20bn in discretionary mandates aligned to our sustainable investing strategic asset allocation. Additionally, we continue to broaden our offering across asset classes and themes, collaborating with external partners, such as Robeco Asset Management, Ambienta, Rockefeller Asset Management, Rethink Impact and Bridge Investment Group, to provide clients with access to differentiated sustainable- and impact-investing opportunities.

We are investing in our operating platforms and tools to better serve our clients' needs, improve their experience and enhance overall advisor productivity. As of 31 December 2022, more than 80% of invested assets outside the Americas were booked on our *Wealth Management Platform*. In the US, we are enhancing the Wealth Management Americas workstation for advisors, by delivering new functionalities, as well as driving simplification and improving our banking capabilities.

› **Refer to "Clients" in the "How we create value for our stakeholders" section and to "Our focus on technology" in the "Our strategy" section of this report for more information about innovation and digitalization**

Our digital transformation aims to make us faster and more responsive and our services more convenient for our clients. Our clients benefit from a more seamless service across platforms and devices, and our advisors and the teams that support them are aspiring to deliver best-in-class content and solutions with increasing speed, relevance and personalization. We are developing new service models through which we seek to serve our clients according to their individual needs and preferences, based on scalable digital platforms, and underpinned by our client promise: providing service that is personalized, relevant, on-time and seamless.

For clients with complex financial needs, our GFIW offering addresses the execution, investment, risk management, financing and banking needs of family offices and their corporate entities, as well as entrepreneurs. In our core personally advised service model, we focus on expanding our coverage of entrepreneurs, women and next-generation clients, alternative investments as a differentiated source of returns, and increasing digital convenience for all our clients. We are making continuous improvements to our digital platforms, and have rolled out innovative new solutions, such as *Circle One* (in 2022), a global ecosystem that connects clients to experts, thought leaders and actionable investment ideas, and *UBS My Way* (in 2021), a next-generation portfolio management solution that enables clients to tailor their investments to their individual preferences. We have introduced the *UBS My Way* solution in Germany, Italy and Japan, and plan to also offer it in other markets. We have launched *WE.UBS*, the first digital-only offering launched by a global wealth manager in China, and we are planning the launch of further regional solutions.

We closely collaborate across business divisions to deliver UBS's best capabilities to our clients. Joint efforts with the Investment Bank, Asset Management and selected external partners enable us to offer clients broad access to financing, global capital markets and bespoke portfolio solutions. For example, we launched an SMA initiative in 2020 with Asset Management in the US and continued to expand our SMA offering throughout 2022. The initiative generated USD 21bn in net new money inflows in 2022, bringing total invested assets from this initiative to USD 125bn.

› **Refer to "Delivering one ecosystem" in this section for examples of the joint efforts of the business divisions**

Our operations and our competitors

We operate a global business tailored to both regional and local clients, combining scale with an ability to provide local offerings to best serve our clients' needs. We are regularly recognized as a leading wealth manager by independent industry awards on a global, regional and country level.

The US is our largest market, accounting for around half of our invested assets, and we are recognized as the industry-leading firm in terms of overall client satisfaction.[2] In Asia Pacific, we are by far the largest wealth manager[3] and have received numerous independent industry awards for several years in a row,[4] recognizing our long-term commitment to the region. In our home market of Switzerland, we are the leading wealth manager[5] and continue to extend our leading market position with above-market growth and investments into digitalizing our core business. In Western Europe, we have a strong footprint, which we further optimized with the sales of our domestic businesses in Spain (in 2022) and Austria (in 2021), and have been recognized as the best bank for wealth management several years in a row.[6] In Latin America, we continue to expand our strategic partnership with Banco do Brasil, helping us remain the best bank for wealth management in the region.[7] We were able to deliver a strong performance in Central & Eastern Europe, Greece and Israel despite substantial geopolitical challenges in parts of the region, supported by our GFIW offering. In the Middle East and Africa, we are building out our offering with further investment in local offices, such as Dubai and Qatar, emphasizing our commitment to the region and building on our local strength.[8]

Our competitors fall into two categories: competitors with a strong position in the Americas but more limited global footprints, such as Morgan Stanley and JPMorgan Chase; and competitors with similar international footprints but with a smaller presence than UBS in the US, such as Credit Suisse and Julius Baer. We have strong positions in the largest and the fastest-growing regions (respectively, the US and Asia Pacific). The size and diversification of our global franchise, bespoke cross-divisional solutions, and premium brand and reputation set us apart and would be difficult for our competitors to replicate.

2022 selected highlights

As of or for the year ended 31 December 2022

USD 60bn of net new fee-generating assets

Best Private Bank for alternatives[1] globally (PWM / The Banker 2022)

USD 5.3bn of net interest income, 24% growth

USD 2.8trn in invested assets

More than 80% of our clients are very or extremely satisfied with UBS (UBS client survey 2022)

Invested assets in alternatives[1] reached **USD 150bn**, with USD 14bn in net new commitments

1 Hedge fund businesses and private markets.

1 Statements of market position for Global Wealth Management are based on UBS's internal estimates and publicly available information about competitors' invested assets.
2 Highest in client satisfaction with full-service brokerage firms in the J.D. Power 2022 survey.
3 Private banking assets under management excluding China onshore in 2021, according to Asian Private Banker.
4 Awards won in two or more consecutive years include the Private Banker International Global Wealth Awards, PWM / The Banker Private Banking Awards, Euromoney Private Banking Awards, Asiamoney Asia Private Banking Awards, WealthBriefingAsia Awards and Asian Private Banker Awards.
5 Recognized as "Best Private Bank Switzerland" by Euromoney Private Banking Awards in 2022.
6 Recognized as "Western Europe's Best Bank for Wealth Management" by Euromoney Awards for Excellence in 2020, 2021 and 2022.
7 Recognized as "Latin America's Best Bank for Wealth Management" by Euromoney Awards for Excellence in 2022.
8 Recognized as "Middle East's Best Bank for Wealth Management" by Euromoney Awards for Excellence in 2020, 2021 and 2022.

Personal & Corporate Banking

As the #1 Swiss universal bank, we provide a comprehensive range of financial products and services to private, corporate and institutional clients. Personal & Corporate Banking is the core of our universal bank in Switzerland. As a market leader across all our business areas, we strive to grow at a rate faster than the Swiss market. We aim to be digital at the core by enabling our clients to satisfy most of their banking needs via our apps, while offering a user experience that is personalized, relevant, on-time and seamless.

How we do business

Our personal banking clients have access to a comprehensive, life-cycle-based offering. This includes a broad range of basic banking products, from payments to deposits, cards and convenient online and mobile banking, as well as lending (predominantly mortgages), investments and retirement planning services. In 2022, we were once again named the "Best Bank in Switzerland" by Euromoney. Our offering is complemented by our *UBS KeyClub* reward program, which provides clients in Switzerland with exclusive and attractive offers, some of which are offered in collaboration with our external partners. We also work closely with Global Wealth Management to provide our clients with access to leading wealth management services.

Our corporate and institutional clients benefit from our financing and investment solutions, in particular access to equity and debt capital markets, syndicated and structured credit, private placements, leasing, and traditional financing. We offer transaction banking solutions for payment and cash management services, trade and export finance, and global custody solutions for institutional clients.

We work closely with the Investment Bank to offer capital market and foreign exchange products, hedging strategies, and trading capabilities, as well as corporate finance advice. In cooperation with Asset Management, we also provide fund and portfolio management solutions.

› **Refer to "Delivering one ecosystem" in this section for examples of the joint efforts of the business divisions**

While continuing to focus on the needs of our clients, we need to better connect business and technology and develop new solutions in an agile way through fully empowered teams. The agile transformation is essential for every part of our organization. In 2022, we accelerated *Agile@UBS*, a unified approach to agile ways of working, which now includes approximately 5,000 colleagues based in Switzerland.

› **Refer to "Clients" and "Employees" in the "How we create value for our stakeholders" section and to "Our focus on technology" in the "Our strategy" section of this report for more information about innovation and digitalization**

In 2022, we continued to support our clients in the transition to a low-carbon economy. For example, we introduced two new products: *UBS Mortgage Energy* for our private clients and *UBS Loan Energy* for income-producing real estate, both providing preferential conditions for energy-efficient buildings. Furthermore, we entered into two partnerships with Swiss start-ups to remove greenhouse gas emissions from the atmosphere.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about sustainability-related topics**

We collaborate with other companies to better satisfy our clients' diverse needs. For example, in 2022, we further expanded our strategic partnership with Baloise. We both increased our stakes in the digital homeowner platform *Houzy*, which offers prospective and existing homeowners advice about financing, insurance and other property planning and management matters, and *Brixel*, which provides our clients real estate sales advice and services.

Our operations and our competitors

We operate primarily in our Swiss home market. With our Personal Banking and Corporate & Institutional Clients business units, we are organized into 10 regions, covering distinct Swiss economic areas. We operate a multi-channel approach, and we are constantly developing our digital and remote channels.

In Personal Banking, our main competitors are Raiffeisen, the cantonal banks, Credit Suisse, PostFinance, and other regional and local Swiss banks; we also face competition from international neobanks and other national digital market participants. Areas of competition are basic banking services, mortgages, and foreign exchange, as well as investment mandates and funds.

In Corporate & Institutional Clients, the cantonal banks, Credit Suisse and globally active foreign banks are our main competitors. We compete in basic banking services, cash management, trade and export finance, asset servicing, investment advice for institutional clients, corporate finance and lending, and cash and securities transactions for banks. We also support the international business activities of our Swiss corporate clients through local hubs in New York, Frankfurt, Singapore and the Hong Kong SAR. No other Swiss bank offers its corporate clients local banking capabilities abroad.

As of or for the year ended 31 December 2022

~2.6 million clients[1] served by Personal Banking	Best Bank in Switzerland (Euromoney 2022)	>100,000 corporate and institutional clients[2]
194 branches in Switzerland	>90% of large Swiss corporations served	>30% of Swiss households served

1 "Clients" refers to the number of unique business relationships operated by Personal Banking. 2 "Clients" refers to the number of unique business relationships or legal entities operated by Corporate & Institutional Clients.

Asset Management

Asset Management is a global, large-scale and diversified asset manager, with USD 1.1trn in invested assets. We offer investment capabilities and styles across all major traditional and alternative asset classes, as well as advisory support to institutions, wholesale intermediaries and our Global Wealth Management clients.

Our strategy is focused on capitalizing on the areas where we have a leading position and differentiated capabilities – including sustainability, alternatives, indexed customization, and key markets in Asia Pacific – in order to drive further profitable growth.

Organizational changes

In April 2022, we completed the sale of our 49% shareholding in our Japanese real estate joint venture, Mitsubishi Corp.-UBS Realty Inc., to KKR & Co.

How we do business

We offer clients a wide range of investment products and services in different asset classes, in the form of segregated, pooled or advisory mandates, as well as registered investment funds in various jurisdictions. Our traditional and alternative capabilities include equities, fixed income, hedge funds (single- and multi-manager), real estate and private markets, and indexed and alternative beta strategies, including exchange-traded funds (ETFs), as well as sustainable- and impact-investing products and solutions.

Our Investment Solutions business draws on the breadth of our capabilities to offer: asset allocation and currency investment strategies across the risk–return spectrum; customized multi-asset solutions; and advisory and fiduciary services.

Sustainable and impact investing remains a key area, as clients increasingly seek solutions that combine their investment goals with sustainability objectives. We are continuing the expansion of our capabilities through: product and service innovation; dedicated research; integrating environmental, social and governance risk factors into our investment processes by leveraging our proprietary analytics; and active corporate engagement.

During 2022, our Real Estate & Private Markets business launched a number of new innovative strategies, including UK Life Sciences and Cold Storage, and again achieved strong results in the latest GRESB Assessments,[1] with 100% of our submitted strategies (representing 96% of Real Estate & Private Markets' direct pooled real estate and infrastructure strategies) achieving four- or five-star ratings.

We also continue to develop our award-winning[2] indexed businesses globally, including ETFs in Europe, Switzerland and Asia. To meet increasing client demand, we have focused on sustainable investing across our product range and provide customized solutions. Aligned with our purpose and strength in building partnerships, in 2022, we launched the UBS Global Equity Climate Transition Fund, in partnership with Aon, and the UBS Life Global Equity Sustainable Transition Fund, in collaboration with the Essex Pension Fund and Hymans Robertson. These funds provide investors with the ability to mitigate climate-related investment risks while also aiming to make a positive social impact aligned with specific United Nations Sustainable Development Goals.

Stewardship is a fundamental element of our sustainability strategy, and we are firmly committed to engaging with companies to support them on their transition journey. During 2022, we extended our Climate Engagement Program to include more industry sectors and built out our research to further extend the program to include natural capital. We also launched our new Social Engagement Program, with a focus on human and labor rights, diversity, equity and inclusion, and health, to enable us to provide clients with products that meet their criteria in these areas as well.

As a founding member of the Net Zero Asset Managers[3] initiative, we are working on the foundational pillars required to deliver on our net-zero interim target, committing to align 20% of total assets under management to achieve a 50% carbon emissions reduction by 2030. In parallel, we are continuing to work with our clients, standard setters and industry bodies to help develop the new methodologies, tools and data needed by investors to mitigate risks and capture opportunities.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about sustainability matters**

To support our growth, we are focused on disciplined execution of our operational excellence initiatives. This includes further automation, simplification, process optimization and offshoring or nearshoring of selected activities, complemented by continued enhancements to our platform and development of our analytics and data capabilities.

We have also continued our joint efforts with the other business divisions, enabling our teams to draw on the best ideas, solutions and capabilities from across the firm in order to deliver high-quality investment performance and experiences for our clients. For example, we launched a separately managed accounts (SMA) initiative in 2020 with Global Wealth Management in the US. We continued to expand our SMA offering throughout 2022, including the launch of new index SMA portfolios offering personalized tax management, and also a sustainable investing overlay enabling clients to select from six major themes, including climate change, pollution and governance. The initiative generated USD 21bn in net new money inflows in 2022, bringing total invested assets from this initiative to USD 125bn.

› **Refer to "Delivering one ecosystem" in this section for examples of the joint efforts of the business divisions**

Our operations and our competitors

Our business division is organized into five areas: Client Coverage; Investments; Real Estate & Private Markets; Products; and the COO area. We cover the main asset management markets globally, and have a local presence in 23 locations across four regions: the Americas; Asia Pacific; EMEA; and Switzerland. We have nine main hubs: Chicago; the Hong Kong SAR; London; New York; Shanghai; Singapore; Sydney; Tokyo; and Zurich.

Geographically, we are building on our extensive and long-standing presence in the Asia Pacific region, including China, where we continue to invest in our products and presence, both on- and off-shore.

In the rapidly evolving and attractive wholesale segment, we aim to further expand our market share through a combination of measures: a continued increase in the share of clients' business; expansion of our strategic partnerships with distributors; the building-out of our client service and product shelf offerings; and the launch of new white-labeling and portfolio implementation capabilities.

› **Refer to "Clients" in the "How we create value for our stakeholders" section and to "Our focus on technology" in the "Our strategy" section of this report for more information about innovation and digitalization**

Our main competitors are global firms with wide-ranging capabilities and distribution channels, such as AllianceBernstein, Allianz Asset Management, Amundi, BlackRock, Credit Suisse Asset Management, DWS, Franklin Templeton, Invesco, JPMorgan Asset Management, Morgan Stanley Investment Management, Schroders, SSGA Funds Management and T. Rowe Price, as well as firms with a specific market or asset-class focus.

2022 selected highlights

As of or for the year ended 31 December 2022

USD 1.1trn total invested assets	Passive Manager of the Year (Insurance Asset Management Awards, 2022)	USD 21bn net new money from the SMA[1] initiative
USD 25bn total net new money	USD 157bn assets invested in alternatives[2]	USD 178bn in sustainability focus and impact invested assets

1 Separately managed accounts. 2 Hedge fund businesses, real estate and private markets.

1 GRESB is an independent organization providing validated ESG performance data and peer benchmarks.
2 Passive Manager of the Year 2022, Insurance Asset Management Awards; ETF Provider of the Year, European Pensions Awards; UBS MSCI UK IMI SRI ETF, Winner: Ethical / Sustainable – Passive, AJ Bell FIT Awards; ETP Award 2022, Best Provider of Sustainable ETFs; and ranked fifth largest ETF provider in Europe as of December 2022 (source: *ETFBook.com*).
3 *netzeroassetmanagers.org*

Investment Bank

The Investment Bank provides services to institutional, corporate and wealth management clients, helping them raise capital, invest and manage risks, while targeting attractive and sustainable risk-adjusted returns for shareholders. Our traditional strengths are in equities, foreign exchange, research, advisory services and capital markets, complemented by a focused rates and credit platform. We use our data-driven research and technology capabilities to help clients adapt to evolving market structures and changes in regulatory, technological, economic and competitive landscapes.

Aiming to deliver market-leading solutions by using our intellectual capital and electronic platforms, we work closely with Global Wealth Management, Personal & Corporate Banking and Asset Management to bring the best of UBS's capabilities to our clients. We do so with a disciplined approach to balance sheet deployment and costs.

Our priority is providing high-quality execution and seamless client service, through an integrated, solutions-led approach, with disciplined growth in the capital-light advisory and execution businesses, while accelerating our digital transformation. In Global Banking, we position ourselves as trusted advisors via our client coverage and ability to provide access to the wider suite of UBS's capabilities.

Organizational changes

In January 2022, Global Research and the Strategic Insights teams, formerly part of Evidence Lab Innovations, were integrated into the Investment Bank, as Investment Bank Research. With this new setup, we intend to better align our research coverage with the needs of our clients, while continuing to provide research and analytical services across the firm.

In April 2022, we created Global Family & Institutional Wealth (GFIW), a cross-divisional offering that leverages capabilities from the Investment Bank and client coverage from Global Wealth Management to address the execution, investment, risk management, financing and banking needs of family offices and their corporate entities, as well as entrepreneurs.

How we do business

Our business division consists of two areas: Global Banking and Global Markets, which are supported by Investment Bank Research. Our global coverage model utilizes our international industry expertise and product capabilities to meet clients' emerging needs.

Our Global Banking business advises clients on strategic business opportunities, such as mergers, acquisitions and related strategic matters, and helps them raise capital, both on public and private markets, to fund their activities.

Our Global Markets business enables clients to buy, sell and finance securities on capital markets worldwide, and to manage their risks and liquidity. We distribute, trade, finance and clear cash equities and equity-linked products, as well as structuring, originating and distributing new equity and equity-linked issues. From origination and distribution to managing risk and providing liquidity in foreign exchange, rates, credit and precious metals, we help clients to realize their financial goals. We provide flexible, innovative and bespoke access to solutions, from market and insight tools to trading strategies and execution.

Our Investment Bank Research business continues to publish research based on primary data to concentrate on data-driven outcomes and offers clients differentiated content about major financial markets and securities around the globe, with analysts based in 22 countries and with coverage of more than 3,000 stocks in 49 different countries. The Strategic Insights team provides timely and relevant information and insights to help clients quickly make decisions regarding their most important questions.

We seek to develop new products and solutions consistent with our capital-efficient business model, typically related to new technologies or changing market standards.

› **Refer to "Clients" in the "How we create value for our stakeholders" section and to "Our focus on technology" in the "Our strategy" section of this report for more information about innovation and digitalization**

The Investment Bank is focused on meeting clients' needs, including those with respect to environmental, social and governance (ESG) considerations and sustainable finance, helping to reshape business models and investment opportunities and to develop sustainable finance products and solutions.

In Global Markets, we develop products and solutions designed to meet clients' specific and increasingly detailed ESG objectives, such as thematic portfolio and investment solutions. We have also developed products related to carbon, such as emissions futures, and we joined *Carbonplace* as a founding member. *Carbonplace* is a platform that seeks to build infrastructure to scale voluntary carbon markets, with the aim of enabling firms such as UBS to offer clients the ability to buy, sell, hold and retire voluntary carbon credits.

Following the formation of the Global ESG Advisory team within Global Banking in 2021, in 2022, we provided strategic advisory and capital-raising services by specifically recognizing the structural shift in investor preferences toward ESG investment opportunities. To do so, we built our capabilities to assess a firm's sustainability profile and to link such profiles to ESG investor demand. During 2022, we facilitated USD 48bn of green, social, sustainability and sustainability-linked (GSSS) bonds financing through 77 bond deals for our clients, including corporate clients, financial firms and sovereign issuers. UBS has a market-leading share of the Swiss franc GSSS bond market (Bloomberg, 2022), supporting domestic issuers and bringing international names to the Swiss market.

Our independent ESG research team collaborates with UBS sector analysts and *UBS Evidence Lab* primary research experts. The ESG research team works to identify touchpoints between markets, society and the environment, and to respond to ESG issues as they move onto investors' agenda. By December 2022, the ESG team had published more than 90 *ESG Sector Radar* reports, which assessed the impact of ESG factors at the sector level (up from about 30 in 2021).

In 2022, we launched our *ESG Company Radar* research reports (more than 30 published by December 2022), which assess the impact of ESG factors at company level, and we have seen a very positive client response to those reports. Other types of ESG content include thematic and cross-sectoral collaborations, *ESG Keys* (which covers sustainable investing topics), and an increasing number of regional perspectives from our expanded ESG team, which works out of our offices in London, New York, the Hong Kong SAR, Tokyo and Sydney.

As part of our efforts to enhance governance and oversight, the Sustainable Investment Review Group was launched in June 2022 with the responsibility for reviewing ESG products within Global Markets. The Investment Bank Sustainable Finance Guidelines were established in 2022 to set out minimum criteria for ESG products, which are to be applied to new products. In addition, as part of the Group's net-zero commitments, the Investment Bank has developed emission targets for 2030 for its lending business.

› **Refer to the "Environment" section of our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about the Investment Bank's targets for its lending business**

Our digital strategy harnesses technology to provide access to a wide range of sources of global liquidity and differentiated content. The Investment Bank strives to be the digital investment bank of the future, with innovation-led businesses driving efficiencies and solutions. We aim to develop new products and solutions consistent with our capital-efficient business model, which are most often related to new technologies or changing market standards.

In 2021, we announced the creation of a single *Digital Platforms* business area within the Investment Bank, utilizing digital competencies to benefit all products and maximizing the return on our technology spend in close partnership with our Chief Digital and Information Office. *Digital Platforms* combines product expertise with deep technical know-how, aiming to reduce the number of systems and increase automation, maximizing client impact, revenue and digital adoption. *Digital Platforms* was an early adopter of *Agile@UBS*, an evolution of the historically close collaboration with our Chief Digital and Information Office, creating long-lived teams that learn and continuously improve, which in turn attracts the best talent.

Our ambition is to have a simplified and modern technology landscape that is secure and stable, where we re-use more of everything and where the platforms work together to drive progress toward our overall strategic imperatives.

› **Refer to "Clients" in the "How we create value for our stakeholders" section and to "Our focus on technology" in the "Our strategy" section of this report for more information about innovation and digitalization**

Joint efforts between the Investment Bank and the other business divisions (for example, our work with Global Wealth Management on our new GFIW offering) and, externally, strategic partnerships (for example, UBS BB jointly with Banco do Brasil, focused on Latin America) continue to be key strategic priorities. Partnership with Global Wealth Management and Asset Management enables us to provide clients with broad access to financing, global capital markets and portfolio solutions. We expect these initiatives to continue to lead to growth by delivering global products to each region, leveraging our global connectivity across borders and sharing and strengthening our best client relationships.

› **Refer to "Delivering one ecosystem" in this section for examples of the joint efforts of the business divisions**

Our operations and our competitors

Our two business areas, Global Banking and Global Markets, are organized globally by product. Our business is regionally diversified, with a presence in more than 30 countries. We cover the main investment banking markets globally, and have major financial hubs across four regions: the Americas; Asia Pacific; EMEA; and Switzerland.

Our global reach gives attractive options for growth. In the Americas, the largest investment banking fee pool globally, we continue to focus on increasing market share in our core Global Banking and Global Markets businesses. In Asia Pacific, opportunities arise mainly from expected market internationalization and growth in China, where we plan to grow by strengthening our presence, both onshore and offshore. In EMEA, we plan to leverage our strong base and brand recognition even further.

Competing firms operate in many of our markets, but our strategy differentiates us, with our focus on leadership in the areas where we have chosen to compete and a business model that leverages talent and technology rather than balance sheet. Our main competitors are the major global investment banks (e.g., Morgan Stanley, Credit Suisse and Goldman Sachs) and corporate investment banks (e.g., Bank of America, Barclays, Citigroup, BNP Paribas, Deutsche Bank and JPMorgan Chase). We also compete with boutique investment banks and fintech firms in certain regions and products.

2022 selected highlights

As of or for the year ended 31 December 2022

15% return on attributed equity

The Best Investment Bank in Asia Pacific and Australia (FinanceAsia, 2022)

GFIW launched in April 2022

#1 among international banks in Asia Pacific equity capital markets[1]

Completed formation of our Global ESG Advisory team

USD 3.7bn of Derivatives & Solutions revenues, 7% growth

1 Dealogic, 2022.

Group Functions

Group Functions provides services to the Group, focusing on effectiveness, risk mitigation and efficiency. Group Functions also includes the Non-core and Legacy Portfolio unit.

How we are organized

Group Functions

Group Functions is made up of the following major areas: Group Services (which consists of Chief Digital and Information Office, Communications & Branding, Compliance, Finance, Group Sustainability and Impact, Human Resources, Group Legal, Regulatory & Governance, and Risk Control), Group Treasury and Non-core and Legacy Portfolio.

In recent years, we have aligned support functions and business divisions. The vast majority of such functions are fully aligned or shared among the business divisions, where they have full management responsibility. By keeping the activities of the businesses and support functions close, we improve efficiency and create a working environment built on accountability and collaboration.

Certain activities are retained centrally, where not directly related to the businesses, such as: Non-core and Legacy Portfolio; a small residual set of activities in Group Treasury; and certain other costs that are mainly related to deferred tax assets and costs relating to our legal entity transformation program.

Group Treasury

Group Treasury manages balance sheet structural risk (e.g., interest rate, structural foreign exchange and collateral risks) as well as the risks associated with our liquidity, capital and funding portfolios. Group Treasury serves all four business divisions, and its risk management is integrated into the Group risk governance framework.

Non-core and Legacy Portfolio

Non-core and Legacy Portfolio consists of residual trades from businesses exited by the Investment Bank, mainly in 2012. Positions are typically left to run to contractual maturity, although trades are terminated early where such action is economically prudent, and the portfolio continues to be actively hedged. The portfolio also includes positions relating to legal matters arising from businesses transferred to it at the time of its formation.

› **Refer to "Note 17 Provisions and contingent liabilities" in the "Consolidated financial statements" section of this report for more information about litigation, regulatory and similar matters**

Our environment

Market climate

Global economic developments in 2022[1]

2022 was a challenging year for the global economy and most markets. After rebounding in 2021 from the COVID-19 pandemic, economic momentum slowed in 2022. The Russia–Ukraine war contributed to higher commodity prices, adding to rising inflation, which reached multi-decade highs in most major economies. This led to the fastest pace of monetary tightening by many leading central banks since the 1980s.

Against this backdrop, global GDP growth decelerated to 3.3% in 2022, from 6.5% in 2021, with headwinds continuing to mount in 2023. US GDP growth slowed to 2.1% in 2022, from 5.9% in 2021, as the Federal Reserve raised interest rates. Reduced energy supplies from Russia and tighter monetary policy from the European Central Bank added to headwinds for the Eurozone economy, where growth was down to 3.5% in 2022, from 5.3% in 2021. Weakness in the Eurozone contributed to a slowdown in Switzerland. Swiss GDP growth was down to 2.0% in 2022, from 4.2% in 2021. UK GDP grew by 4.0% in 2022, down from 7.6% in 2021, with momentum undermined by higher inflation, interest rate increases by the Bank of England (the BoE) and weaker global demand.

China's economy grew by 3.0% in 2022, down from 8.4% in 2021, reflecting an economic drag from the government's zero-COVID policy, along with a downturn in the nation's real estate sector. Other leading Asian economies slowed less markedly, with GDP growth in India of 7.0% in 2022, down from 8.7% in 2021. South Korea's GDP grew by 2.6% in 2022, down from 4.1% in 2021.

Inflation remained elevated in 2022. Exceptionally strong demand for goods emerged as economies reopened, overwhelming supply, and creating inflation. Just as this pressure faded, the Russia–Ukraine war led to a rise in energy and food prices, further boosting inflation. High inflation affected many major economies, averaging 8.5% globally in 2022. US inflation reached a high in June 2022 of 9.1% year on year, having risen at the fastest pace since 1982. However, inflation remained relatively muted in China, at 3%, and Japan, at 1.1%, with neither country experiencing an exceptional post-pandemic surge in demand. Inflation in Switzerland was also more muted, at 2% for 2022, due to a less-pronounced profit margin expansion than elsewhere.

Equity and bond markets fell in tandem in 2022, impacted by the combination of high inflation, monetary tightening and slowing growth. In 2022, the MSCI USA index fell by 19.8% and the MSCI Eurozone, the MSCI Switzerland and the MSCI China indices fell by 12.5%, by 17.1% and by 20.7% respectively (in local currency terms). However, more defensive markets outperformed, such as the MSCI UK index, which increased by 7.1%. Globally, value stocks proved more resilient, with the MSCI World Value index down 6.5%, compared with a 29.2% decrease in the MSCI World Growth index.

Bond markets also experienced negative returns, amid headwinds from higher inflation and central bank tightening. The Bloomberg Global Aggregate Bond index decreased by 16.2% in 2022. The yield on 10-year US Treasuries ended the year at 3.9%, up from 1.5% at the end of 2021. The yield on the 10-year Swiss government bonds increased from –0.2% at the start of 2022 to 1.6% by year-end, and the yield on 10-year German Bunds increased to 2.6%, up from –0.2% at the end of 2021.

Economic and market outlook for 2023

We expect 2023 to be a year of inflections, as investors try to identify turning points for inflation, interest rates, economic growth and financial markets against a complex geopolitical backdrop.

We expect inflation to be lower at the end of 2023 than it was at the end of 2022, as tighter monetary policy slows demand and squeezes profit margins. In addition, a repeat of the 2022 commodity price surge is, in our view, unlikely. Although future economic data will be key, and recent data suggests the decline in inflation has been slower than forecast in some economies, we expect the Federal Reserve, the European Central Bank, the Swiss National Bank, and the BoE to conduct the final interest rate increases of this cycle in 2023.

We expect the impact of higher interest rates to weigh on economic growth and earnings. Economic growth should hit bottom later in the year, if, as we expect, financial conditions start to ease. For 2023 as a whole, we expect the US economy to grow by 0.8%, with the Eurozone expanding 0.8% and Switzerland 0.4%. We forecast a contraction of 0.4% in UK GDP, with inflation still high, given the prospect of tighter fiscal and monetary policy. The relaxation of China's COVID-19 restrictions means a rebound of the Chinese economy is likely over the course of 2023. We expect China's GDP to expand 4.9% in 2023.

Geopolitical events look likely to remain a concern for investors. The Russia–Ukraine war poses energy and security threats to Europe and fosters the risk of a broader war. US–China tensions are unlikely to recede, given Beijing's focus on self-sufficiency, the Biden administration's moves to restrict trade on security grounds, and the potential for further discord over Taiwan. In addition, we are cognizant of an elevated risk of political tensions within and across countries, as well as their impact on society and financial markets.

1 Comparative figures as of 28 February 2023.

Industry trends

Although our industry has been heavily affected by various regulatory developments over the past decade, technological transformation and changing client expectations are further emerging as key drivers of change today, increasingly affecting the competitive landscape, as well as our products, service models and operations. In parallel, our industry continues to be materially driven by changes in financial markets and macroeconomic and geopolitical conditions.

Digitalization

While the technological maturity of the financial services sector increased greatly throughout the COVID-19 pandemic, digitalization in our industry is still developing at a rapid pace. The world is faster, more digital and more data-driven than ever before, with clients increasingly demanding even more seamless, personalized digital products and services tailored to their needs. Following the COVID-19 pandemic, regional and demographic differences in the acceptance and use of digital technologies are narrowing, thus continuing a high rate of digital adoption across all client segments. As a result, we see a gradual shift from digitalizing and automating existing processes to digital-as-default solutions, while still allowing for human interaction, a component that continues to be an important competitive advantage.

Digital communication, with clients and employees alike, has established new remote ways of working, enabling financial services providers to attract an even wider array of talent than before. The digitalization of the financial services sector has led to a structural shift in the workforce: more and better engineers are required to keep banks at the forefront of technology, thus putting them into direct competition with technology companies beyond the borders of the financial sector.

Continuous investment in technology is driving automation and simplification of labor-intensive processes, improving banks' operational efficiency and freeing up resources to focus on client needs. Decision-making is becoming increasingly data-driven, with advanced analytics and artificial intelligence (AI) enabling banks to address client needs in an even more targeted manner. In a consistently connected, open, and location-independent financial services ecosystem, the focus lies on adopting open-source technology, including cloud-native and modular architecture, to drive innovation and open exchange.

An open-finance environment combined with a shift in business models from in-person to digital channels bears the risk of increased digital vulnerability. Clients and other stakeholders are demanding ethical and responsible data gathering, storage and usage, making the protection of the firm's data a continued priority and focus. We also place great importance on managing the risk of cyberattacks.

Decentralized finance applications, including digital cash solutions, are gradually being adopted by the banking industry. Nascent technologies, such as distributed ledger technology, are expected to mature over the coming years and may reshape our industry. They provide opportunities to overcome friction within the existing financial system, increase banking efficiency, broaden access to underserved communities and make previously unviable products or services available to the financial services sector. They also further enable early-stage concepts, such as Web 3.0 and the metaverse, which could lead to an enhanced digital user experience.

Sustainability

The evolution of corporate business models, the growth in investors factoring the transition to a low-carbon economy and other sustainability themes into investment risk-and-return expectations, the ongoing shifts in societal values, and greater regulation are all increasing client demand for sustainable investing strategies.

In 2022, due to the challenging environment for investments, global open-ended fund and exchange-traded fund (ETF) total net assets decreased by 19%.[1] Despite this downturn, the industry overall saw continued inflows into sustainable investing products, while funds and ETFs that were not specifically categorized as sustainable faced outflows throughout most of 2022.[1]

Our view is that the long-term growth trajectory for sustainable funds and ETFs plays to UBS's strengths, as we have been at the forefront of sustainable finance for over two decades, making us well placed to build on our offering and continue to develop the innovative products and solutions our institutional and private clients need.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about sustainability matters**

Client expectations

As technology progresses, clients more rapidly redefine the way they live, work and interact with others. This is reshaping clients' expectations toward financial services firms, as their reference points are increasingly influenced by experiences with companies outside our sector, where technology-supported and data-driven solutions are progressively enabling a more personalized, relevant, on-time and seamless client experience. These services often focus on convenience, flexibility and personalization, and drive toward holistically addressing clients' needs and facilitating community building. Therefore, our franchise needs to evolve, as clients measure us against new standards. While the global pandemic further sharpened our industry's focus on digital-led solutions, recent geopolitical, macroeconomic and societal shifts have highlighted values such as security, stability and a credible plan toward a sustainable future. Additionally, many clients not only expect net-zero commitments from their financial services provider of choice, but they are also increasingly demanding investment, financing and advisory products and services that fit their own sustainability preferences and ambitions.

Consolidation

Many regions and businesses in the financial services sector are still highly fragmented. We expect further consolidation, with the key drivers being ongoing margin pressure, a push for cost efficiencies and increasing scale advantages resulting from fixed technology costs and regulatory requirements. Many players in financial services continue to seek increasing exposure and access to regions with attractive growth profiles, such as Asia and other emerging markets, through local acquisitions or partnerships, as well as acquiring new capabilities addressing changes in market dynamics and overall client demands. The increased focus on core capabilities and geographical footprint, as well as the ongoing simplification of business models to reduce operational and compliance risks, is likely to drive further disposals of non-core businesses and assets. While banks already face increasing challenges from digitalization needs and intensified competition, tightening macroeconomic conditions across major economies may create further pressure if a recessionary environment cannot be avoided.

New competitors

Our competitive environment is evolving. In addition to traditional competitors in the asset-gathering businesses, new entrants are targeting selected parts of the value chain. However, we have not yet seen a fundamental unbundling of the value chain and client relationships, which might ultimately result in the further disintermediation of banks by new competitors. Over the long term, we believe large platform companies entering the financial services sector could pose a larger competitive threat, given their strong client franchises and access to client data, if they decide to broaden the scope of their services. While fintech firms have gained greater momentum during the COVID-19 pandemic, recent macroeconomic developments have slowed down the trend, as funding appetite and valuations have trended downward. Although we expect our industry to recover in the near term, we do not expect a material disruption of our asset-gathering businesses. The trend for forging partnerships between new entrants and incumbent banks is continuing, as technology and innovation help banks overcome new challenges.

Regulation

In 2022, regulators further progressed in their policy developments with a focus on regulations around digital innovation and sustainable finance along with finalizing and implementing the remaining Basel III requirements.

Regulators increased their focus on AI, data and, particularly, digital assets, as a result of market turbulence. In the area of digital assets, the attention by regulators was on stablecoins, crypto assets and the prudential treatment of banks' exposures to digital assets, with recent efforts by supranational standard setters aiming to coordinate relevant national regulations. Central banks also continued to work on central bank digital currencies, which aim to provide new digital payment instruments that would be a direct liability of the central bank.

Sustainable finance and climate-related risks continued to be a key focus of policymakers in 2022, where we noted significant activity, particularly in the areas of disclosures regarding the impact of climate-related risks and corporate sustainability actions, classification or taxonomies of sustainability-related efforts and activities, and risk management of climate-related financial risks. The multitude of developments at the jurisdictional level has the potential to create a fragmented policy landscape. These developments add to the rapidly evolving societal expectations toward financial institutions.

The national implementation of the remaining Basel III elements continues to be another important focus area. The authorities in Switzerland and the UK launched consultations on their approaches in 2022 and Switzerland changed the expected date on which the final Basel III guidelines are to enter into force, from 1 July 2024 to 1 January 2025. The EU authorities continued with the parliamentary debates. We expect the US authorities also to start their consultation process in the first half of 2023. Although the timing of the implementation seems broadly aligned across Switzerland, the EU and the UK at this stage, we still see a significant risk of divergence regarding the content of the provisions.

In addition, regulatory authorities continued to refine existing regulations, including the finalization of the Swiss too-big-to-fail framework and revision of the EU anti-money laundering framework, as well as efforts to enhance operational resilience. Following Brexit, the UK started a holistic review of its regulatory framework for financial services, while both the EU and the UK are updating their wholesale markets and investor protection rules. Furthermore, the focus of regulatory authorities is also increasingly moving toward corporate responsibility, diversity and inclusion. Finally, digitalization and shifts in the macroeconomic and interest rate environment increased the focus on operational resilience and financial stability risks, including the assessment of existing policy gaps relating to the non-bank financial intermediation sector.

Many of these developments are taking place in an environment characterized by significant political uncertainties, including increasing geopolitical tensions and the Russia–Ukraine war which resulted in the adoption of unprecedented sanctions packages introduced by various jurisdictions against Russia and Belarus. This led to significant implementation efforts that were closely coordinated between authorities to ensure consistency in interpretation and implementation. Political uncertainties and geopolitical tensions are posing additional challenges to the provision of cross-border financial services.

We believe the continued adaptations made to our business model and our proactive management of regulatory change put us in a strong position to absorb upcoming changes to the regulatory environment.

› **Refer to the "Regulatory and legal developments" and "Capital, liquidity and funding, and balance sheet" sections of this report for more information**

Wealth creation[2]

2022 began with the global high net worth individual population and financial wealth both at record highs, with surging financial markets and recovering economies enabling the global high net worth individual population and financial wealth to increase 7.8% and 8.0%, respectively, in 2021.

Since then, falling equity and bond markets, slowing economic growth, and US dollar strength, mean that global wealth growth in 2022 was likely substantially lower, or negative, although we continue to see the longer-term outlook for wealth creation and financial asset appreciation as positive.

As of the end of 2021, 46% of global financial wealth was concentrated in North America, followed by Asia (26%) and Europe (21%).[3]

By segment, approximately one-third of global high net worth individual wealth is held by individuals with wealth in excess of USD 30m, 23% by individuals with wealth ranging from USD 5m to USD 30m and the remaining 43% is within the wealth segment between USD 1m and USD 5m.

Wealth is being created at a faster rate for certain key client groups, including female clients and entrepreneurs. We also see significant wealth transition to the next generation over the coming decade.

Wealth transfer

Demographic and socioeconomic developments continue to generate shifts in wealth. Over the next few decades, more than USD 30trn of wealth will be passed between generations. The majority will move from the silent generation and older baby boomers to younger baby boomers and Gen X (jointly encompassing individuals currently between the ages of 42 and 65).[2]

As a group, these "next gens" are likely to have a longer investment horizon, a greater appetite for risk, often combined with a desire to use wealth to create a positive societal impact alongside investment returns. Meanwhile, as shown in the Wealth-X report "World Ultra Wealth Report 2022," the proportion of ultra-wealthy[4] women is gradually rising, reflecting changing cultural attitudes and growth in female entrepreneurship, as well as wealth transfers between generations.

We are responding to the evolving wealth landscape with a framework that addresses all aspects of our clients' financial lives, called *UBS Wealth Way*. It begins with discovery questions and a conversation with clients about what is most important to them. We help clients organize their financial life along three key strategies: *Liquidity* to help provide cash flow for short-term expenses; *Longevity* for long-term needs; and *Legacy* for needs that go beyond their own and help improve the lives of others, a key part of wealth transfer planning.

Investing in an inflationary world

As a result of the major macroeconomic shocks in 2022, investors are facing a very different landscape to the one seen over the past decade, with significant market volatility, higher interest rates and inflation levels not seen for a generation. This environment has created opportunities in the bond market, and investors are once again being rewarded for taking risks in fixed income. Investors also continue to diversify into illiquid alternatives (including private equity, property, hedge funds and infrastructure) that can deliver compelling longer-term risk-adjusted returns, while also looking for low-cost, efficient passive strategies across liquid markets. The breadth of our investment expertise and capabilities enables us to find the right solutions for clients across asset classes and regions.

1 Morningstar Direct, as of or for the year ended 31 December 2022. Encompasses worldwide open-ended funds and exchange-traded funds, excluding money market funds. Sustainable funds are identified on the basis of Morningstar's Sustainable-Investment framework. The information contained herein: (1) is proprietary to Morningstar and / or its content providers; (2) may not be copied, adapted or distributed; (3) is not warranted to be accurate, complete or timely; and (4) does not constitute advice of any kind, whether investment, tax, legal or otherwise. User is solely responsible for ensuring that it complies with all laws, regulations and restrictions applicable to it. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information, except where such damages or losses cannot be limited or excluded by law in your jurisdiction. Past performance is no guarantee of future results.

2 All the figures are from the Capgemini World Wealth Report 2022 unless otherwise stated and refer to the 2021 financial year. The Capgemini World Wealth Report 2022 segments wealth as follows: those with wealth of greater than USD 30m are classified as ultra high net worth individuals; USD 1m to USD 30m for high net worth individuals.

3 Based on BCG Global Wealth Report 2022, which refers to the 2021 financial year. Wealth concentration is based on financial assets by regions and excludes real assets and liabilities.

4 World Ultra Wealth Report 2022, Altrata. The report defines those with wealth of greater than USD 30m as ultra high net worth individuals (also referred to as the "ultra wealthy").

How we create value for our stakeholders

Stakeholder group	Stakeholder needs: what our stakeholders expect from us	Value proposition: how we create value for our stakeholders	Key topics discussed: what was important to our stakeholders in 2022	Stakeholder engagement: how we engage with our stakeholders
Clients	Advice on a broad range of products and services from trusted advisors, addressing increasingly complex needs A mix of personal interaction with our advisors in combination with digital and remote services (convenient, seamless digital banking) High-quality solutions and the highest standards in terms of asset safety, data and information security, confidentiality, and privacy A combination of global reach and local capabilities targeting positive investment outcomes Competitively priced products and services, risk management, and the provision of liquidity	Delivering tailored advice and customized solutions, using our intellectual capital and digital platforms Developing new products, solutions and strategic partnerships in response to clients' evolving needs Providing access to global capital markets and bespoke financing solutions Meeting increasing sustainable investment and private markets demand from clients Implementing cross-divisional offering with fully aligned front-to-back setup	Investing in times of uncertainty: high inflation, market volatility, rising interest rates, slowing economic growth and increasing geopolitical tensions Holistic goal-based financial planning Sustainable finance and investing opportunities Data privacy and security Products and services, including those around digital banking	Personalized meetings A blend of virtual and in-person client events and conferences, including information about key developments and opportunities Client satisfaction surveys Increasing levels of digital interaction with clients Monitor client feedback and complaint handling
Investors	Disciplined execution of our strategy leading to attractive capital returns through dividends and share repurchases Comprehensive and clear disclosures on quantitative and qualitative data necessary to make informed investment decisions Recognizing and proactively addressing strategic opportunities and challenges	Executing our strategy with discipline and agility as the external environment evolves, while aiming to deliver cost- and capital-efficient growth Providing relevant, transparent, timely and reliable public disclosures	Strategic plans and targets, and execution against them Structural growth in and return potential of our businesses Cost efficiency and ability to generate positive operating leverage Ability to protect or grow profits in a higher-inflation and rising-interest-rate environment Incorporation of environmental, social and governance (ESG) factors into the business model, compensation and risk management	Financial reports, investor and analyst conference calls, and webcasts, as well as media updates about our performance or other disclosures General meetings of shareholders Investor and analyst meetings Digital interactions with investors as a result of COVID-19 pandemic restrictions and hybrid-working patterns in the industry, with limited impact on pre-pandemic meeting schedules and participation, given reliable virtual solutions; the 2022 Annual General Meeting was held virtually
Employees	A world-class employer with the expertise and breadth of opportunity to empower successful careers A collaborative, engaging, inclusive and supportive workplace culture An environment that provides a sense of belonging and opportunities to positively impact colleagues, clients, shareholders and society Engaging work and career growth opportunities, including future-capabilities development, and rewards for performance and impact	Hiring talented, diverse employees and investing in development, now and for the future Fair, effective people management and compensation policies and practices Further strengthening our workplace culture to live up to our purpose, and providing a framework for employees to develop their careers Hybrid- and flexible-working arrangements, along with holistic support to empower employees and foster resilience Comprehensive data analytics that enable leaders to make better and faster decisions to meet business needs	Living up to our purpose and culture, enabled by our three keys to success Fair and equitable pay practices Focusing on impact and outcome in our performance management processes Hybrid-, flexible- and home-working arrangements Building a diverse, equitable and inclusive workplace Fostering internal mobility and providing long-term career prospects Accelerating new ways of working, particularly through Agile@UBS	Regular CEO and senior leadership communications and events, along with divisional, regional and functional sessions with employees Group-wide targeted surveys and other employee engagement activities Group Franchise Awards and the Kudos peer-to-peer recognition program Health and well-being events and offerings, employee networks and volunteering opportunities, and hybrid- and flexible-working arrangements
Society	Facilitation of economic development that is sustainable for the planet and humankind Maximization of our positive effects and minimization of any negative effects on society and the environment Proactive management of the environmental and societal impacts of our businesses	Promoting significant and lasting improvements to the well-being of communities in which we operate Taking an active role in the transition of our economy toward environmentally and socially sustainable solutions Advising clients to align their business models with ESG parameters and the United Nations Sustainable Development Goals	Sustainable finance Our climate strategy Our client and corporate philanthropy efforts Furthering the economic and social inclusion of those we support	Grant making and volunteering through strategic community partners Participation in forums and round tables, as well as industry-, sector- and topic-specific debates Dialogues with regulators and governments; interaction with NGOs Launch of our Ukraine and Pakistan Relief Funds Support for COVID-19-related aid projects across our communities

Clients

Our clients are the heart of our business. We are committed to building and sustaining long-term relationships based on mutual respect, trust and integrity. Understanding our clients' needs and expectations enables us to best serve their interests and to create value for them, underpinned by our client promise that we aim to differentiate our service by delivering a client experience that is personalized, relevant, on-time and seamless.

Our clients and what matters most to them

There is no typical UBS client, but each of our clients expects outstanding advice and service, a range of choices, and an excellent client experience.

Global Wealth Management focuses on serving the unique and sophisticated needs of wealthy families and individuals. We give them access to outstanding advice, global service and investment opportunities, delivered by experts they can trust and based on the expertise and insights of our Chief Investment Office (the CIO). Using a holistic, goals-based approach to financial planning, we deliver a personalized wealth management experience, working closely with clients to help them realize their ambitions, and we make our wealth coverage more client-centric, digital and effective. Our client-facing advisors and the global teams supporting them focus on developing long-term client relationships, which often span generations. Clients look to us for expertise in helping them to grow, protect and transfer their wealth, as well as helping them make some of the most important decisions in their lives. From significant liquidity events to professional milestones and personal turning points, we aim to give clients the confidence to move forward and achieve their goals. Through extensive research into clients' preferences and goals, and broader analysis of investor sentiment globally, we constantly evolve our offerings to meet the shifting priorities of today's wealthy clients. This includes investing in digital capabilities and developing products to help clients fund their lifestyles and manage their cash flow, as well as offering guidance on how they can create a lasting and positive impact for their communities and the causes they care about most. We are the leading global wealth manager for clients interested in sustainable investing,[1] with a commitment to developing solutions that enable them to align their financial goals with their personal values.

› **Refer to "Global Wealth Management" in the "Our businesses" section of this report for more information about sustainable investment offerings**

Personal & Corporate Banking serves a total of approximately 2.6 million retail clients[2] and more than 100,000 corporate clients,[3] companies ranging from start-ups to multi-nationals, including specialized entities, such as pension funds and insurers, real estate companies, commodity traders and banks. Our clients include more than 30% of Swiss households, more than 90% of the 250 largest Swiss corporations and more than 50% of midsize to large pension funds in Switzerland. They look for financial advice based on their needs at each stage of their individual or corporate journey. We aim to deliver outstanding advice to all via a multi-channel approach. Clients have access to digital banking, a wide network of branches and remote advice. These channels are designed to deliver a quality and convenient client experience with 24/7 availability, security and value for money, resulting in high levels of client satisfaction. Clients are also offered a broad range of products and services in all relevant areas: basic banking, investing, financing (including mortgages), retirement planning, cash management, trade and export finance, global custody, and company succession, among others.

In Asset Management, we manage relationships with institutional clients (including sovereign institutions, central banks, pension funds and insurers), wholesale intermediaries and Global Wealth Management and its clients. By building long-term, personalized relationships with our clients and partners, underpinned by disciplined execution, we aim to achieve a deep understanding of their needs and to earn their trust. We combine our global scale with the independent thinking of our distinct investment teams to utilize innovative ideas, drawing on the breadth and depth of our investment capabilities, across traditional and alternative, active and indexed, to deliver the solutions that clients need.

The Investment Bank provides corporate, institutional and wealth management clients with expert advice, financial solutions, deal execution and access to the world's capital markets. Our business model is specifically built around our clients and their needs. Corporate clients can access advisory services, debt and equity capital market solutions, and bespoke financing through our Global Banking business. Our Global Markets business focuses on helping institutional clients engage with local markets around the world, offering equities and equity-linked products, and foreign exchange, rates and credit products and services. Our differentiated content offering is underpinned by Investment Bank Research. The differentiated nature of our research provides access to insight-ready data sets for thousands of companies, and aims to give clients an informational edge. In 2022, our experts produced more than 40,000 research reports, attracting seven million reads.

We know the security and confidentiality of our clients' data is of utmost importance to them, as it is for UBS. That is why we put the highest priority on having comprehensive measures in place that are seeking to ensure client data confidentiality and integrity are maintained. We continually assess and improve our control environment to mitigate emerging cyber threats and meet expanding legal and regulatory expectations. Investments in our digital platforms preserve and improve our security standards, with a focus on giving clients secure access to their data via our digital channels and protecting that data from unauthorized access. Although the level of sophistication and the impact and volume of cyberattacks continue to grow worldwide, we are ever vigilant, maintaining a strong and agile cybersecurity and information security program to mitigate and manage cyber risk by providing robust, consistent, secure and resilient business processes.

Enhancing the client experience through innovation and digitalization

We streamline and simplify interactions with clients through front-to-back digitalization and innovation.

In Global Wealth Management, we develop and deploy digital tools that help deepen and enhance the relationships we have built with our clients, a factor that differentiates UBS. Clients expect the convenience and speed that technology offers but, at the same time, they feel that a personal experience with advisors is more important than ever. Our advisors use digital tools to spend more time with clients and better evaluate the full scope of their financial lives. Our clients appreciate digital tools that improve their experience. They also want multiple ways in which to interact conveniently with their advisors. Clients increasingly embrace the use of digital and mobile tools. We continue to introduce new and better tools to meet and exceed clients' expectations. For example, our *UBS Manage Advanced [My Way]* solution offers clients in selected markets access to more than 60 professionally managed investment modules. Clients can personalize beyond what they can normally do in a discretionary solution while continuing to reap the benefits of continuous portfolio monitoring and risk management. The app is interactive; clients can work with their advisors to design their own portfolio based on individual preferences and priorities, easily including elements such as sustainable investing modules or themes. We intend to further extend access and upgrade client convenience and experience with *UBS Manage Advanced [My Way].* In 2022, *UBS Circle One* was launched in Asia Pacific. This digital platform aims to bring to clients the best of UBS's global ecosystem for investing, connecting them with experts, thought leaders and actionable ideas delivered by the CIO in an engaging and convenient way. As a trusted brand offering premium content, we see opportunities to deliver our expertise to a broader set of clients, combining digital experience with human advice. Progress continues on our multi-year strategy to serve clients via two platforms: the *Wealth Management Americas Platform* in the US and the *Wealth Management Platform* outside the US.

In Personal & Corporate Banking, we further strengthened our leadership position as the leading digital bank in Switzerland by continuing to develop simple, smart, secure and sustainable solutions for our clients. In 2022, an average of 74% of Personal Banking clients used Digital Banking, and an average of 56% logged in via Mobile Banking. This demonstrates that our clients are engaging more frequently with us through our online and mobile capabilities. Our continued growth in digital enrollment and engagement led us to take the next evolutionary step, the introduction of a dedicated digital assortment line: *UBS key4*. Within six months of its launch in May 2022, we introduced a comprehensive digital product shelf. *UBS key4 banking* offers new Personal Banking clients 24/7 mobile account opening via secure, biometric self-identification and instant credit card availability, with attractive exchange rates. With *UBS key4 smart investing*, *UBS key4 gold*, *UBS key4 pension 3a* and *UBS key4 FX*, our Swiss clients benefit from new seamless digital-only investing, pension and payment solutions. We have also delivered products and personalized care for our corporate clients, whose digital adoption has accelerated further in recent years, with an average of 80% of such clients using Digital Banking in 2022. With *UBS key4 business*, small and medium-sized enterprises that are in the process of being formed can open their accounts more quickly and entirely paperlessly, and access comprehensive solutions beyond banking via our *UBS key4 business marketplace*. Complementing our dedicated digital offering, we also continued to further build out our hybrid touchpoints with clients, such as *Remote Sales & Advice* for private clients and our *Corporate Hybrid Bank*. In addition, to give clients access to market-leading solutions beyond banking, we have expanded our network of partnerships, such as our targeted long-term collaboration with Baloise, investing in homeowner platforms, such as *Houzy* and *Brixel*. Furthermore, we entered into a strategic partnership with ETH Zurich, a Swiss Federal Institute of Technology, to promote innovation and entrepreneurship in Switzerland. We have also continuously developed our sustainability offerings, such as *UBS Mortgage Energy*, which helps clients with the transition to more sustainable heating, and *UBS Loan Energy*, thanks to which clients benefit from attractive interest rates and comprehensive advice for their low-energy investment properties.

In Asset Management, we are accelerating our investment in digitalization. We have extended our digital client relationship management pilot tools, technologies and data capabilities to enhance the experience of, and service for, our clients, to foster innovation and to support alpha generation. For example, we are developing a scalable platform to enable more efficient development and management of theme-based investment products to meet growing client demand. To simplify and enhance our client service, we are introducing improvements in client and data analytics.

The Investment Bank strives to be the digital investment bank of the future, with innovation-led businesses driving efficiencies and solutions. In 2021, we announced the creation of a *Digital Platforms* business area within the Investment Bank, to work on transformation through innovation, experimentation and external partnerships. In Global Markets, our *Technology-Enhanced Sales* (TES) teams work in close partnership with our Data Intelligence, Chief Digital and Information Office and Client Coverage teams to embed our data and technology capabilities across all client teams and enhance our client service. TES enables clients to choose where and how we deliver content and uses data modeling to personalize the content they receive. *UBS Neo*, our award-winning multi-channel platform and enterprise ecosystem for digital clients, lets our professional and institutional clients access a comprehensive suite of products and services covering the full investment life cycle. *Investment Bank DigiOps*, our Operations team working in collaboration with the Chief Digital and Information Office on digital innovation projects, is enhancing the client experience through a digital platform that continues to make progress on simplifying Operations' technology infrastructure, increasing front-to-back efficiency and enhancing our decision-making and relevance to clients. By utilizing distributed ledger technology, Global Markets is transforming the business models of products where the Investment Bank has been strong historically. One example is *UBS key4 gold*, our global physical gold transaction network of retail investors, gold merchants, institutional investors and vault providers that enables clients to buy and sell at interbank prices, which saw growth in 2022. A tokenized representation of underlying physical gold provides fractional ownership with low-friction transactional capability. Our vision is to accelerate the tokenization of financial products traded by UBS clients. In November 2022, we launched and issued the world's first digital bond that is publicly traded and settled on both blockchain-based and traditional exchanges. Global Banking has also prioritized the client experience. *Global Banking Strategic Development Lab* uses data science, predictive analytics and quantitative models to develop solutions for our businesses. *UBS-GUARD* applies data science and predictive analytics to Global Banking business users, predicting the risk of companies becoming the targets of activists, identifying deal opportunities and helping navigate client pitches.

Engaging with our clients

Our clients' needs and their preferred communication channels continually evolve. Our objective is to engage with clients in the ways most convenient for them. We use a variety of channels to engage with clients, including regular client relationship and service meetings, as well as various corporate roadshows and dedicated events. In the post-COVID "new normal," we observe an increase in client interaction across all channels, and have changed to a mix of hybrid and in-person events.

Global Wealth Management interacted with clients via various settings in 2022, from personalized private briefings with subject matter experts to segment-specific virtual and in-person events and large-scale initiatives. We utilize marketing campaigns, events, advertising, publications and digital-only solutions to help drive greater awareness of UBS among prospective clients and reinforce trust-based relationships between advisors and clients.

Personal & Corporate Banking holds regular client events (leveraging a number of formats such as webcasts and in-person, virtual or hybrid events), covering a wide range of topics. In 2022, we increasingly engaged with clients via online channels, such as social media, online displays and search engines, and further decreased our use of traditional channels.

In Asset Management, we have a consistent program of client events and engagement activities throughout the year. These include our flagship conferences, such as the annual *UBS Reserve Management Seminar,* and we held our second annual *Alternatives Conference* in 2022. Alongside this, our teams continued the high level of interaction with clients globally in 2022, facilitated by new digital tools, and our publication of macro insights and thought leadership to provide timely insights into rapidly evolving markets. We also hosted a broad range of hybrid events, including our investment series, to help our clients better understand market challenges and opportunities, and we continued to engage with clients through our social media and online channels.

The Investment Bank hosted more than 175 investor conferences and educational seminars globally in 2022, covering a broad range of macro, sector, regional and regulatory topics. Almost all of those conferences were held virtually. More than 40,000 clients took part in such events in 2022, providing insight and access to our own opinion leaders, policy makers and leading industry experts. We leverage our intellectual capital and relationships and use our execution capabilities, differentiated research content, bespoke solutions, client franchise model and global platform to expand coverage across a broad set of clients. *UBS Neo Question Bank* is the largest global database of market-related questions asked by professional investors, while *UBS Live Desk,* built within the *UBS Neo* platform, provides clients with a stream of fast-paced commentary from UBS traders. Our clients' needs and their preferred communication channels have continued to evolve. Our objective is to engage with clients in the manner most convenient for them. Following the pandemic, we have observed an increase in client interaction through all channels, both digital and in-person.

How we measure client satisfaction

We use multiple techniques to regularly assess our achievements and the satisfaction of our clients.

Global Wealth Management is increasingly using technology and analytics capabilities to collect and respond to client feedback. Our digital client feedback tool lets clients submit, via mobile and the web, input about overall satisfaction with advisors and UBS, and share key topics they wish to discuss with their advisors. Advisors and their teams have seamless, real-time access to client feedback, enabling them to be highly responsive. The tool is available in the US and Asia Pacific, as well as most EMEA countries. In 2022, our client satisfaction level and net promoter score (NPS) remained high.

Personal & Corporate Banking has conducted annual surveys of clients in Switzerland since 2008, consistently covering all private and corporate client segments annually since 2015. Clients provide feedback on their satisfaction with regard to various topics (e.g., UBS overall, branches, client advisors, products and services) and indicate further product or advisory needs. Survey responses are distributed to client advisors, who follow up with each respondent individually. In 2022, our client satisfaction levels and NPS remained high, with client satisfaction regarding mobile banking at an all-time high.

The Quality Feedback system in Global Wealth Management and Personal & Corporate Banking provides a comprehensive and systematic platform to receive and process client feedback and suggestions. We receive feedback in various forms and through different client touchpoints. Client feedback, including complaints and suggestions, is vitally important, as it shows direct and unfiltered client needs, supports the development and introduction of new products and services, and, therefore, fosters the optimization of our offering in a client-focused manner. By addressing client feedback, we aim to strengthen client relationships, improve client satisfaction and make tangible improvements to our services. By sharing their views, clients contribute to quality improvements at all levels. We aim to respond to each individual who provides feedback. In 2022, key topics and enhancements centered mostly around services rendered by our hotlines and in our branches, cards, and Digital Banking features.

In Asset Management, we have an integrated process to record and manage client feedback through our client relationship management tool. We also conduct regular surveys, covering our wholesale and institutional clients globally, inviting them to assess their satisfaction with our client service, products and solutions, as well as other factors relevant to their investments. The results are analyzed to identify focus areas for improvement, and our client relationship managers follow up with respondents to address specific feedback where required.

The Investment Bank closely monitors client satisfaction via individual product coverage points. Direct client feedback is actively captured and tracked in our systems. Internal regional forums serve as a platform for senior management to discuss client relationships, possibilities for improvement, potential opportunities and specific client issues. Other processes are in place to enable consolidated findings to be shared within UBS as appropriate. The Investment Bank also closely monitors external surveys, which provide feedback across a range of investment banking services. We continue to make progress in simplifying our technology infrastructure, focusing on increasing front-to-back efficiency and enhancing our decision-making and relevance to clients. In the second quarter of 2022, we extended our Annual Global Markets Client Survey to a broader population looking to measure client satisfaction, and the ease and frequency of doing business. We also looked to understand the key drivers of each measure, both to refine individual coverage but also as an additional input into our investment and development plans. The most significant drivers of client satisfaction remain relationship management coverage and connectivity, liquidity and competitive pricing. We thoroughly evaluate the feedback we receive, including complaints from clients, and take measures to address key themes identified.

1 Euromoney Private Banking and Wealth Management Survey 2022: No. 1 in ESG / Sustainable Investing.
2 "Clients" refers to the number of unique business relationships operated by Personal Banking.
3 "Clients" refers to the number of unique business relationships or legal entities operated by Corporate & Institutional Clients.

Investors

We aim to create sustainable, long-term value for our investors by executing our strategy with discipline, maintaining risk and cost discipline, and delivering attractive shareholder returns.

Investor base

Our investor base is well diversified. A substantial proportion of our institutional shareholders are based in the US, the UK and Switzerland.

› **Refer to the "Corporate governance" section of this report for more information about disclosed shareholdings**

Alignment of interests

We aim to align the interests of our employees with those of our equity and debt investors, and this approach is reflected in our compensation philosophy and practices.

› **Refer to "Our compensation philosophy" in the "Compensation" section of this report for more information**

We are focused on driving long-term growth while maintaining risk and cost discipline

Our objective is to generate value for our shareholders and clients by driving long-term growth. To accomplish this, we are building on our scale, content and solutions, while remaining disciplined on risk and costs. This will give us the capacity to invest strategically, and will enable us to deliver against our financial and commercial targets.

Moreover, we are aiming to maximize our and our clients' impact to create long-term sustainable value. We also have a responsibility toward our communities and employees. We have outlined selected environmental, social and governance aspirations, which should support our financial and commercial targets.

Our primary measurement of performance for the Group is return on common equity tier 1 (CET1), as regulatory capital is our binding constraint and drives our ability to return capital to shareholders.

› **Refer to the "Targets, aspirations and capital guidance" section of this report for more information**

Active capital management to enable growth and deliver attractive shareholder returns

Our first priority is ensuring that we can maintain a strong balance sheet. This includes our strong capitalization, in line with our capital guidance of maintaining a CET1 capital ratio of around 13% and a CET1 leverage ratio of greater than 3.7%.

As a second priority, we consider opportunities for investment in growth.

Our third priority is returning capital to shareholders in the form of a progressive dividend and share buybacks. For 2022, the Board of Directors is proposing a dividend to UBS Group AG shareholders of USD 0.55 per share. We also bought back USD 5.6bn of our shares. Looking ahead, we intend to buy back more than USD 5bn of shares in 2023.

› **Refer to "UBS shares" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information**

Communications

Our Investor Relations (IR) function is the primary point of contact between UBS and our shareholders. Our senior management and IR regularly interact with institutional investors, financial analysts and other market participants, such as credit rating agencies. Clear, transparent and relevant disclosures, and regular direct interactions with existing and prospective shareholders, form the basis for our communications. The IR team relays the views of and feedback on UBS from institutional investors and other market participants to our senior management.

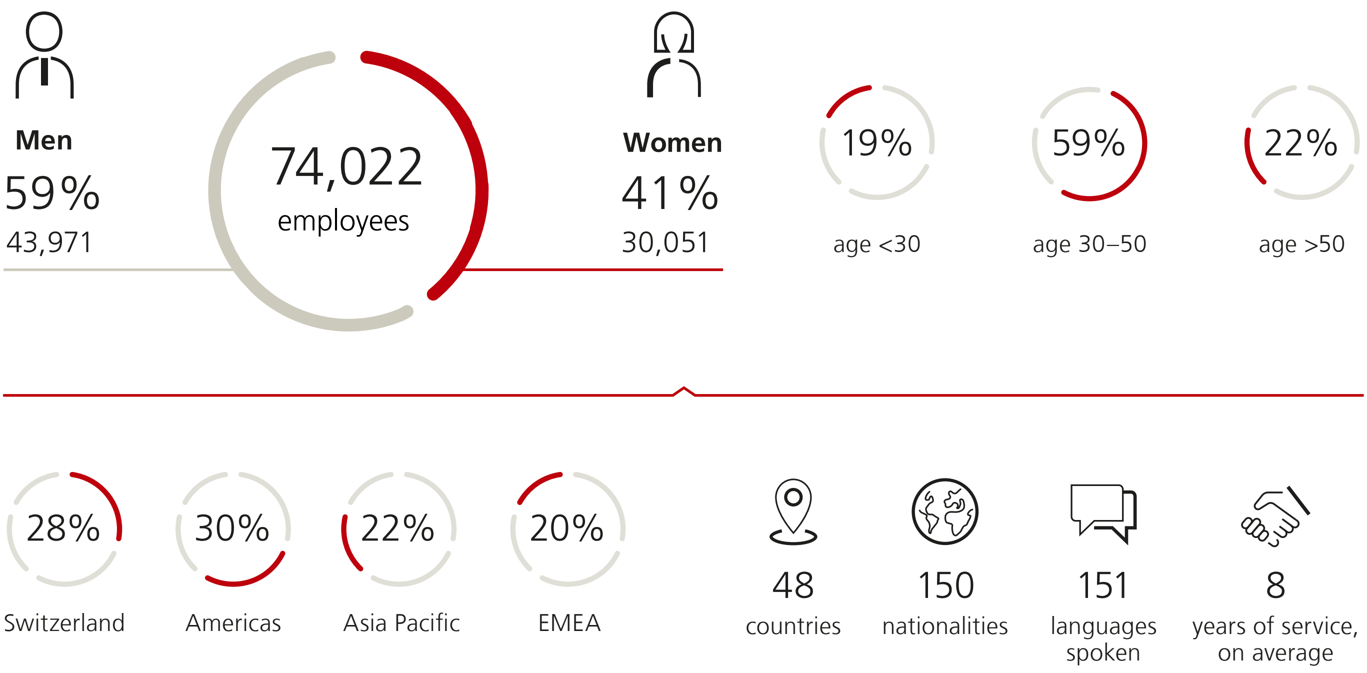
IR and our Corporate Responsibility function work together and interact with any investors interested in sustainability topics relevant to UBS and wider society.

› **Refer to the first part of the "Corporate governance" section of this report and "Information policy" in that same section for more information**
› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information**

Employees

At UBS, all business is personal. We are dedicated to being a world-class employer for talented individuals across all our markets, and a place where people can unlock their full potential. We want to have real impact. As such, we invest in measures to strengthen our unique culture and to provide a framework for employee growth and well-being as part of our overarching people-management approach.

Our workforce in a nutshell[1]



1 Calculated as of 31 December 2022 on a headcount basis of 74,022 internal employees only (72,597 FTE).

Deliver on our purpose and culture

Everything we do as a firm starts with our purpose. It is why we do what we do, and, in this respect, our culture is decisive in achieving our ambitions, and is grounded in our three keys to success: our *Pillars, Principles and Behaviors*. We therefore engage with our employees and seek to build an even more diverse and inclusive organization. Likewise, embracing flexibility and agile ways of working and our intentional focus on simplification and efficiency support a transformation that will generate significant benefits for our clients and for our employees.

In our global employee experience survey conducted in spring 2022, 92% of respondents indicated that they were familiar with our purpose. In 2022, we therefore sought to ensure that we are living up to our purpose by bringing it to life and driving it deeply into our daily business and people-management processes. Our Leadership Summit has been pivotal in that respect. Senior leaders engaged with and were aligned to our purpose and strategy, thereby making those concepts more tangible within their teams and accelerating our transformation. They also participated in training to discover their own purpose and to connect it to the firm's performance opportunities. We will have an ongoing focus on the topic.

› **Refer to "A firm driven by purpose" at the beginning of this report for more information about our purpose and culture**

Build a diverse, equitable and inclusive workplace

We live a culture of belonging, where everyone can thrive. In practical terms, we seek to hire individuals with diverse skills, perspectives and experiences, to provide visibility and opportunities, and to create an inclusive culture where employees feel recognized and valued.

As a member of The Valuable 500, a global business collective, we are committed to taking action on disability inclusion. We have improved the physical accessibility of many of our locations in 2022, increased digital accessibility for clients and employees, and provided support for our disability-focused employee networks to increase their visibility and impact.

In 2020, we outlined our intention to increase our female and ethnic minority representation, especially in leadership positions, and we are making progress toward these aspirations. For example, we aim to have 30% of Director and above roles globally held by women by 2025. At the end of 2022, that figure was 27.8%, up from 26.7% in 2021. Similarly, our 2025 aspiration is to have 26% of Director and above roles in the US and the UK held by ethnic minority employees. This figure was 20.4% in the US and 23.0% in the UK as of the end of 2022.

› **Refer to our Diversity, Equity and Inclusion Report 2022, which will be available in the second quarter of 2023 at *ubs.com/diversity*, for more details**

Pay our people fairly and equitably

Fair and consistent pay practices are designed to ensure employees are appropriately rewarded for their contribution. We pay for performance, and we take pay equity seriously. We've embedded clear commitments in our global compensation policies and practices, and we regularly conduct internal reviews and external audits as quality checks. Since 2020, we have been certified under the EQUAL-SALARY Foundation standards for our human resources practices in Switzerland, the US, the UK, the Hong Kong SAR and Singapore, covering more than two-thirds of our global employee population. Our global human resources policies and standards, including reward, performance management and promotion, from hiring through retirement, are reviewed annually to further improve our approach and processes. Our processes are global, and we apply the same standards across all our locations.

Listen to and appreciate employees

Key to bringing our purpose to life is listening to employees and acting on the things that matter to them. As part of our employee listening strategy, we conduct regular Group-wide, focused and employee life cycle surveys. Those surveys measure indicators such as strategic alignment, employee experience and well-being, collaboration, innovation, career development and line manager effectiveness. We implement improvement measures on firm-wide, divisional and regional levels and use survey results to create future culture-building initiatives.

Employee recognition continued to be a priority in 2022, as appreciation brings teams together and increases employees' motivation and engagement. In particular, our Group Franchise Awards program rewards employees for promoting innovation and cross-divisional collaboration. A linked idea-sharing platform helps employees collaborate on solutions for various operational, client service and sustainability challenges. Furthermore, our peer-to-peer appreciation program, called Kudos, encourages employees to recognize colleagues' exemplary behavior, with more than 424,000 recognitions awarded in 2022 alone.

Attract employees with the right capabilities and support their development

Connecting people with ideas and opportunities starts with our employees. In 2022, we continued to focus on hiring diverse individuals with strong potential, along with the right capabilities and agile mindset. These qualities enable us to deliver innovative and personalized products to clients faster, and in a more connected way. We hired a total of 12,693 external candidates in 2022, including more than 1,900 graduates and trainees, apprentices and interns through our junior talent programs worldwide. We actively support multi-year apprenticeship programs in Switzerland and the UK, along with summer internship programs in numerous locations. In 2022, for the 14th consecutive year, UBS was recognized among the top 50 of the World's Most Attractive Employers by employer-branding expert Universum.

Personnel by region

	As of			% change from
Full-time equivalents	31.12.22	31.12.21	31.12.20	31.12.21
Americas	21,819	21,317	21,394	2
of which: USA	*21,032*	*20,537*	*20,528*	*2*
Asia Pacific	16,489	15,618	15,353	6
Europe, Middle East and Africa (excluding Switzerland)	14,342	14,091	13,899	2
of which: UK	*6,234*	*6,051*	*6,069*	*3*
of which: rest of Europe (excluding Switzerland)	*7,823*	*7,826*	*7,652*	*0*
of which: Middle East and Africa	*285*	*215*	*178*	*33*
Switzerland	19,947	20,359	20,904	(2)
Total	72,597	71,385	71,551	2

Drive career growth

We want our employees to be able to build long and successful careers. It starts with our senior leaders and line managers, all of whom are expected to invest in their employees' development and to inspire excellence. We take a systematic approach to talent management, conducting annual talent reviews that look at our succession planning needs along with individual employees' contributions, abilities and future potential. Supporting this is our innovative Career Navigator platform. It offers a wide range of self-service tools and resources, including mentorship and networking opportunities, career path and training guidance, access to short-term rotations and internal mobility resources. To date, more than 7,000 people have shared their skills, enabling colleagues or internal recruiters to approach them directly for their subject matter expertise.

Our in-house UBS University plays a central role in both skill- and culture-building. Our broad offering includes business, leadership and line manager education along with training on digitalization, data literacy, agile working, diversity, inclusion and personal well-being, among other topics. Launched in June 2022, our new learning experience platform offers AI-powered training recommendations based on employees' unique needs and interests. We invested USD 78m in training in 2022, and our permanent employees completed more than 1,327,000 learning activities, including mandatory training, for an average of two training days per employee.

Work smarter

Driven by our strategic imperatives and evolving client needs, we continued to embrace new ways of working together in 2022. In particular, we accelerated our transition to agile ways of working, with approximately 18,500 employees across the firm working in agile teams as of year-end. In this setup, pods of specialists with end-to-end responsibility are empowered to achieve better results, and more quickly, than in traditional project structures. A number of tailored measures supported the transition, including the development of one consistent agile model and specialized training delivered through the Agile Academy within our UBS University.

Comprehensive workforce data dashboards help us analyze all aspects of the employee life cycle, including recruitment, internal mobility and attrition. These tools enable us to identify trends and make workforce decisions based on relevant HR data.

Focus on impact and outcome

Our performance management approach (*MyImpact*), which considers both contribution and behavior, supports a high-performance culture while simplifying our performance management and feedback processes. It features aspirational objectives with outcomes aligned to strategic priorities, continuous feedback and transparent year-end decisions that support pay-for-performance principles. Line managers play a key role in the quality of our approach. In 2022, we introduced an integrated feedback app called *Feedback 365*, which allows employees to easily give and receive meaningful feedback throughout the year.

Foster a supportive workplace community

We are committed to meeting employees' needs and supporting their overall well-being. Hybrid-working arrangements enable many employees to work at home several days a week, with agreed in-office days to support collaboration. Additionally, starting with Global Wealth Management in the US, a new virtual worker framework launched in March 2022 will enable eligible US employees to work entirely remotely. These measures, along with options such as flexible hours, part-time working, job sharing and partial retirement, will help us attract and retain top talent while making us a stronger, more dynamic company.

Having seen the positive impact, we further expanded our employee health and well-being offering in 2022. This included a suite of programs, benefits and workplace resources, along with a bespoke eLearning curriculum, that aimed to help our employees manage their health, foster well-being, strengthen their resilience and support the sustainability of the organization. We also sponsored virtual fitness challenges and mental health initiatives in all regions.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about our workforce, our people management approach and relevant data**

Society

The world's social and environmental problems are too big and complex to tackle alone. Lasting change can only be achieved when philanthropists and public and private organizations work collectively to maximize positive impact for people and the planet.

Our clients can maximize the positive effect of their giving through our diverse social impact offering: UBS Philanthropy Services, the grant-making UBS Optimus Foundation network, UBS Global Visionaries and UBS Community Impact.

Reimagining client philanthropy

With more than 100 social impact and philanthropy staff around the globe, we help clients to maximize their impact locally, nationally and globally. We have partnered for more than two decades with clients and their families by using an investment-based approach and connecting them to an international network of expertise and support.

To best serve our clients, we base our approach on three pillars: Advice, Insights and Execution. *Advice* – consulting with clients who are considering setting up their first charitable fund and guiding them on tax-efficient giving, thus maximizing the value of charitable giving. *Insights* – connecting our clients to a global network of experts, both within and outside UBS (e.g., through insight trips, publications and events with fellow philanthropists, thought leaders and social entrepreneurs, such as UBS Global Visionaries). *Execution* – providing clients with flexible options for managing their philanthropic giving, including structures such as donor-advised funds (DAFs), outcomes financing, emergency relief funds and our *UBS Collectives*, and supporting curated programs via the UBS Optimus Foundation network.

Donor-advised funds

A DAF offers clients an easy, flexible and efficient alternative to setting up their own foundation and can be managed in line with their usual investment approach. Their charitable donations can be invested within the parameters they select, such as capital, growth or income, so they can grow their fund to give grants at a later date. UBS offers these services in Switzerland, Singapore and the UK, with USD 249m in donations in 2022.

UBS Optimus Foundation

UBS Optimus Foundation is a network of foundations globally that connects clients with inspiring programs designed to make a measurable, long-term difference. It has a 20-year track record and is recognized globally as a philanthropic thought leader and is focused on incubating impact ventures, scaling impact through partnerships and achieving impact transparency. The network is a pioneer in the social finance space, through which we leverage solutions to mobilize private capital in new and more efficient ways. It conducts extensive due diligence and only recommends programs considered to have the capacity to achieve long-term, measurable impact. UBS also makes matching contributions to the network, to help our clients' donations go even further.

Collective impact

The *UBS Collectives* also utilize an evidence-based approach and bring together philanthropists to pool their funds, share their expertise and achieve a longer-term impact. The *Collectives* are a three-year learning journey during which philanthropists follow a curriculum, network with peers and engage in programs with the goals of preventing family separation, mitigating climate change and funding programs linked to measurable results. In 2022, USD 4.8m in funding was raised for this long-term, systems-level change approach.

Emergency relief

In response to urgent relief efforts, in 2022 UBS raised more than USD 25m for the Ukraine Relief Fund, with matched funding from UBS and XTX Markets bringing the total to more than USD 50m. Over half the funds have been disbursed to 14 partners providing relief, recovery and resilience services. In 2022, we also launched our Pakistan Relief Fund with our partners Americares and The Citizens Foundation, which raised USD 1.2m, including UBS matching contributions, to provide both response and recovery efforts.

UBS Global Visionaries

Through our UBS Global Visionaries program, we aim to create opportunities for clients and prospective clients to connect with leading social entrepreneurs, and help entrepreneurs focusing on social and environmental issues increase their impact by expanding their network, building capacity and raising awareness of their work. Since the program started in 2016, we have onboarded and helped 68 entrepreneurs to accelerate their impact.

A third-party evaluation[1] conducted in 2022 found that 88% of those entrepreneurs said the program had had a positive influence on expanding their networks, with 68% creating partnerships from it, 64% agreed that we had increased awareness of critical global issues and their solutions, 51% agreed that the program had helped them build skills valuable to delivering their mission, and 48% felt that the program had influenced their fundraising efforts. We have also started to evaluate how we can maximize the role of the program in terms of the impact of Global Visionaries on the United Nations Sustainable Development Goals. In 2022, 27% noted this benefit.[1]

UBS Community Impact

At UBS, we seek to have an impact in local communities. We have a strategic focus on education and the development of skills, as we believe these topics are where our resources can make the most impact. We believe our long-term investment in these subjects is central to furthering the economic and social inclusion of those we support through our activities.

With our Community Impact program, we focus on helping young people and adults to learn and develop skills. We deliver on our commitment through strategic financial support and employee volunteering that will address social issues to help further their economic and social inclusion. Through our Community Impact program, in 2022, we:
– supported 370,916 young people and adults in learning and developing skills – our aim is to support 1.5 million young people and adults by 2025;
– engaged 34% of our global workforce in volunteering.

Direct cash contributions from the firm, including support through our Community Impact program, UBS's affiliated foundations in Switzerland and the UBS Foundation of Economics in Society at the University of Zurich, and contributions to the UBS Optimus Foundation network, amounted to a total of USD 76m in 2022.

UBS's overall charitable contributions are measured using the industry-leading Business for Societal Impact (B4SI) framework. This includes cash, employee time and in-kind support.

› **Refer to the "Social" section of our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information**

1 Evaluation led by Wasafiri Consulting in October 2022, based on survey results from 71% (44) of our 62 UBS Global Visionaries and alumni at the time.

Our focus on sustainability and climate

Our commitment to sustainability starts with our purpose. We know finance has a powerful influence on the world and we recognize that investments can help create a better world for everyone: a fairer society, a more prosperous economy and a healthier environment. That is why we partner with our clients to help them mobilize their capital toward a more sustainable world and why we have put sustainability at the heart of our purpose. We are guided by the goal of being the financial provider of choice for clients that want to mobilize capital toward the achievement of the United Nations Sustainable Development Goals (the SDGs) and the orderly transition to a low-carbon economy.

Our Code of Conduct and Ethics

In our Code of Conduct and Ethics (the Code), the Board of Directors (the BoD) and the Group Executive Board (the GEB) set out the principles and practices that define our ethical standards and the way we do business, which apply to all aspects of our business. All employees must affirm annually that they have read and will adhere to the Code and other key policies, supporting a culture where ethical and responsible behavior is part of our everyday operations. In our Code, we make a commitment to acting with the long term in mind and creating value for clients, employees and shareholders. We aspire to do our part in creating a fairer, more prosperous society, championing a healthier environment and addressing inequalities at their root. This ethos underpins our purpose and is in line with our external commitments, such as our pledge to help making progress toward the SDGs. Following a substantial review in 2021, we made only limited changes to the Code in 2022, mainly pertaining to clarifications, simplifications and alignment of language.

› **Refer to the Code of Conduct and Ethics of UBS, available at *ubs.com/code*, for more information**

Our sustainability and impact governance

Sustainability activities, including climate, are overseen at the highest level of UBS, by the BoD and the GEB, and are grounded in our Code.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about our sustainability and impact governance**

Board of Directors and Group Executive Board

The BoD is responsible for setting UBS's values and standards for the purpose of ensuring that the Group's obligations to stakeholders are met. Both the Chairman of the BoD and the Group CEO play key roles in safeguarding our reputation and ensuring we communicate effectively with all of our stakeholders. The BoD's Corporate Culture and Responsibility Committee (the CCRC) is the UBS body primarily responsible for corporate culture, responsibility and sustainability. The CCRC oversees our sustainability and impact strategy and key activities across environmental and social topics, including climate, nature and human rights. Annually, it considers and approves our firm's sustainability and impact objectives. During its six meetings throughout the course of the year, the CCRC also reviews the GEB's activities in executing our climate strategy, including our net-zero targets, and, jointly with the BoD's Risk Committee, evaluates the progress of our climate risk program. All BoD committees have environmental, social and governance (ESG)-related responsibilities.

The Group CEO has delegated to the GEB Lead for Sustainability and Impact, Suni Harford, the responsibility to lead reviews of the firm's sustainability and impact strategy and related objectives, in agreement with fellow GEB members, and to propose strategy and objectives to the CCRC. The GEB Lead for Sustainability and Impact also co-chairs the firm's cross-divisional and cross-functional Sustainability and Climate Task Force, which oversees the implementation of the firm's sustainability activities and its climate action plan, including its net-zero program. We manage these annual plans and goals through our ISO 14001-certified environmental management system, with management accountabilities across our firm. Senior representatives from across our firm, including from the business divisions, Risk, Compliance and Finance, attend the task force's regular meetings.

The GEB also resolves overarching matters relating to sustainability and climate risks, including risk management framework, policies, and disclosure.

› **Refer to "Board of Directors" in the "Corporate governance" section of this report for more information about the CCRC**

Group Sustainability and Impact

The Group Sustainability and Impact (GSI) organization supports the GEB Lead for Sustainability and Impact with carrying out her responsibilities. GSI consists of the Chief Sustainability and Social Impact offices, headed by the Chief Sustainability Officer (the CSO) and the Head Social Impact, respectively. The CSO is responsible for driving the implementation of the Group-wide sustainability and impact strategy, including reporting on our progress toward net zero (and the execution thereof by the business divisions and Group Functions). The Head Social Impact is responsible for driving and implementing our social impact strategy, including Community Impact, Philanthropy Services and UBS Global Visionaries. Progress toward the firm's sustainability and impact strategy and associated targets is reviewed at least once a year by the GEB and the CCRC.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about our sustainability and impact governance**

Our sustainability and impact strategy

To help us maximize our impact, we focus on three key areas to drive the sustainability transition: planet, people and partnerships.

- *Planet:* Climate is a clear focus for us as we shift toward a lower-carbon future. We have committed to achieving net-zero greenhouse gas (GHG) emissions from across our business by 2050.
- *People*: We believe in a diverse, equitable and inclusive society. We are taking action to get there, within our own workplace and beyond.
- *Partnerships*: By working in partnership with other thought leaders and standard setters, our goal is to drive change at a global scale.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about how UBS is advancing sustainability in the financial sector and beyond**

Our approach to climate and nature

Our climate strategy covers two main areas: managing climate-related financial risks and acting for a low-carbon future. Underpinning these two areas are four strategic pillars.

Climate strategy

Governance

Strategy

Managing climate-related financial risks

Protecting our clients' assets
- Managing climate-related risks and opportunities through our innovative products and services in investment, financing and research

Protecting our own assets
- Limiting our risk appetite for carbon-related assets
- Estimating our vulnerability to climate risks

Acting for a low-carbon future

Reducing our climate impact
- Sourcing 100% of our electricity from renewable sources
- Responsible supply chain management

Mobilizing capital
- From private and institutional clients
- Toward the orderly transition to a low-carbon economy

Risks and opportunities

Metrics and targets

We understand the deep interrelationships that exist between climate and nature. Our climate strategy, including our ambition to achieve net zero, also forms part of our approach toward managing nature-related risks and opportunities.

› **Refer to our Climate and Nature Report 2022, available at *ubs.com/gri*, for a full description of UBS's approach to climate and nature**

Our approach to sustainable finance

As a global financial institution, we have a role in helping clients direct capital toward the SDGs. Our clients turn to us for advice on how they can help finance the transition to a low-carbon economy, support sustainable finance, align their investments with their personal values and better risk manage their portfolios and businesses. They want to take advantage of these opportunities, while also managing the risks associated with this transformational challenge.

During a year of global geopolitical and economic upheaval, sustainability and sustainable finance remained strategically important topics for UBS and many of our clients, with a focus on two key areas:

- the implementation of strategic sustainability commitments, for example reaching net-zero GHG emissions across all our activities by 2050, and
- the ongoing evolution of regulatory guidance designed to prevent greenwashing.

At UBS, we want to partner with all our clients by providing innovative and effective products and solutions that can support them in their sustainability transition and deliver on their commitments, where that is their preference. In particular, we want to support innovation and technological progress.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about our sustainability and impact strategy and activities**

Defining sustainable finance

It is important to set out how we define sustainable finance, as at present there is no global, uniformly accepted definition. At UBS, sustainable finance means any financial product or service (including both investing and financing solutions) that aims to explicitly align with and / or contribute to sustainability-related objectives, while targeting market-rate financial returns.

Sustainability outcomes can occur across a range of topics including goals defined using a reference framework, such as the SDGs in the United Nations 2030 Agenda for Sustainable Development. As an example, a sustainable investment (SI) product could invest in companies whose transition plans are aligned with the goal of limiting global warming to 1.5°C compared with the pre-industrial age or invest with the goal of encouraging companies to adopt such plans.

Our definition is also reflected in our Group's SI framework, which specifically defines "sustainability focus" and "impact investing" products. Both categories reflect a defined and explicit sustainability intention of the underlying investment strategy. This intentionality differentiates them from more "traditional" investment products, or those that consider ESG aspects but do not actively and explicitly pursue any specific sustainability objective, such as ESG integration- or exclusions-only approaches.

Investment approaches

UBS's definition of sustainable investments

'Traditional' investing

- No explicit sustainability objectives
- Manage sustainability and all risks related to investment performance
- May use ESG tools, but these do not drive the strategy

Sustainability focus

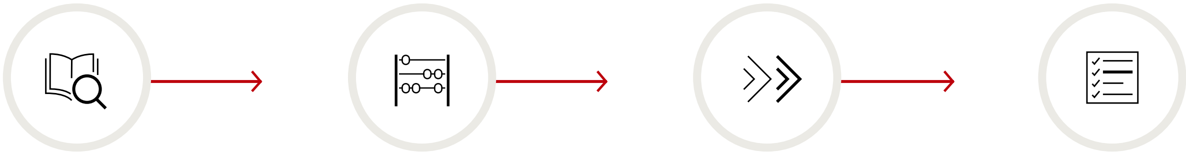
- Target market-rate investment returns
- Have explicit sustainable intentions or objectives that drive the strategy
- Underlying investments may contribute to positive sustainability outcomes through products, services and/or proceeds

Impact investing

- Target market-rate investment returns
- Have explicit intentions to generate measurable, verifiable, positive sustainability outcomes
- Impact attributable to investor action and/or contribution

Identifying opportunities

UBS has a global and diversified business model. Each client has specific and differentiated sustainable financing, investing and / or advisory needs. Leveraging the deep expertise of our experienced teams, we work hard to service those needs in the best way possible. While their needs are diverse, our interactions with our clients follow an established rationale that starts by building an understanding of the relevance of sustainability for their business and / or investment portfolio.



Analysis
We help clients understand the relevance of ESG factors for their business or portfolio

Advice
We provide targeted advice to our clients on managing ESG-related risks and/or capturing ESG-related opportunities for their specific circumstances

Action
We develop innovative and individualized sustainable finance products for clients

Assessment
We give transparent feedback to clients on non-financial outcomes achieved with regard to sustainable financing and investing client promises

Research, thought leadership, data, analytics and tools

Sustainable investment

In 2022, we made progress on a number of important investment product initiatives relevant to a broad spectrum of clients across our business areas. For example:

– we made it easier for private clients to access SI products and services, suited to their individual preferences, e.g., through expanded access to our Advice SI and separately managed account (SMA) solutions, and new targeted sustainable and impact offerings. In line with EU regulations for clients in scope thereof, UBS systematically captures clients' preferences when it comes to SI;
– we expanded the range of sustainable and impact funds in public and private markets and exchange-traded funds available to private, institutional and corporate clients; and
– we continued to provide customized, tailored, and structured investment solutions for private and institutional investors.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about our sustainable investing and financing offering, including financing solutions, advisory, and research and insights**

Sustainable financing

We develop financing solutions to help our clients transition to a more sustainable future. These solutions can be on-balance sheet (e.g., green or sustainable loans and mortgages) or off-balance sheet (such as access to debt and equity capital markets), and also include transaction structuring. Highlights in 2022 included: our Investment Bank facilitating USD 48bn of green, social, sustainability and sustainability-linked (GSSS) bonds financing through 77 bond deals for our clients, with a market-leading share of the Swiss franc GSSS bond market; our Personal & Corporate Banking business launching both *UBS Mortgage Energy* and *UBS Loan Energy*, the former to encourage private clients to replace their fossil fuel heating, either with a more sustainable alternative or by installing a photovoltaic system, and the latter being specially designed for energy-efficient investment properties. Clients benefit from attractive interest rates and comprehensive advice for their low-energy properties. In December of 2022, UBS adopted guidelines providing an internal global standard for all our products in the categories of sustainable lending, sustainable bonds and GHG emissions trading. During the course of 2023, UBS expects to (re-)assess all its products against these guidelines.

Sustainable investments

	For the year ended			% change from
USD bn, except where indicated	31.12.22	31.12.21	31.12.20	31.12.21
Sustainable investments[1]				
Sustainability focus[2]	246.9	222.7	127.7	10.9
Impact investing[3]	20.7	28.5	13.1	(27.4)
Total sustainable investments[4,5]	267.6	251.2	140.8	6.5
SI proportion of total invested assets (%)	*6.8*	*5.5*	*3.4*	
UBS total invested assets	3,957.2	4,596.2	4,187.2	(13.9)

1 We focus our sustainable investment reporting on those investment strategies exhibiting an explicit sustainability intention. 2 Strategies that have explicit sustainable intentions or objectives that drive the strategy. Underlying investments may contribute to positive sustainability outcomes through products / services / use of proceeds. Examples include Global Wealth Management's discretionary Manage SI mandate solutions and Asset Management's strategies such as its Global Sustainable Equities product. 3 Strategies that have explicit intentions of generating measurable, verifiable and positive sustainability outcomes. Impact generated is attributable to investor action and / or contributions. Examples include Global Wealth Management's Oncology Impact funds and Asset Management's UBS Engage for Impact or UBS Climate Action funds. 4 In 2022, UBS converted funds to the sustainability focus and impact investing categories, in line with corresponding changes to the funds' underlying investment policies. The main impact was on sustainability focus and impact investing strategies in Asset Management of USD 33bn. Further, we aligned the Global Wealth Management and Personal & Corporate Banking reporting of UBS funds and mandates products to the Asset Management categorization with an impact on sustainable investments of USD 20bn. 5 In 2022, methodology changes related to the application of the Group SI framework resulted in a decrease in invested assets of USD 10bn across total sustainable investments.

In line with global market developments, at UBS, we continue to grow SI assets under management (AuM) as a share of total AuM, reaching 6.8% by the end of 2022, compared with 5.5% at the end of 2021. As of 31 December 2022, UBS's SI assets (sustainability focus and impact investing) were USD 268bn, compared with USD 251bn at year-end 2021. Impact investing assets decreased to USD 21bn from USD 29bn, reflecting negative market performance and foreign currency effects, as well as methodology changes.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about our sustainable investing and financing offering, including financing solutions, advisory and research and insights**

Managing sustainability and climate risks

At UBS, sustainability and climate risk is defined as the risk that UBS negatively impacts, or is impacted by, climate change, natural capital, human rights, and other environmental, social, governance matters. Sustainability and climate risk may manifest as credit, market, liquidity and / or non-financial risks for UBS, resulting in potential adverse financial, liability and / or reputational impacts. These risks extend to the value of investments and may also affect the value of collateral (e.g., real estate). Climate risks can arise from either changing climate conditions (physical risks) or from efforts to mitigate climate change (transition risks). Physical and transition risks from a changing climate contribute to a structural change across economies and, consequently, can affect banks and the financial sector through financial and non-financial impacts.

Our Sustainability and Climate Risk (SCR) unit (part of Group Risk Control) manages material exposure to sustainability and climate risks. It also advances our firm-wide SCR initiative to build in-house capacity for the management of sustainability and climate-related risks.

› **Refer to "Sustainability and climate risk" in the "Risk management and control" section of this report**

› **Refer to Appendix 2 to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for a full description of our sustainability and climate risk policy framework**

Our sustainability goals and progress

We work with a long-term focus on providing appropriate returns to our stakeholders in a responsible manner. We are committed to providing transparent targets and reporting on the progress made against them. Our aspirational goals, as set out below, can therefore only partly be compared with what we set out in previous years.

Our aspirational goals and progress

Our priorities	Our aspirational goals	Our progress in 2022
Planet, people, partnerships	USD 400bn invested assets in sustainable investments by 2025.	Increased invested assets in sustainable investments to USD 268bn (compared with USD 251bn in 2021).
Planet	Decarbonization targets for 2030 for financing of the real estate, fossil fuels, power generation and cement sectors (from 2020 levels): – reduce emissions intensity of UBS's residential real estate lending portfolio by 42%; – reduce emissions intensity of UBS's commercial real estate lending portfolio by 44%; – reduce absolute financed emissions associated with UBS loans to fossil fuel companies by 71%; – reduce emissions intensity associated with UBS loans to power generation companies by 49%; and – reduce emissions intensity associated with UBS loans to cement companies by 15%.	Calculated progress against pathways for the real estate (commercial and residential), fossil fuel and power generation sectors:[1] – reduced emissions intensity of UBS's residential real estate lending portfolio by 8% (end of 2021 vs 2020 baseline); – reduced emissions intensity of UBS's commercial real estate lending portfolio by 7% (end of 2021 vs 2020 baseline); – reduced absolute financed emissions associated with UBS loans to fossil fuel companies by 42% (end of 2021 vs 2020 baseline); and – reduced emissions intensity associated with UBS loans to power generation companies by 12% (end of 2021 vs 2020 baseline). Introduction of an additional decarbonization target for the cement sector, as well as an estimation of the overall financed emissions.
	Align 20% of AuM to be managed in line with net zero (Asset Management).[2] Achieve net-zero emissions across discretionary client portfolios by 2050 (Asset Management).[3]	Initiated analysis of revisions to fund documentation and investment management agreements to align with Asset Management's net-zero-aligned frameworks.
	Achieve net-zero energy emissions resulting from our own operations (scopes 1 and 2) by 2025; cut energy consumption by 15% by 2025 (compared with 2020).	Reduced net GHG footprint for scope 1 and 2 emissions by 13% and energy consumption by 8% (compared with 2021); continued implementation of the replacement of fossil fuel heating systems and investing in credible carbon removal projects; achieved 99% renewable electricity coverage despite challenging market conditions.
	Offset historical emissions back to the year 2000 by sourcing carbon offsets (by year-end 2021) and by offsetting credit delivery and full retirement in registry (by year-end 2025).	Continued to follow up on credit delivery and retirement of sourced portfolio.
	Engage with key vendors on aiming for net zero by 2035.	Identified "GHG key vendors" (vendors that collectively account for >50% of our estimated vendor GHG emissions) and invited the vendors that accounted for 67% of our annual vendor spend (including all GHG key vendors) to disclose their environmental performance through CDP's Supply Chain Program, with 66% of the invited vendors completing their disclosures in the CDP platform.
People	30% global female representation at Director level and above by 2025.	Increased to 27.8% (2021: 26.7%) female representation at Director level and above.
	26% of US roles at Director level and above held by employees from ethnic minorities by 2025.	Increased to 20.4% (2021: 20.1%) ethnic minority representation at Director level and above in the US.
	26% of UK roles at Director level and above held by employees from ethnic minorities by 2025.	Increased to 23.0% (2021: 21.3%) ethnic minority representation at Director level and above in the UK.
	Raise USD 1bn in donations to our client philanthropy foundations and funds and reach 25 million beneficiaries by 2025 (cumulative for 2021–2025).	Achieved a UBS Optimus Foundation network donation volume of USD 274m in 2022, totaling USD 436m since 2021 (both figures include UBS matching contributions). Reached 5.9 million beneficiaries.
	Support 1.5 million young people and adults to learn and develop skills through our community impact activities (2022–2025).	Reached 370,916 beneficiaries through strategic community impact activities.[4]
Partnerships	Establish UBS as a leading facilitator of discussion, debate and idea generation.	Co-organized, with the Institute of International Finance, the first Wolfsberg Forum for Sustainable Finance. Joined a consortium that is pioneering methods of assessing and maximizing the GHG reduction potential of energy storage. Co-founded Carbonplace, a technology platform for the voluntary carbon market that has the goal of creating a streamlined and transparent market for our clients.
	Drive standards, research and development, and product development.	Co-led the Taskforce on Nature-related Financial Disclosures' financial-sector-specific working group. Collaboration with two Swiss companies that are pioneering innovative carbon removal technologies. Joined the Partnership for Carbon Accounting Financials (PCAF).

1 Refer to the "Environment" section of our Sustainability Report 2022, available under "Annual reporting" at ubs.com/investors, for further information. The inherent one-year time lag between the as-of date of our lending exposure and the as-of date of emissions can be explained by two factors: corporates disclose their emissions in annual reporting only a few months after the end of a financial year; and specialized third-party data providers take up to nine months to collect disclosed data and make it available to data users. Consequently, the baselines for our net-zero ambitions are based on year-end 2020 lending exposure and 2019 emissions data. Our 2021 emissions actuals are based on year-end 2021 lending exposure and 2020 emissions data. 2 The 20% alignment goal amounted to USD 235bn at the time of Asset Management's commitment in 2021. By 2030, the weighted average carbon intensity of funds is to be 50% below the carbon intensity of the respective 2019 benchmark. 3 The near- and medium-term plans for the achievement of this goal include our Asset Management business division only. 4 Our Community Impact program has a strategic focus on education and the development of skills.

Our climate-related metrics and targets

We have developed methodologies that we use to set our climate-related targets and identify climate-related risks and which underly the metrics that are disclosed in this report. Standard-setting organizations and regulators continue to provide new or revised guidance and standards, as well as new or enhanced regulatory requirements for climate disclosures. Our disclosed metrics are based upon data available to us, including estimates and approximations where actual or specific data is not available. We intend to update our disclosures to comply with new guidance and regulatory requirements as they become applicable to UBS. Such updates may result in revisions to our disclosed metrics, our methodologies and related disclosures, which may be substantial, as well as changes to the metrics we disclose.

Our climate targets and ambitions are high-level goals that have been set based on the methodologies, data and assumptions that we currently use. Changes to these methodologies, data and assumptions may affect our progress toward intermediate targets and ambitions and the achievability of net zero and other climate goals. Our 2050 net-zero targets, and related ambitions for scope 3 emissions, have a critical dependency on overall progress across all sectors and countries toward net-zero carbon emissions that requires substantial governmental action across many jurisdictions. In the absence of such progress, our goals with respect to scope 3 emissions will not be achievable.

› **Refer to our Climate and Nature Report 2022, available at *ubs.com/gri*, for a full description of our net-zero targets, including baselines and pathways**

Climate-related metrics 2022

	For the year ended			% change from
	31.12.22	31.12.21	31.12.20	31.12.21
Risk management				
Carbon-related assets (USD bn)[1,2]	33.8	36.5	37.1	(7.4)
of which: UBS AG	*8.9*	*10.1*	*11.0*	*(11.9)*
of which: UBS Switzerland AG	*24.6*	*26.0*	*25.4*	*(5.4)*
Proportion of total customer lending exposure, gross (%)	*7.5*	*8.0*	*8.6*	
Total exposure to climate-sensitive sectors, transition risk (USD bn)[2,3,4]	24.9	27.3	27.1	(8.8)
of which: UBS AG	*5.4*	*6.7*	*7.5*	*(19.4)*
of which: UBS Switzerland AG	*19.3*	*20.4*	*19.2*	*(5.4)*
Proportion of total customer lending exposure, gross (%)	*5.5*	*5.9*	*6.2*	
Total exposure to climate-sensitive sectors, physical risk (USD bn)[2,3,4]	30.0	31.9	35.0	(6.0)
of which: UBS AG	*11.6*	*13.3*	*18.3*	*(12.8)*
of which: UBS Switzerland AG	*17.7*	*18.2*	*16.2*	*(2.7)*
Proportion of total customer lending exposure, gross (%)	*6.7*	*7.0*	*8.0*	
Opportunities				
Number of green, sustainability, and sustainability-linked bond deals[5]	69	98	29	(29.6)
Total deal value of green, sustainability, and sustainability-linked bond deals (USD bn)[5]	42.4	63.3	19.3	
UBS-apportioned deal value of above (USD bn)	*8.8*	*13.2*	*5.7*	
Stewardship – Voting				
Number of climate-related resolutions voted upon[6]	160	89	50	79.8
Proportion of supported climate-related resolutions (%)	*71.2*	*78.6*	*88.0*	
Own operations (reporting period: July to June)				
Net GHG footprint (1,000 metric tons CO_2e)[7]	25	30	75	(15.4)
Change from baseline 2004 (%)	*(93.0)*	*(92.0)*	*(79.0)*	
Share of renewable electricity (%)	99	100	85	

1 As defined by the Task Force on Climate-related Financial Disclosures (the TCFD), in its expanded definition published in 2021, UBS defines carbon-related assets through industry-identifying attributes of the firm's banking book. UBS further includes the four non-financial sectors addressed by the TCFD, including, but not limited to, fossil fuel extraction, carbon-based power generation, transportation (air, sea, rail, and auto manufacture), metals production and mining, manufacturing industries, real estate development, chemicals, petrochemicals, and pharmaceuticals, building and construction materials and activities, forestry, agriculture, fishing, food and beverage production, as well as including trading companies that may trade any of the above (e.g., oil trading or agricultural commodity trading companies). This metric is agnostic of risk rating, and therefore may include exposures of companies that may be already transitioning or adapting their business models to climate risks, unlike UBS climate-sensitive sectors methodology, which takes a risk-based approach to defining material exposure to climate impacts. 2 Methodologies for assessing climate-related risks are emerging and may change over time. As the methodologies, tools and data availability improve, we will further develop our risk identification and measurement approaches, including further and updated geospatial analysis of properties securing financing with UBS (real estate) and better understanding how private lending (e.g., Lombard) activities may result in direct financial impacts for UBS. Lombard lending rating is assigned based on the average riskiness of loans. 3 Consists of total loans and advances to customers and guarantees, as well as irrevocable loan commitments (within the scope of expected credit loss), and is based on consolidated and standalone IFRS numbers. Metrics are calculated and restated based on 2022 methodology, across three years of reporting, 2020–2022. 4 Climate-related risks are scored between 0 and 1, based upon sustainability and climate risk transmission channels, as outlined in Appendix 3 to our Sustainability Report 2022, available under "Annual reporting" at ubs.com/investors. Risk ratings represent a range of scores across five risk-rating categories: low, moderately low, moderate, moderately high, and high. The climate-sensitive exposure metrics are determined based upon the top three out of five rated categories: high to moderate. 5 Such as, but not limited to, Investment Bank Global Banking bonds issued under the voluntary ICMA Green Bond Principles, Sustainability Bond Principles, and Sustainability-Linked Bond Principles. The principles include a recommendation that the issuer appoints an external review provider to undertake an independent external review (e.g., second-party opinion). This is consistent with market practice. 6 This excludes proposals related to Japanese companies that included changes to the companies' articles of association. The 2022 and 2021 numbers include shareholder and management proposals, the 2020 number shareholder proposals only. This reflects the increasingly common market practice of climate-related proposals being presented by management. 7 Net greenhouse gas (GHG) footprint equals gross GHG emissions minus GHG reductions from renewable electricity and CO_2e offsets (gross GHG emissions include: direct GHG emissions by UBS; indirect GHG emissions associated with the generation of imported / purchased electricity (grid average emission factor), heat or steam; and other indirect GHG emissions associated with business travel, paper consumption and waste disposal). A breakdown of our GHG emissions (scopes 1, 2 and 3) is provided in Appendix 3 to our Sustainability Report 2022, available under "Annual reporting" at ubs.com/investors.

Reporting to our stakeholders on our sustainability strategy and activities

Further information about our sustainability efforts and commitments is provided in our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*. The content of our Sustainability Report 2022 has been prepared in accordance with Global Reporting Initiative (GRI) standards and with the German rules implementing the EU Directive on disclosure of non-financial and diversity information (2014/95/EU). We also disclose data on climate-related financial risks, pertaining to the Swiss Financial Market Supervisory Authority's (FINMA's) disclosure requirements as set out in appendix 5 to FINMA Circular 2016/1 "Disclosure – banks." Our reporting on sustainability has been reviewed on a limited assurance basis by Ernst & Young Ltd against the GRI standards.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for an overview of non-financial disclosures in accordance with the German rules implementing EU Directive 2014/95 and for information about UBS AG and UBS Europe SE disclosures pursuant to Art. 8 of the EU Taxonomy Regulation**

Regulation and supervision

As a financial services provider based in Switzerland, UBS is subject to consolidated supervision by the Swiss Financial Market Supervisory Authority (FINMA). Our entities are also regulated and supervised by authorities in each country where they conduct business. Through UBS AG and UBS Switzerland AG, both licensed as banks in Switzerland, UBS may engage in a full range of financial services activities in Switzerland and abroad, including personal banking, commercial banking, investment banking and asset management.

As a global systemically important bank (a G-SIB), as designated by the Financial Stability Board, and a systemically relevant bank (an SRB) in Switzerland, we are subject to stricter regulatory requirements and supervision than most other Swiss banks.

› **Refer to the "Our evolution" section of this report for more information**
› **Refer to the "Regulatory and legal developments" and "Risk factors" sections of this report for more information**

Regulation and supervision in Switzerland

Supervision

UBS Group AG and its subsidiaries are subject to consolidated supervision by FINMA under the Swiss Banking Act and related ordinances, which impose standards for matters such as minimum capital, liquidity, risk concentration and internal organization standards. FINMA meets its statutory supervisory responsibilities through licensing, regulation, supervision, and enforcement. It is responsible for prudential supervision and mandates audit firms to perform regulatory audits and other supervisory tasks on its behalf.

Capital adequacy and liquidity regulation

As an internationally active Swiss systemically important bank (SIB), we are subject to capital and total loss-absorbing capacity (TLAC) requirements that are based on both risk-weighted assets and the leverage ratio denominator, and are among the most stringent in the world. We are also subject to Swiss SIB liquidity requirements and to minimum long-term funding requirements.

› **Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information about the Swiss SRB framework and the Swiss too-big-to-fail (TBTF) requirements**
› **Refer to "Liquidity coverage ratio" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information about liquidity coverage ratio requirements**

Regulation and supervision outside Switzerland

Regulation and supervision in the US

In the US, UBS is subject to regulation and supervision by the Board of Governors of the Federal Reserve System (the Federal Reserve Board) under a number of laws. UBS Group AG and UBS AG are both subject to the Bank Holding Company Act, pursuant to which the Federal Reserve Board has supervisory authority over the US operations of both UBS Group AG and UBS AG.

In addition to being a financial holding company under the Bank Holding Company Act, UBS AG has US branches, which are authorized and supervised by the Office of the Comptroller of the Currency (the OCC). UBS AG is registered as a swap dealer with the Commodity Futures Trading Commission (the CFTC) and as a securities-based swap dealer with the Securities and Exchange Commission (the SEC).

UBS Americas Holding LLC, the intermediate holding company for our operations in the US outside of the UBS AG branch network, as required under the Dodd–Frank Act, is subject to requirements established by the Federal Reserve Board related to risk-based capital, liquidity, the Comprehensive Capital Analysis and Review (CCAR) stress testing and capital planning process, and resolution planning and governance.

UBS Bank USA, a Federal Deposit Insurance Corporation (FDIC)-insured depository institution subsidiary, is licensed and regulated by state regulators in Utah and is also supervised by the FDIC.

UBS Financial Services Inc., UBS Securities LLC and several other US subsidiaries of UBS are subject to regulation by a number of different government agencies and self-regulatory organizations, including the SEC, the Financial Industry Regulatory Authority, the CFTC, the Municipal Securities Rulemaking Board and national securities exchanges, depending on the nature of their business. Certain of our activities in the US are subject to regulation by the Consumer Financial Protection Bureau.

Regulation and supervision in the UK

Our regulated UK operations are mainly subject to the authority of the Prudential Regulation Authority (the PRA), which is part of the Bank of England, and the Financial Conduct Authority (the FCA). We are also subject to the rules of the London Stock Exchange and other securities and commodities exchanges of which UBS AG is a member.

UBS AG has a UK-registered branch in London, which serves as a global booking center for our Investment Bank. Our regulated subsidiaries in the UK that provide asset management services are authorized and regulated mainly by the FCA, with one entity, UBS Asset Management Life Ltd, being also subject to the authority of the PRA.

Regulation and supervision in Germany / the EU

UBS Europe SE, headquartered in Germany, is subject to the direct supervision of the European Central Bank, as well as to continued conduct, consumer protection and anti-money-laundering-related supervision by the German Federal Financial Supervisory Authority (the BaFin) and supervisory support by the German Bundesbank. The entity is subject to EU and German laws and regulations. UBS Europe SE maintains branches in Denmark, France, Italy, Luxembourg, the Netherlands, Poland, Spain, Sweden and Switzerland, and is subject to conduct supervision by authorities in all those countries.

Regulation and supervision in Asia Pacific

We operate in 13 locations in Asia Pacific and are subject to regulation and supervision by local financial regulators. Our regional hubs are in Singapore and the Hong Kong SAR.

In Singapore, we conduct our operations primarily through UBS AG Singapore Branch and UBS Securities Pte. Ltd., which are supervised by the Monetary Authority of Singapore and the Singapore Exchange.

UBS AG Hong Kong Branch is primarily supervised by the Hong Kong Monetary Authority. UBS Securities Hong Kong Limited, UBS Securities Asia Limited and UBS Asset Management (Hong Kong) Limited are primarily supervised by the Hong Kong Securities and Futures Commission. In addition, UBS Securities Hong Kong Limited is supervised by the Hong Kong Stock Exchange and the Hong Kong Futures Exchange.

In mainland China, UBS has multiple licenses to operate its core business lines and the various UBS entities are subject to regulation by a number of different government agencies. The People's Bank of China oversees the macro capital markets policies and ensures coordinated supervisory approaches by the China Banking and Insurance Commission, the China Securities and Regulatory Commission, and the exchanges.

Financial crime prevention

Combating money laundering and terrorist financing has been a major focus of many governments in recent years. Laws and regulations, including the Swiss Banking Act and the US Bank Secrecy Act, require effective policies, procedures and controls to detect, prevent and report money laundering and terrorist financing, and the verification of client identities. Failure to introduce and maintain adequate programs to prevent money laundering and terrorist financing can result in significant legal and reputational risk and fines.

We are also subject to laws and regulations prohibiting corrupt or illegal payments to government officials and other persons, including the US Foreign Corrupt Practices Act and the UK Bribery Act. We maintain policies, procedures and internal controls intended to comply with those regulations.

› **Refer to "Non-financial risk" in the "Risk management and control" section of this report for more information**

Data protection

We are subject to regulations concerning the use and protection of customer, employee, and other personal and confidential information. This includes provisions under Swiss law, the EU General Data Protection Regulation (the GDPR) and laws of other jurisdictions.

› **Refer to the "Risk factors" section of this report for more information about regulatory change**

Recovery and resolution

Swiss TBTF legislation requires each Swiss SRB to establish an emergency plan to maintain systemic functions in case of impending insolvency. In response to these Swiss requirements, and similar ones in other jurisdictions, UBS has developed recovery plans and resolution strategies, as well as plans for restructuring or winding down businesses if the firm could not be stabilized otherwise.

In 2013, FINMA stated its preference for a single point of entry (an SPE) strategy for globally active SRBs, such as UBS, with a bail-in at the group holding-company level. UBS has made structural, financial and operational changes to facilitate an SPE strategy and is confident that a resolution of the bank is operationally executable and legally enforceable.

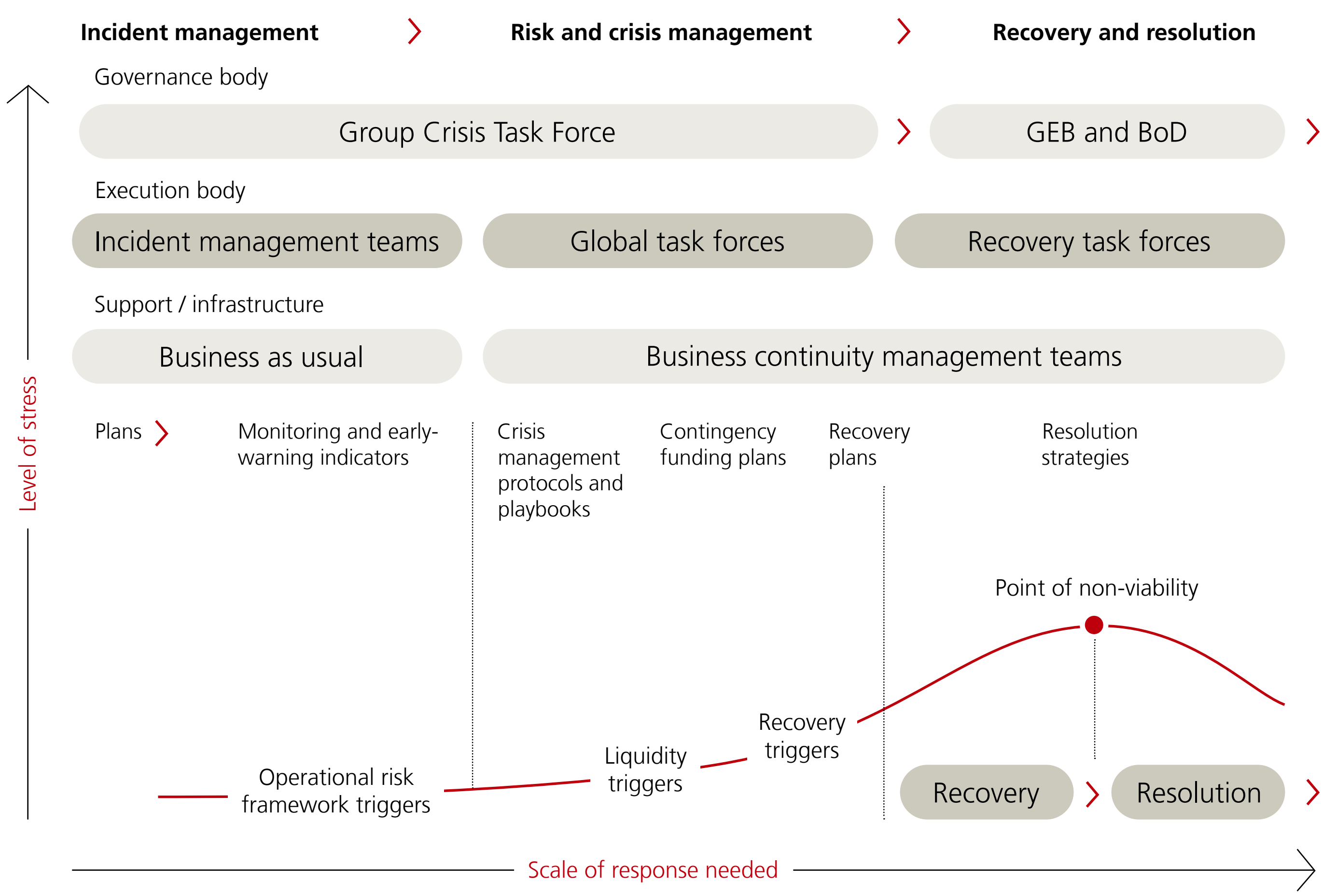
FINMA evaluates the recovery and resolution plans of Swiss SRBs on a regular basis. In its most recent assessment published in March 2022, FINMA re-confirmed that our Swiss emergency plan is effective and that our recovery plan was approved. Furthermore, FINMA acknowledged the continued progress we made toward achieving global resolvability.

UBS's crisis management framework

Our crisis management framework assigns responsibility and actions depending on the nature of the stress incident and the scale of the response needed.

- For incident, risk and crisis management, the Group Crisis Task Force works with incident management teams that provide monitoring and early-warning indicators at the local / regional level, without needing to activate protocols at the Group level. If a local response is insufficient, global task forces and crisis management teams provide decision-making guidance and coordination, including crisis management plans, protocols and playbooks, and contingency funding plans.
- The Group Executive Board (the GEB) and the Board of Directors (the BoD) would evaluate and decide upon the need to activate the Global Recovery Plan (the GRP) if a stress event reached a severity requiring such activation, based on the GRP's risk indicators.
- FINMA has the authority to determine whether the point of non-viability (PONV) as defined by Swiss law has been reached and, as part of the resolution strategy, has the power to order the bail-in of creditors to recapitalize and stabilize the Group, limit payments of dividends and interest, alter our legal structure, take actions to reduce business risk, and order a restructuring of the bank.

UBS crisis management framework



Global Recovery Plan
The GRP provides a tool to restore financial strength if UBS comes under severe capital and liquidity stress. Quantitative and qualitative triggers are monitored daily and are subject to predefined governance and escalation processes. Recovery options are linked to owners and checklists, with the objectives of preserving capital, raising capital or liquidity, or disposing of or winding down businesses.

Global Resolution Strategy
FINMA is required to produce a global resolution plan for UBS. The plan includes setting out measures that FINMA can take to resolve UBS in an orderly manner if the Group enters into resolution. The SPE bail-in strategy would involve writing down the Group's remaining equity and additional tier 1 and tier 2 instruments, as well as bail-in of total TLAC-eligible senior unsecured bonds at the UBS Group AG level. An internal recapitalization of undercapitalized subsidiaries would be made simultaneously with losses transmitted to UBS AG and, ultimately, UBS Group AG. Post-resolution restructuring measures could include disposal and winding down of businesses and assets.

Local recovery and resolution plans
The Swiss emergency plan demonstrates how UBS's systemically important functions and critical operations in Switzerland can continue if the UBS Group cannot be restructured. This is achieved mainly by holding UBS Switzerland AG as a separate legal entity and maintaining sufficient capital and liquidity to ensure its continued operation. FINMA considers the plan to be effective.

The US resolution plan sets out the steps that could be taken to resolve the UBS Americas Holding LLC group if it suffered material financial distress and the UBS Group was unable or unwilling to provide financial support. As required by US regulations, our US plan contemplates that UBS Americas Holding LLC will commence US bankruptcy proceedings. Prior to this, the plan envisages UBS Americas Holding LLC down-streaming financial resources to subsidiaries to facilitate orderly wind-down or disposal of businesses.

UBS Europe SE develops a local recovery plan annually based on European Central Bank (ECB) requirements, and resolution planning information and capabilities based on Single Resolution Board requirements. On the basis of such information the Internal Resolution Team (IRT), composed of members of the Single Resolution Board, produces a resolution plan for UBS Europe SE.

Other local recovery and resolution plans exist for various Group entities and jurisdictions.

Regulatory and legal developments

Developments regarding prudential matters
In March 2022, the Swiss Financial Market Supervisory Authority (FINMA) presented its annual assessment of the recovery and resolution plans of systemically important financial institutions in Switzerland as part of the too-big-to-fail framework. In its report, FINMA acknowledged the further progress that UBS has made with regard to its global resolvability by significantly reducing the remaining obstacles to the implementation of its resolution strategy and making further improvements to its recovery plans. FINMA considered UBS's global recovery plan and Swiss emergency plan to be effective, while identifying certain areas for further improvement, which UBS is in the process of addressing.

In parallel, the Swiss Federal Council announced the key parameters for a public liquidity backstop in conjunction with the revision of the Swiss Liquidity Ordinance. The liquidity backstop would enable the Swiss government and the Swiss National Bank to support the liquidity of a Swiss systemically important bank (SIB) in the process of resolution. The introduction of the backstop is intended to increase the confidence of market participants in the ability of SIBs to become successfully recapitalized and remain solvent in a crisis situation. The Swiss Federal Department of Finance (the FDF) is expected to issue a public consultation by mid-2023.

In July 2022, the revision of the Swiss Liquidity Ordinance became effective, which increases the regulatory minimum liquidity requirements for SIBs from 1 January 2024. The specific increase for UBS remains uncertain pending supervisory guidance from FINMA, which is expected to be communicated to the firm in the autumn of 2023. Related new and revised regulatory reporting requirements became effective from the fourth quarter of 2022 onward.

In November 2022, the Swiss Federal Council adopted the amendments to the Banking Act and the Banking Ordinance, which entered into force as of 1 January 2023. The amendments enact insolvency provisions for banks into statutory law and strengthen the deposit insurance framework. They also replace the current resolvability discount on the gone concern capital requirements for SIBs, including UBS, with a reduced base gone concern capital requirement. In addition, FINMA has the authority to impose a surcharge of up to 25% of the base gone concern capital requirement should obstacles to a SIB's resolvability be identified in future resolvability assessments. We currently expect that our total gone concern requirements will remain substantially unchanged in the first quarter of 2023 because of these changes.

In December 2022, the Swiss State Secretariat for International Finance changed the expected date on which the final Basel III guidelines are to enter into force, from 1 July 2024 to 1 January 2025. As a result, the Swiss implementation timeline would be aligned to the currently expected implementation timeline in the EU. We currently estimate that the revised Basel III framework would lead to a further net increase in risk-weighted assets (RWA) of around USD 12bn, before taking into account mitigating actions and not reflecting the impact of the output floor, which is phased in over time. Our estimate includes the finalization of the Basel III framework, as well as the Fundamental Review of the Trading Book, based on our current understanding of the relevant standards. It may change as a result of new or updated regulatory interpretations, appropriate conservatism in model calibration, the implementation of Basel III standards into national law, changes in business growth, market conditions and other factors. The final degree of alignment between the Swiss implementation and those in other jurisdictions, particularly those regarding the treatment of historical operational losses, remains uncertain at this stage.

In the US, the Securities and Exchange Commission (the SEC) has proposed a number of significant new and revised regulations, including, among others, proposals that would significantly change order execution rules in US public equity markets and new disclosure requirements relating to climate, cybersecurity and share repurchases, as well as changes relating to investment companies and investment advisors. On 15 February 2023, the SEC approved rule changes to shorten the settlement cycle for US markets to trade date +1, with the compliance date set as 28 May 2024.

US banking regulators are expected to adopt rules that would substantially change how banks' service to low-income and underserved communities is evaluated under the Community Reinvestment Act, which, if adopted as currently proposed, would change measurement of this obligation for UBS Bank USA. The regulators further propose regulations to implement the remaining Basel III capital requirements, including the Fundamental Review of the Trading Book requirements. These requirements, when final, will affect UBS Americas Holding LLC.

The above proposals from the SEC and the US banking regulators represent a significant regulatory agenda, which, if completed in the near future, would likely require significant resources to implement.

Corporate taxation in Switzerland and the US

In December 2021, the Organisation for Economic Co-operation and Development (the OECD) issued Global Anti-Base Erosion Rules under the Pillar 2 framework. To address this, the Swiss Federal Council launched the consultation of the ordinance on the national implementation of a global minimum corporate tax rate in August 2022. The Federal Council has proposed a minimum tax rate of 15% for Swiss firms with global earnings above EUR 750m from January 2024. The OECD model rules will be transformed into Swiss national law following a constitutional amendment, which is subject to a mandatory referendum, expected by June 2023. We do not expect the proposed implementation of global minimum taxation in Switzerland to materially impact our effective tax rate.

As part of the Inflation Reduction Act (the IRA) passed by the US Congress in August 2022, a new corporate alternative minimum tax (CAMT) was introduced, with an effective date of 1 January 2023. CAMT is calculated as 15% of an entity's consolidated financial statement profits, without taking into account pre-2019 tax loss carry-forwards. As a result, the Group is expected to incur significant US current tax expenses, although these will be offset by the recognition of equivalent benefits in respect of deferred tax assets. There is no change to the Group's effective tax rate. CAMT will temporarily defer the accretion of profits to the Group's common equity tier 1 (CET1) capital, but the amount of such deferral is expected to be recaptured in the future through the use of CAMT credits. The 2022 impact on the accretion of CET1 capital would have been around USD 250m.

Sanctions related to the Russia–Ukraine war

During 2022, the Swiss Federal Council adopted the EU sanctions against Russia. Recently issued measures provide, among other things, a legal basis for the introduction of price caps for Russian crude oil and petroleum, and include a ban on the provision of certain services to the Russian government and Russian companies. UBS's sanctions programs are designed to comply with sanctions across multiple jurisdictions, including those imposed by the United Nations, Switzerland, the EU, the UK and the US.

Developments regarding environmental, social and governance matters

In 2022, environmental, social and governance (ESG) matters continued to evolve rapidly across different jurisdictions.

In June 2022, two new self-regulation minimum requirements were issued by the Swiss Bankers Association. One requirement sets standards for the consideration of sustainability criteria in the investment advisory process and the other regulates the mortgage advisory process. In parallel, the Swiss Federal Council launched the Swiss Climate Scores, which consist of six indicators that provide transparency regarding climate-related information, such as carbon emissions and the implied temperature increase of a portfolio.

In September 2022, the Swiss Parliament adopted a new federal law on climate protection, including provisions related to emission-reduction pathways and interim targets. The law provides the legal basis for measures to support the transition to net zero in different economic sectors, including the financial sector. Subject to a referendum that will take place in June 2023, the new law is expected to enter into force in 2024.

The Swiss Federal Council adopted a revised ordinance on climate-related disclosures in November 2022, which will be mandatory for large companies domiciled in Switzerland as of 1 January 2024. The ordinance makes reference to the recommendations of the Task Force on Climate-related Financial Disclosures (the TCFD) and sets disclosure requirements related to the plans for the transition to net zero and regarding climate-related impacts on a company's business activities. In parallel, FINMA has issued guidance on disclosures of climate-related financial risks and announced another review of climate-related disclosures in the course of 2023.

In December 2022, the Swiss Federal Council published a report on sustainability in the financial sector, in which it defined 15 measures planned to be implemented in the years 2023 to 2025. The measures aim to, among other things, ensure that more and better sustainability data is available from all sectors of the economy, in order to increase overall transparency. The Swiss government also adopted a position on greenwashing, stating that financial products or services should only be advertised as being sustainable if they are aligned with or contribute to at least one of the goals of the wider sustainability frameworks, such as the United Nations Sustainable Development Goals.

In January 2023, FINMA provided further guidance on the developments regarding the management of climate risks. FINMA reiterated its expectation that supervised institutions, including UBS, will establish adequate frameworks for managing climate-related financial risks that are adapted to the respective risk profile of the institution. In this context, FINMA expects the supervised financial institutions to proactively engage with the recommendations and guidance provided by international bodies, such as the BCBS and its Principles for the Effective Management and Supervision of Climate-Related Financial Risks issued in June 2023, as well as relevant best practices in the market, and to further develop their tools and processes where necessary.

In April 2022, the SEC proposed rules on climate-related disclosures. The proposed rules would require qualitative disclosures on climate risk management processes inclusive of governance, risk identification and scenario analyses, and quantitative disclosures on greenhouse gas emissions and financial statement impacts.

The European Commission (the EC) proposed draft legislation on corporate sustainability due diligence in February 2022, requiring companies to identify and, where necessary, prevent, end or mitigate adverse impacts of their activities on human rights and the environment. The EC also published a consultation aiming to gain a better understanding of the functioning of ESG ratings provided by specialized rating agencies.

In November 2022, the EU finalized the Corporate Sustainability Reporting Directive, which amends the reporting requirements of the 2014 Non-Financial Reporting Directive for all large companies and all companies listed on regulated markets in the EU. It requires the first companies, including UBS, to provide detailed information about sustainability matters in their annual financial reports from the 2024 fiscal year onward, including the impact of their business activities on sustainability matters and the influence of sustainability factors (e.g., climate change or human rights issues) on their business model, outlook and operations. The Swiss Federal Council decided to review the impact of the EU rules on Switzerland with a consultation planned for July 2024 at the latest.

On a global level, the International Sustainability Standards Board (the ISSB) launched a consultation in March 2022 on two of its proposed standards: one defining general sustainability-related disclosure requirements and the other specifying climate-related disclosure requirements. Based on the results of this consultation, the ISSB decided to adopt disclosure standards on greenhouse gas emissions, to introduce scenarios for reporting on climate resilience and to identify climate-related risks and opportunities. The ISSB is expected to finalize its standards by June 2023.

We expect to implement the standards and requirements that are applicable to us by their respective due dates.

FINMA revision of Circular 2008/21 "Operational risks and resilience – banks"

In December 2022, FINMA issued a revised "Operational risks and resilience – banks" circular that incorporates the BCBS's new Principles on Operational Resilience into the FINMA framework, including information and communication technology risk, cyber risk, critical data risk, business continuity management, cross-border business service risk, and the continuation of critical services during resolution and recovery. A two-year transition period has been granted for the implementation of the requirements on ensuring operational resilience, with the first elements on critical functions and disruption tolerance required to be in place by 1 January 2024 and the remaining elements in phases until 1 January 2026.

Swiss Federal Council approval of the revised Anti-Money Laundering Act

In August 2022, the Swiss Federal Council revised the Swiss Anti-Money Laundering Act and amended the Anti-Money Laundering Ordinance, which became effective on 1 January 2023. Among other things, the revised provisions will affect reporting requirements, as well as requirements to periodically review all clients and client data.

Risk factors

Certain risks, including those described below, may affect our ability to execute our strategy or our business activities, financial condition, results of operations and prospects. We are inherently exposed to multiple risks, many of which may become apparent only with the benefit of hindsight. As a result, risks that we do not consider to be material, or of which we are not currently aware, could also adversely affect us. Within each category, the risks that we consider to be most material are presented first.

Market, credit and macroeconomic risks

Performance in the financial services industry is affected by market conditions and the macroeconomic climate

Our businesses are materially affected by market and macroeconomic conditions. A market downturn and weak macroeconomic conditions can be precipitated by a number of factors, including geopolitical events, such as international armed conflicts, war, or acts of terrorism, the imposition of sanctions, global trade or global supply chain disruptions, including energy shortages and food insecurity, changes in monetary or fiscal policy, changes in trade policies or international trade disputes, significant inflationary or deflationary price changes, disruptions in one or more concentrated economic sectors, natural disasters, pandemics or local and regional civil unrest. Such developments can have unpredictable and destabilizing effects.

Adverse changes in interest rates, credit spreads, securities prices, market volatility and liquidity, foreign exchange rates, commodity prices, and other market fluctuations, as well as changes in investor sentiment, can affect our earnings and ultimately our financial and capital positions. As financial markets are global and highly interconnected, local and regional events can have widespread effects well beyond the countries in which they occur. Any of these developments may adversely affect our business or financial results.

As a result of significant volatility in the market, our businesses may experience a decrease in client activity levels and market volumes, which would adversely affect our ability to generate transaction fees, commissions and margins, particularly in Global Wealth Management and the Investment Bank. A market downturn would likely reduce the volume and valuation of assets that we manage on behalf of clients, which would reduce recurring fee income that is charged based on invested assets, primarily in Global Wealth Management and Asset Management, and performance-based fees in Asset Management. Such a downturn could also cause a decline in the value of assets that we own and account for as investments or trading positions. In addition, reduced market liquidity or volatility may limit trading opportunities and may therefore reduce transaction-based income and may also impede our ability to manage risks.

Geopolitical events: For example, the Russia–Ukraine war has led to one of the largest humanitarian crises in decades, with millions of people displaced, a mass exodus of businesses from Russia, and heightened volatility across global markets. In addition, as a result of the war, several jurisdictions, including the US, the EU, the UK, Switzerland and others, have imposed extensive sanctions on Russia and Belarus and certain Russian and Belarusian entities and nationals, as well as the Russian Central Bank. Among others, the financial sanctions include barring certain Russian banks from using the Society for Worldwide Interbank Financial Telecommunication (SWIFT) messaging system, asset freezes for sanctioned individuals and corporations, limits on financial transactions with sanctioned entities and individuals, and limitation of deposits in the EU and Switzerland from Russian persons not entitled to residency in the European Economic Area (the EEA) or Switzerland. The scale of the conflict and the speed and extent of sanctions may produce many of the effects described in the paragraph above, including in ways that cannot now be anticipated.

If individual countries impose restrictions on cross-border payments or trade, or other exchange or capital controls, or change their currency (for example, if one or more countries should leave the Eurozone, as a result of the imposition of sanctions on individuals, entities or countries, or escalation of trade restrictions and other actions between the US, or other countries, and China), we could suffer adverse effects on our business, losses from enforced default by counterparties, be unable to access our own assets or be unable to effectively manage our risks.

We could be materially affected if a crisis develops, regionally or globally, as a result of disruptions in markets due to macroeconomic or political developments, trade restrictions, or the failure of a major market participant. Over time, our strategic plans have become more heavily dependent on our ability to generate growth and revenue in emerging markets, including China, causing us to be more exposed to the risks associated with such markets.

Global Wealth Management derives revenues from all the principal regions, but has a greater concentration in Asia than many peers and a substantial presence in the US, unlike many European peers. The Investment Bank's business is more heavily weighted to Europe and Asia than our peers, while its derivatives business is more heavily weighted to structured products for wealth management clients, in particular with European and Asian underlyings. Our performance may therefore be more affected by political, economic and market developments in these regions and businesses than some other financial service providers.

COVID-19 pandemic: The COVID-19 pandemic, the governmental measures taken to manage it, and related effects, such as labor market displacements, supply chain disruptions, and inflationary pressures, have adversely affected, and may still adversely affect, global and regional economic conditions, resulting in contraction in the global economy, substantial volatility in the financial markets, crises in markets for goods and services, as well as significant disruptions in certain regional real estate markets, increased unemployment, increased credit and counterparty risk, and operational challenges. While in most jurisdictions the pandemic-related governmental measures were reversed, resurgence of the pandemic, ineffectiveness of vaccines and continuance or imposition of new pandemic control measures may result in additional adverse effects on the global economy negatively affecting UBS's results of operations and financial condition. Should inflationary pressures or other adverse global market conditions persist, or should the pandemic lead to additional economic or market disruptions, we may experience reduced levels of client activity and demand for our products and services, increased utilization of lending commitments, significantly increased client defaults, continued and increasing credit and valuation losses in our loan portfolios, loan commitments and other assets, and impairments of other financial assets. A fall in equity markets and a consequent decline in invested assets would also reduce recurring fee income in our Global Wealth Management and Asset Management businesses, as UBS experienced in the second quarter of 2022. These factors and other consequences of the COVID-19 pandemic may negatively affect our financial condition, including possible constraints on capital and liquidity, as well as a higher cost of capital, and possible downgrades to our credit ratings.

The extent to which the pandemic, the ongoing Russia–Ukraine war, and current inflationary pressures and related adverse economic conditions affect our businesses, results of operations and financial condition, as well as our regulatory capital and liquidity ratios, will depend on future developments, including the effects of the current conditions on our clients, counterparties, employees and third-party service providers.

Our credit risk exposure to clients, trading counterparties and other financial institutions would increase under adverse or other economic conditions

Credit risk is an integral part of many of our activities, including lending, underwriting and derivatives activities. Adverse economic or market conditions, or the imposition of sanctions or other restrictions on clients, counterparties or financial institutions, may lead to impairments and defaults on these credit exposures. Losses may be exacerbated by declines in the value of collateral securing loans and other exposures. In our prime brokerage, securities finance and Lombard lending businesses, we extend substantial amounts of credit against securities collateral, the value or liquidity of which may decline rapidly. Market closures and the imposition of exchange controls, sanctions or other measures may limit our ability to settle existing transactions or to realize on collateral, which may result in unexpected increases in exposures. Our Swiss mortgage and corporate lending portfolios are a large part of our overall lending. We are therefore exposed to the risk of adverse economic developments in Switzerland, including property valuations in the housing market, the strength of the Swiss franc and its effect on Swiss exports, return to negative interest rates applied by the Swiss National Bank, economic conditions within the Eurozone or the EU, and the evolution of agreements between Switzerland and the EU or EEA, which represent Switzerland's largest export market. We have exposures related to real estate in various countries, including a substantial Swiss mortgage portfolio. Although we believe this portfolio is prudently managed, we could nevertheless be exposed to losses if a substantial deterioration in the Swiss real estate market were to occur.

As we experienced in 2020, under the IFRS 9 expected credit loss (ECL) regime, credit loss expenses may increase rapidly at the onset of an economic downturn as a result of higher levels of credit impairments (stage 3), as well as higher ECL from stages 1 and 2. Substantial increases in ECL could exceed expected loss for regulatory capital purposes and adversely affect our common equity tier 1 (CET1) capital and regulatory capital ratios.

Interest rate trends and changes could negatively affect our financial results

UBS's businesses are sensitive to changes in interest rate trends. A prolonged period of low or negative interest rates, particularly in Switzerland and the Eurozone, adversely affected the net interest income generated by UBS's Personal & Corporate Banking and Global Wealth Management businesses prior to 2022. Actions that UBS took to mitigate adverse effects on income, such as the introduction of selective deposit fees or minimum lending rates, contributed to outflows of customer deposits (a key source of funding for UBS), net new money outflows and a declining market share in its Swiss lending business.

During 2022, interest rates increased sharply in the US and most other markets, including a shift from negative to positive central bank policy rates in the Eurozone and Switzerland, as central banks responded to higher inflation. Higher interest rates generally benefit UBS's net interest income. However, as returns on alternatives to deposits increase with rising interest rates, such as returns on money market funds, UBS has experienced outflows from customer deposits and shifts of deposits from lower-interest account types to accounts bearing higher interest rates, such as savings and certificates of deposit, particularly in the US, where rates have rapidly increased. Customer deposit outflows may require UBS to obtain alternative funding, which would likely be more costly than customer deposits.

Our shareholders' equity and capital are also affected by changes in interest rates.

Currency fluctuation may have an adverse effect on our profits, balance sheet and regulatory capital

We are subject to currency fluctuation risks. Although our change from the Swiss franc to the US dollar as our Group presentation currency in 2018 reduces our exposure to currency fluctuation risks with respect to the Swiss franc, a substantial portion of our assets and liabilities are denominated in currencies other than the US dollar. Additionally, in order to hedge our CET1 capital ratio, our CET1 capital must have foreign currency exposure, which leads to currency sensitivity. As a consequence, it is not possible to simultaneously fully hedge both the amount of capital and the capital ratio. Accordingly, changes in foreign exchange rates may adversely affect our profits, balance sheet, and capital, leverage and liquidity coverage ratios.

Regulatory and legal risks

Material legal and regulatory risks arise in the conduct of our business

As a global financial services firm operating in more than 50 countries, we are subject to many different legal, tax and regulatory regimes, including extensive regulatory oversight, and are exposed to significant liability risk. We are subject to a large number of claims, disputes, legal proceedings and government investigations, and we expect that our ongoing business activities will continue to give rise to such matters in the future. The extent of our financial exposure to these and other matters is material and could substantially exceed the level of provisions that we have established. We are not able to predict the financial and non-financial consequences these matters may have when resolved.

We may be subject to adverse preliminary determinations or court decisions that may negatively affect public perception and our reputation, result in prudential actions from regulators, and cause us to record additional provisions for such matters even when we believe we have substantial defenses and expect to ultimately achieve a more favorable outcome. This risk is illustrated by the award of aggregate penalties and damages of EUR 4.5bn by the court of first instance in France. This award was reduced to an aggregate of EUR 1.8bn by the Court of Appeal, and UBS has further appealed this judgment.

Resolution of regulatory proceedings may require us to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations, and may permit financial market utilities to limit, suspend or terminate our participation in them. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material adverse consequences for us.

Our settlements with governmental authorities in connection with foreign exchange, London Interbank Offered Rates (LIBOR) and other benchmark interest rates starkly illustrate the significantly increased level of financial and reputational risk now associated with regulatory matters in major jurisdictions. In connection with investigations related to LIBOR and other benchmark rates and to foreign exchange and precious metals, very large fines and disgorgement amounts were assessed against us, and we were required to enter guilty pleas despite our full cooperation with the authorities in the investigations, and despite our receipt of conditional leniency or conditional immunity from anti-trust authorities in a number of jurisdictions, including the US and Switzerland.

For a number of years, we have been, and we continue to be, subject to a very high level of regulatory scrutiny and to certain regulatory measures that constrain our strategic flexibility. We believe we have remediated the deficiencies that led to significant losses in the past and made substantial changes in our controls and conduct risk frameworks to address the issues highlighted by the LIBOR-related, foreign exchange and precious metals regulatory resolutions. We have also undertaken extensive efforts to implement new regulatory requirements and meet heightened expectations.

We continue to be in active dialogue with regulators concerning the actions we are taking to improve our operational risk management, risk control, anti-money laundering, data management and other frameworks, and otherwise seek to meet supervisory expectations, but there can be no assurance that our efforts will have the desired effects. As a result of this history, our level of risk with respect to regulatory enforcement may be greater than that of some of our peers.

Substantial changes in regulation may adversely affect our businesses and our ability to execute our strategic plans

Since the financial crisis of 2008, we have been subject to significant regulatory requirements, including recovery and resolution planning, changes in capital and prudential standards, changes in taxation regimes as a result of changes in governmental administrations, new and revised market standards and fiduciary duties, as well as new and developing environmental, social and governance standards and requirements. Notwithstanding attempts by regulators to align their efforts, the measures adopted or proposed for banking regulation differ significantly across the major jurisdictions, making it increasingly difficult to manage a global institution. In addition, Swiss regulatory changes with regard to such matters as capital and liquidity have often proceeded more quickly than those in other major jurisdictions, and Switzerland's requirements for major international banks are among the strictest of the major financial centers. This could put Swiss banks, such as UBS, at a disadvantage when competing with peer financial institutions subject to more lenient regulation or with unregulated non-bank competitors.

Our implementation of additional regulatory requirements and changes in supervisory standards, as well as our compliance with existing laws and regulations, continue to receive heightened scrutiny from supervisors. If we do not meet supervisory expectations in relation to these or other matters, or if additional supervisory or regulatory issues arise, we would likely be subject to further regulatory scrutiny, as well as measures that may further constrain our strategic flexibility.

Resolvability and resolution and recovery planning: We have moved significant operations into subsidiaries to improve resolvability and meet other regulatory requirements, and this has resulted in substantial implementation costs, increased our capital and funding costs and reduced operational flexibility. For example, we have transferred all of our US subsidiaries under a US intermediate holding company to meet US regulatory requirements, and have transferred substantially all the operations of Personal & Corporate Banking and Global Wealth Management booked in Switzerland to UBS Switzerland AG to improve resolvability.

These changes create operational, capital, liquidity, funding and tax inefficiencies. Our operations in subsidiaries are subject to local capital, liquidity, stable funding, capital planning and stress testing requirements. These requirements have resulted in increased capital and liquidity requirements in affected subsidiaries, which limit our operational flexibility and negatively affect our ability to benefit from synergies between business units and to distribute earnings to the Group.

Under the Swiss too-big-to-fail (TBTF) framework, we are required to put in place viable emergency plans to preserve the operation of systemically important functions in the event of a failure. Moreover, under this framework and similar regulations in the US, the UK, the EU and other jurisdictions in which we operate, we are required to prepare credible recovery and resolution plans detailing the measures that would be taken to recover in a significant adverse event or in the event of winding down the Group or the operations in a host country through resolution or insolvency proceedings. If a recovery or resolution plan that we produce is determined by the relevant authority to be inadequate or not credible, relevant regulation may permit the authority to place limitations on the scope or size of our business in that jurisdiction, or oblige us to hold higher amounts of capital or liquidity or to change our legal structure or business in order to remove the relevant impediments to resolution.

Capital and prudential standards: As an internationally active Swiss systemically relevant bank (an SRB), we are subject to capital and total loss-absorbing capacity (TLAC) requirements that are among the most stringent in the world. Moreover, many of our subsidiaries must comply with minimum capital, liquidity and similar requirements and, as a result, UBS Group AG and UBS AG have contributed a significant portion of their capital and provide substantial liquidity to these subsidiaries. These funds are available to meet funding and collateral needs in the relevant entities, but are generally not readily available for use by the Group as a whole.

We expect our risk-weighted assets (RWA) to further increase as the effective date for additional capital standards promulgated by the Basel Committee on Banking Supervision (the BCBS) draws nearer.

Increases in capital and liquidity standards could significantly curtail our ability to pursue strategic opportunities or to return capital to shareholders.

Market regulation and fiduciary standards: Our wealth and asset management businesses operate in an environment of increasing regulatory scrutiny and changing standards with respect to fiduciary and other standards of care and the focus on mitigating or eliminating conflicts of interest between a manager or advisor and the client, which require effective implementation across the global systems and processes of investment managers and other industry participants. For example, we have made material changes to our business processes, policies and the terms on which we interact with these clients in order to comply with SEC Regulation Best Interest, which is intended to enhance and clarify the duties of brokers and investment advisers to retail customers, the Volcker Rule, which limits our ability to engage in proprietary trading, as well as changes in European and Swiss market conduct regulation. Future changes in the regulation of our duties to customers may require us to make further changes to our businesses, which would result in additional expense and may adversely affect our business. We may also become subject to other similar regulations substantively limiting the types of activities in which we may engage or the way we conduct our operations.

In many instances, we provide services on a cross-border basis, and we are therefore sensitive to barriers restricting market access for third-country firms. In particular, efforts in the EU to harmonize the regime for third-country firms to access the European market may have the effect of creating new barriers that adversely affect our ability to conduct business in these jurisdictions from Switzerland. In addition, a number of jurisdictions are increasingly regulating cross-border activities based on determinations of equivalence of home country regulation, substituted compliance or similar principles of comity. A negative determination with respect to Swiss equivalence could limit our access to the market in those jurisdictions and may negatively influence our ability to act as a global firm. For example, the EU declined to extend its equivalence determination for Swiss exchanges, which lapsed as of 30 June 2019.

UBS experienced cross-border outflows over a number of years as a result of heightened focus by fiscal authorities on cross-border investment and fiscal amnesty programs, in anticipation of the implementation in Switzerland of the global automatic exchange of tax information, and as a result of the measures UBS has implemented in response to these changes. Further changes in local tax laws or regulations and their enforcement, additional cross-border tax information exchange regimes, national tax amnesty or enforcement programs or similar actions may affect our clients' ability or willingness to do business with us and could result in additional cross-border outflows.

If we experience financial difficulties, FINMA has the power to open restructuring or liquidation proceedings or impose protective measures in relation to UBS Group AG, UBS AG or UBS Switzerland AG, and such proceedings or measures may have a material adverse effect on our shareholders and creditors

Under the Swiss Banking Act, FINMA is able to exercise broad statutory powers with respect to Swiss banks and Swiss parent companies of financial groups, such as UBS Group AG, UBS AG and UBS Switzerland AG, if there is justified concern that the entity is over-indebted, has serious liquidity problems or, after the expiration of any relevant deadline, no longer fulfills capital adequacy requirements. Such powers include ordering protective measures, instituting restructuring proceedings (and exercising any Swiss resolution powers in connection therewith), and instituting liquidation proceedings, all of which may have a material adverse effect on shareholders and creditors or may prevent UBS Group AG, UBS AG or UBS Switzerland AG from paying dividends or making payments on debt obligations.

UBS would have limited ability to challenge any such protective measures, and creditors and shareholders would also have limited ability under Swiss law or in Swiss courts to reject them, seek their suspension, or challenge their imposition, including measures that require or result in the deferment of payments.

If restructuring proceedings are opened with respect to UBS Group AG, UBS AG or UBS Switzerland AG, the resolution powers that FINMA may exercise include the power to: (i) transfer all or some of the assets, debt and other liabilities, and contracts of the entity subject to proceedings to another entity; (ii) stay for a maximum of two business days (a) the termination of, or the exercise of rights to terminate, netting rights, (b) rights to enforce or dispose of certain types of collateral or (c) rights to transfer claims, liabilities or certain collateral, under contracts to which the entity subject to proceedings is a party; and / or (iii) partially or fully write down the equity capital and regulatory capital instruments and, if such regulatory capital is fully written down, write down or convert into equity the other debt instruments of the entity subject to proceedings. Shareholders and creditors would have no right to reject, or to seek the suspension of, any restructuring plan pursuant to which such resolution powers are exercised. They would have only limited rights to challenge any decision to exercise resolution powers or to have that decision reviewed by a judicial or administrative process or otherwise.

Upon full or partial write-down of the equity and regulatory capital instruments of the entity subject to restructuring proceedings, the relevant shareholders and creditors would receive no payment in respect of the equity and debt that is written down, the write-down would be permanent, and the investors would likely not, at such time or at any time thereafter, receive any shares or other participation rights, or be entitled to any write-up or any other compensation in the event of a potential subsequent recovery of the debtor. If FINMA orders the conversion of debt of the entity subject to restructuring proceedings into equity, the securities received by the investors may be worth significantly less than the original debt and may have a significantly different risk profile. In addition, creditors receiving equity would be effectively subordinated to all creditors of the restructured entity in the event of a subsequent winding up, liquidation or dissolution of the restructured entity, which would increase the risk that investors would lose all or some of their investment.

FINMA has significant discretion in the exercise of its powers in connection with restructuring proceedings. Furthermore, certain categories of debt obligations, such as certain types of deposits, are subject to preferential treatment. As a result, holders of obligations of an entity subject to a Swiss restructuring proceeding may have their obligations written down or converted into equity even though obligations ranking on par with such obligations are not written down or converted.

Developments in sustainability, climate, environmental and social standards and regulations may affect our business and impact our ability to fully realize our goals

We have set ambitious goals for environmental, social and governance (ESG) matters. These goals include our ambitions for environmental sustainability in our operations, including carbon emissions, in the business we do with clients and in products that we offer. They also include goals or ambitions for diversity in our workforce and supply chain, and support for the United Nations Sustainable Development Goals. There is substantial uncertainty as to the scope of actions that may be required of us, governments and others to achieve the goals we have set, and many of our goals and objectives are only achievable with a combination of government and private action. National and international standards and expectations, industry and scientific practices, and regulatory taxonomies and disclosure obligations addressing these matters are relatively immature and are rapidly evolving. In many cases, goals and standards are defined at a high level and can be subject to different interpretations. In addition, there are significant limitations in the data available to measure our climate and other goals. Although we have defined and disclosed our goals based on the standards existing at the time of disclosure, there can be no assurance (i) that the various ESG regulatory and disclosure regimes under which we operate will not come into conflict with one another, (ii) that the current standards will not be interpreted differently than our understanding or change in a manner that substantially increases the cost or effort for us to achieve such goals or (iii) that additional data or methods, whether voluntary or required by regulation, may substantially change our calculation of our goals and aspirations. It is possible that such goals may prove to be considerably more difficult or even impossible to achieve. The evolving standards may also require us to substantially change the stated goals and ambitions. If we are not able to achieve the goals we have set, or can only do so at significant expense to our business, we may fail to meet regulatory expectations, incur damage to our reputation or be exposed to an increased risk of litigation or other adverse action.

While ESG regulatory regimes and international standards are being developed, including to require consideration of ESG risks in investment decisions, some jurisdictions, notably in the US, have developed rules restricting the consideration of ESG factors in investment and business decisions. Under these anti-ESG rules, companies that are perceived as boycotting or discriminating against certain industries may be restricted from doing business with certain governmental entities. Our businesses may be adversely affected if UBS is considered as discriminating against companies based on ESG considerations, or if further anti-ESG rules are developed or broadened.

Our financial results may be negatively affected by changes to assumptions and valuations, as well as changes to accounting standards

We prepare our consolidated financial statements in accordance with International Financial Reporting Standards (IFRS). The application of these accounting standards requires the use of judgment based on estimates and assumptions that may involve significant uncertainty at the time they are made. This is the case, for example, with respect to the measurement of fair value of financial instruments, the recognition of deferred tax assets (DTAs), the assessment of the impairment of goodwill, expected credit losses and estimation of provisions for litigation, regulatory and similar matters. Such judgments, including the underlying estimates and assumptions, which encompass historical experience, expectations of the future and other factors, are regularly evaluated to determine their continuing relevance based on current conditions. Using different assumptions could cause the reported results to differ. Changes in assumptions, or failure to make the changes necessary to reflect evolving market conditions, may have a significant effect on the financial statements in the periods when changes occur. Estimates of provisions may be subject to a wide range of potential outcomes and significant uncertainty. For example, the broad range of potential outcomes in our legal proceedings in France and in the US relating to residential mortgage-backed securities increase the uncertainty associated with assessing the appropriate provision. If the estimates and assumptions in future periods deviate from the current outlook, our financial results may also be negatively affected.

Changes to IFRS or interpretations thereof may cause future reported results and financial position to differ from current expectations, or historical results to differ from those previously reported due to the adoption of accounting standards on a retrospective basis. Such changes may also affect our regulatory capital and ratios. For example, the introduction of the ECL regime under IFRS 9 in 2018 fundamentally changed how credit risk arising from loans, loan commitments, guarantees and certain revocable facilities is accounted for. Under the ECL regime, credit loss expenses may increase rapidly at the onset of an economic downturn as a result of higher levels of credit impairments (stage 3), as well as higher ECL from stages 1 and 2, only gradually diminishing once the economic outlook improves. As we observed in 2020, this effect may be more pronounced in a deteriorating economic environment. Substantial increases in ECL could exceed expected loss for regulatory capital purposes and adversely affect our CET1 capital and regulatory capital ratios.

We may be unable to maintain our capital strength

Capital strength enables us to grow our businesses and absorb increases in regulatory and capital requirements. It reassures our clients and stakeholders, allows us to maintain our capital return policy and contributes to our credit ratings. Our capital and leverage ratios are driven primarily by RWA, the leverage ratio denominator and eligible capital, all of which may fluctuate based on a number of factors, some of which are outside of our control. Our ability to maintain our capital ratios is subject to numerous risks, including the financial results of our businesses, the effect of changes to capital standards, methodologies and interpretations that may adversely affect the calculation of our capital ratios, the imposition of risk add-ons or capital buffers, and the application of additional capital, liquidity and similar requirements to subsidiaries. The results of our businesses may be adversely affected by events arising from other risk factors described herein. In some cases, such as litigation and regulatory risk and operational risk events, losses may be sudden and large. These risks could reduce the amount of capital available for return to shareholders and hinder our ability to achieve our capital returns target of a progressive cash dividend coupled with a share repurchase program.

Our eligible capital may be reduced by losses recognized within net profit or other comprehensive income. Eligible capital may also be reduced for other reasons, including acquisitions that change the level of goodwill, changes in temporary differences related to DTAs included in capital, adverse currency movements affecting the value of equity, prudential adjustments that may be required due to the valuation uncertainty associated with certain types of positions, changes in regulatory interpretations on the inclusion or exclusion of items contributing to our shareholders equity in regulatory capital, and changes in the value of certain pension fund assets and liabilities or in the interest rate and other assumptions used to calculate the changes in our net defined benefit obligation recognized in other comprehensive income.

RWA are driven by our business activities, by changes in the risk profile of our exposures, by changes in our foreign currency exposures and foreign exchange rates, and by regulation. For instance, substantial market volatility, a widening of credit spreads, adverse currency movements, increased counterparty risk, deterioration in the economic environment or increased operational risk could result in an increase in RWA. Changes in the calculation of RWA, the imposition of additional supplemental RWA charges or multipliers applied to certain exposures and other methodology changes, as well as the finalization of the Basel III framework and Fundamental Review of the Trading Book promulgated by the BCBS, which are expected to increase our RWA.

The leverage ratio is a balance sheet-driven measure and therefore limits balance sheet-intensive activities, such as lending, more than activities that are less balance sheet intensive, and it may constrain our business even if we satisfy other risk-based capital requirements. Our leverage ratio denominator is driven by, among other things, the level of client activity, including deposits and loans, foreign exchange rates, interest rates and other market factors. Many of these factors are wholly or partly outside of our control.

The effect of taxes on our financial results is significantly influenced by tax law changes and reassessments of our deferred tax assets

Our effective tax rate is highly sensitive to our performance, our expectation of future profitability and any potential increases or decreases in statutory tax rates, such as any potential increase in the US federal corporate tax rate. Furthermore, based on prior years' tax losses, we have recognized DTAs reflecting the probable recoverable level based on future taxable profit as informed by our business plans. If our performance is expected to produce diminished taxable profit in future years, particularly in the US, we may be required to write down all or a portion of the currently recognized DTAs through the income statement in excess of anticipated amortization. This would have the effect of increasing our effective tax rate in the year in which any write-downs are taken. Conversely, if we expect the performance of entities in which we have unrecognized tax losses to improve, particularly in the US or the UK, we could potentially recognize additional DTAs. The effect of doing so would be to reduce our effective tax rate in years in which additional DTAs are recognized and to increase our effective tax rate in future years. Our effective tax rate is also sensitive to any future reductions in statutory tax rates, particularly in the US, which would cause the expected future tax benefit from items such as tax loss carry-forwards in the affected locations to diminish in value. This, in turn, would cause a write-down of the associated DTAs. Conversely, an increase in US corporate tax rates would result in an increase in the Group's DTAs.

We generally revalue our DTAs in the fourth quarter of the financial year based on a reassessment of future profitability taking into account our updated business plans. We consider the performance of our businesses and the accuracy of historical forecasts, tax rates and other factors in evaluating the recoverability of our DTAs, including the remaining tax loss carry-forward period and our assessment of expected future taxable profits over the life of DTAs. Estimating future profitability is inherently subjective and is particularly sensitive to future economic, market and other conditions, which are difficult to predict.

Our results in past years have demonstrated that changes in the recognition of DTAs can have a very significant effect on our reported results. Any future change in the manner in which UBS remeasures DTAs could affect UBS's effective tax rate, particularly in the year in which the change is made.

Our full-year effective tax rate could change if aggregate tax expenses in respect of profits from branches and subsidiaries without loss coverage differ from what is expected, or if branches and subsidiaries generate tax losses that we cannot benefit from through the income statement. In particular, losses at entities or branches that cannot offset for tax purposes taxable profits in other Group entities, and which do not result in additional DTA recognition, may increase our effective tax rate. In addition, tax laws or the tax authorities in countries where we have undertaken legal structure changes may cause entities to be subject to taxation as permanent establishments or may prevent the transfer of tax losses incurred in one legal entity to newly organized or reorganized subsidiaries or affiliates or may impose limitations on the utilization of tax losses that relate to businesses formerly conducted by the transferor. Were this to occur in situations where there were also limited planning opportunities to utilize the tax losses in the originating entity, the DTAs associated with such tax losses may be required to be written down through the income statement.

Changes in tax law may materially affect our effective tax rate, and, in some cases, may substantially affect the profitability of certain activities. In addition, statutory and regulatory changes, as well as changes to the way in which courts and tax authorities interpret tax laws, including assertions that we are required to pay taxes in a jurisdiction as a result of activities connected to that jurisdiction constituting a permanent establishment or similar theory, and changes in our assessment of uncertain tax positions, could cause the amount of taxes we ultimately pay to materially differ from the amount accrued.

Strategy, management and operational risks

Operational risks affect our business

Our businesses depend on our ability to process a large number of transactions, many of which are complex, across multiple and diverse markets in different currencies, to comply with requirements of many different legal and regulatory regimes to which we are subject and to prevent, or promptly detect and stop, unauthorized, fictitious or fraudulent transactions. We also rely on access to, and on the functioning of, systems maintained by third parties, including clearing systems, exchanges, information processors and central counterparties. Any failure of our or third-party systems could have an adverse effect on us. These risks may be greater as we deploy newer technologies, such as blockchain, or processes, platforms or products that rely on these technologies. Our operational risk management and control systems and processes are designed to help ensure that the risks associated with our activities – including those arising from process error, failed execution, misconduct, unauthorized trading, fraud, system failures, financial crime, cyberattacks, breaches of information security, inadequate or ineffective access controls and failure of security and physical protection – are appropriately controlled. If our internal controls fail or prove ineffective in identifying and remedying these risks, we could suffer operational failures that might result in material losses, such as the substantial loss we incurred from the unauthorized trading incident announced in September 2011.

As a significant proportion of our staff have been and will continue working from outside the office, we have faced, and will continue to face, new challenges and operational risks, including maintenance of supervisory and surveillance controls, as well as increased fraud and data security risks. While we have taken measures to manage these risks, such measures have never been tested on the scale or duration that we are currently experiencing, and there is risk that these measures will prove not to have been effective in the current unprecedented operating environment.

We use automation as part of our efforts to improve efficiency, reduce the risk of error and improve our client experience. We intend to expand the use of robotic processing, machine learning and artificial intelligence to further these goals. Use of these tools presents their own risks, including the need for effective design and testing; the quality of the data used for development and operation of machine learning and artificial intelligence tools may adversely affect their functioning and result in errors and other operational risks.

For financial institutions, cybersecurity risks have increased due to the widespread use of digital technologies, cloud computing and mobile devices to conduct financial business and transactions. In addition, cyberattacks by hackers, terrorists, criminal organizations, nation states and extremists have also increased in frequency and sophistication. Current geopolitical tensions have also led to increased risk of cyberattack from foreign state actors. In particular, the Russia–Ukraine war and the imposition of significant sanctions on Russia by Switzerland, the US, the EU, the UK and others has resulted and may continue to result in an increase in the risk of cyberattacks.

Financial services firms have increasingly been subject to breaches of security and to cyber- and other forms of attack, some of which are sophisticated and targeted attacks intended to gain access to confidential information or systems, disrupt service or steal or destroy data. These attacks may occur on our own systems or on the systems that are operated by external service providers, may be attempted through the introduction of "ransomware," viruses or malware, phishing and other forms of social engineering, distributed denial of service attacks and other means. These attempts may occur directly, or using equipment or security passwords of our employees, third-party service providers or other users. In addition to external attacks, we have experienced loss of client data from failure by employees and others to follow internal policies and procedures and from misappropriation of our data by employees and others. We may not be able to anticipate, detect or recognize threats to our systems or data and our preventative measures may not be effective to prevent an attack or a security breach. In the event of a security breach, notwithstanding our preventative measures, we may not immediately detect a particular breach or attack. Once a particular attack is detected, time may be required to investigate and assess the nature and extent of the attack, and to restore and test systems and data. If a successful attack occurs at a service provider, as we have recently experienced, we may be dependent on the service provider's ability to detect the attack, investigate and assess the attack and successfully restore the relevant systems and data. A successful breach or circumvention of security of our or a service provider's systems or data could have significant negative consequences for us, including disruption of our operations, misappropriation of confidential information concerning us or our clients, damage to our systems, financial losses for us or our clients, violations of data privacy and similar laws, litigation exposure and damage to our reputation. We may be subject to enforcement actions as regulatory focus on cybersecurity increases and regulators have announced new rules, guidance and initiatives on ransomware and other cybersecurity-related issues.

We are subject to complex and frequently changing laws and regulations governing the protection of client and personal data, such as the EU General Data Protection Regulation. Ensuring that we comply with applicable laws and regulations when we collect, use and transfer personal information requires substantial resources and may affect the ways in which we conduct our business. In the event that we fail to comply with applicable laws, we may be exposed to regulatory fines and penalties and other sanctions. We may also incur such penalties if our vendors or other service providers or clients or counterparties fail to comply with these laws or to maintain appropriate controls over protected data. In addition, any loss or exposure of client or other data may adversely damage our reputation and adversely affect our business.

A major focus of US and other countries' governmental policies relating to financial institutions in recent years has been on fighting money laundering and terrorist financing. We are required to maintain effective policies, procedures and controls to detect, prevent and report money laundering and terrorist financing, and to verify the identity of our clients under the laws of many of the countries in which we operate. We are also subject to laws and regulations related to corrupt and illegal payments to government officials by others, such as the US Foreign Corrupt Practices Act and the UK Bribery Act. We have implemented policies, procedures and internal controls that are designed to comply with such laws and regulations. Notwithstanding this, US regulators have found deficiencies in the design and operation of anti-money laundering programs in our US operations. We have undertaken a significant program to address these regulatory findings with the objective of fully meeting regulatory expectations for our programs. Failure to maintain and implement adequate programs to combat money laundering, terrorist financing or corruption, or any failure of our programs in these areas, could have serious consequences both from legal enforcement action and from damage to our reputation. Frequent changes in sanctions imposed and increasingly complex sanctions imposed on countries, entities and individuals, as exemplified by the breadth and scope of the sanctions imposed in relation to the war in Ukraine, increase our cost of monitoring and complying with sanctions requirements and increase the risk that we will not identify in a timely manner client activity that is subject to a sanction.

As a result of new and changed regulatory requirements and the changes we have made in our legal structure, the volume, frequency and complexity of our regulatory and other reporting has remained elevated. Regulators have also significantly increased expectations regarding our internal reporting and data aggregation, as well as management reporting. We have incurred, and continue to incur, significant costs to implement infrastructure to meet these requirements. Failure to meet external reporting requirements accurately and in a timely manner or failure to meet regulatory expectations of internal reporting, data aggregation and management reporting could result in enforcement action or other adverse consequences for us.

In addition, despite the contingency plans that we have in place, our ability to conduct business may be adversely affected by a disruption in the infrastructure that supports our businesses and the communities in which we operate. This may include a disruption due to natural disasters, pandemics, civil unrest, war or terrorism and involve electrical, communications, transportation or other services that we use or that are used by third parties with whom we conduct business.

We may not be successful in the ongoing execution of our strategic plans

We have transformed UBS to focus on our Global Wealth Management business and our universal bank in Switzerland, complemented by Asset Management and a significantly smaller and more capital-efficient Investment Bank; we have substantially reduced the risk-weighted assets and leverage ratio denominator usage in Group Functions; and made significant cost reductions. Our ongoing strategic initiatives focus on growing our business in the Americas and in Asia Pacific, particularly China, and investing in technology to differentiate our service to clients, and implementing an agile mode of work. These measures will require significant change in our organization and we may not succeed in executing our strategy or achieving our performance targets, or may be delayed in doing so. Macroeconomic conditions, geopolitical uncertainty, changes to regulatory requirements and the continuing costs of meeting these requirements have prompted us to adapt our targets and ambitions in the past and we may need to do so again in the future.

To achieve our strategic plans, we expect to continue to make significant expenditures on technology and infrastructure to improve client experience, improve and further enable digital offerings and increase efficiency. We also may seek to implement our strategy through acquisitions or strategic partnerships to expand or improve our product offerings or target additional client segments. Our investments in new technology and our acquisitions and strategic partnerships may not be successfully completed, fully achieve our objectives or improve our ability to attract and retain clients. In addition, we face competition in providing digitally enabled offerings from both existing competitors and new financial service providers in various portions of the value chain. For example, technological advances and the growth of e-commerce have made it possible for e-commerce firms and other companies to offer products and services that were traditionally offered only by banks. These advances have also allowed financial institutions and other companies to provide digitally based financial solutions, including electronic securities trading, payments processing and online automated algorithmic-based investment advice at a low cost to their clients. We may have to lower our prices, or risk losing clients as a result. Our ability to develop and implement competitive digitally enabled offerings and processes will be an important factor in our ability to compete.

As part of our strategy, we seek to improve our operating efficiency, in part by controlling our costs. We may not be able to identify feasible cost reduction opportunities that are consistent with our business goals and cost reductions may be realized later or may be smaller than we anticipate. Higher temporary and permanent regulatory costs and higher business demand than anticipated have partly offset cost reductions and delayed the achievement of our past cost reduction targets, and we could continue to be challenged in the execution of our ongoing efforts to improve operating efficiency.

Changes in our workforce as a result of outsourcing, nearshoring, offshoring, insourcing or staff reductions, or changes that arise from the introduction of work from home or other flexible ways of working or agile work methodologies may introduce new operational risks that, if not effectively addressed, could affect our ability to achieve cost and other benefits from such changes, or could result in operational losses.

As we implement effectiveness and efficiency programs, we may also experience unintended consequences, such as the unintended loss or degradation of capabilities that we need in order to maintain our competitive position, achieve our targeted returns or meet existing or new regulatory requirements and expectations.

We depend on our risk management and control processes to avoid or limit potential losses in our businesses

Controlled risk-taking is a major part of the business of a financial services firm. Some losses from risk-taking activities are inevitable, but to be successful over time, we must balance the risks we take against the returns generated. Therefore, we must diligently identify, assess, manage and control our risks, not only in normal market conditions but also as they might develop under more extreme, stressed conditions, when concentrations of exposures can lead to severe losses.

We have not always been able to prevent serious losses arising from risk management failures and extreme or sudden market events. We recorded substantial losses on fixed-income trading positions in the 2008 financial crisis, in the unauthorized trading incident in 2011 and, more recently, positions resulting from the default of a US prime brokerage client. We revise and strengthen our risk management and control frameworks to seek to address identified shortcomings. Nonetheless, we could suffer further losses in the future if, for example:
– we do not fully identify the risks in our portfolio, in particular risk concentrations and correlated risks;
– our assessment of the risks identified, or our response to negative trends, proves to be untimely, inadequate, insufficient or incorrect;
– our risk models prove insufficient to predict the scale of financial risks the bank faces;
– markets move in ways that we do not expect – in terms of their speed, direction, severity or correlation – and our ability to manage risks in the resulting environment is, therefore, affected;
– third parties to whom we have credit exposure or whose securities we hold are severely affected by events and we suffer defaults and impairments beyond the level implied by our risk assessment; or
– collateral or other security provided by our counterparties and clients proves inadequate to cover their obligations at the time of default.

We also hold legacy risk positions, primarily in Group Functions, that, in many cases, are illiquid and may again deteriorate in value.

We also manage risk on behalf of our clients. The performance of assets we hold for our clients may be adversely affected by the same aforementioned factors. If clients suffer losses or the performance of their assets held with us is not in line with relevant benchmarks against which clients assess investment performance, we may suffer reduced fee income and a decline in assets under management, or withdrawal of mandates.

Investment positions, such as equity investments made as part of strategic initiatives and seed investments made at the inception of funds that we manage, may also be affected by market risk factors. These investments are often not liquid and generally are intended or required to be held beyond a normal trading horizon. Deteriorations in the fair value of these positions would have a negative effect on our earnings.

We may not be successful in implementing changes in our wealth management businesses to meet changing market, regulatory and other conditions

We are exposed to possible outflows of client assets in our asset-gathering businesses and to changes affecting the profitability of Global Wealth Management, in particular. Initiatives that we may implement to overcome the effects of changes in the business environment on our profitability, balance sheet and capital positions may not succeed in counteracting those effects and may cause net new money outflows and reductions in client deposits, as happened with our balance sheet and capital optimization program in 2015. There is no assurance that we will be successful in our efforts to offset the adverse effect of these or similar trends and developments.

We may be unable to identify or capture revenue or competitive opportunities, or retain and attract qualified employees

The financial services industry is characterized by intense competition, continuous innovation, restrictive, detailed, and sometimes fragmented regulation and ongoing consolidation. We face competition at the level of local markets and individual business lines, and from global financial institutions that are comparable to us in their size and breadth, as well as competition from new technology-based market entrants, which may not be subject to the same level of regulation. Barriers to entry in individual markets and pricing levels are being eroded by new technology. We expect these trends to continue and competition to increase. Our competitive strength and market position could be eroded if we are unable to identify market trends and developments, do not respond to such trends and developments by devising and implementing adequate business strategies, do not adequately develop or update our technology, including our digital channels and tools, or are unable to attract or retain the qualified people needed.

The amount and structure of our employee compensation is affected not only by our business results, but also by competitive factors and regulatory considerations.

In response to the demands of various stakeholders, including regulatory authorities and shareholders, and in order to better align the interests of our staff with other stakeholders, we have increased average deferral periods for stock awards, expanded forfeiture provisions and, to a more limited extent, introduced clawback provisions for certain awards linked to business performance. We have also introduced individual caps on the proportion of fixed to variable pay for the Group Executive Board (GEB) members, as well as certain other employees.

Constraints on the amount or structure of employee compensation, higher levels of deferral, performance conditions and other circumstances triggering the forfeiture of unvested awards may adversely affect our ability to retain and attract key employees, particularly where we compete with companies that are not subject to these constraints. The loss of key staff and the inability to attract qualified replacements could seriously compromise our ability to execute our strategy and to successfully improve our operating and control environment, and could affect our business performance. Swiss law requires that shareholders approve the compensation of the Board of Directors (the BoD) and the GEB each year. If our shareholders fail to approve the compensation for the GEB or the BoD, this could have an adverse effect on our ability to retain experienced directors and our senior management.

Our reputation is critical to our success

Our reputation is critical to the success of our strategic plans, business and prospects. Reputational damage is difficult to reverse, and improvements tend to be slow and difficult to measure. In the past, our reputation has been adversely affected by our losses during the financial crisis, investigations into our cross-border private banking services, criminal resolutions of LIBOR-related and foreign exchange matters, as well as other matters. We believe that reputational damage as a result of these events was an important factor in our loss of clients and client assets across our asset-gathering businesses. New events that cause reputational damage could have a material adverse effect on our results of operation and financial condition, as well as our ability to achieve our strategic goals and financial targets.

As UBS Group AG is a holding company, its operating results, financial condition and ability to pay dividends and other distributions and / or to pay its obligations in the future depend on funding, dividends and other distributions received directly or indirectly from its subsidiaries, which may be subject to restrictions

UBS Group AG's ability to pay dividends and other distributions and to pay its obligations in the future will depend on the level of funding, dividends and other distributions, if any, received from UBS AG and other subsidiaries. The ability of such subsidiaries to make loans or distributions, directly or indirectly, to UBS Group AG may be restricted as a result of several factors, including restrictions in financing agreements and the requirements of applicable law and regulatory, fiscal or other restrictions. In particular, UBS Group AG's direct and indirect subsidiaries, including UBS AG, UBS Switzerland AG, UBS Americas Holding LLC and UBS Europe SE, are subject to laws and regulations that restrict dividend payments, authorize regulatory bodies to block or reduce the flow of funds from those subsidiaries to UBS Group AG, or could affect their ability to repay any loans made to, or other investments in, such subsidiary by UBS Group AG or another member of the Group. For example, in the early stages of the COVID-19 pandemic, the European Central Bank ordered all banks under its supervision to cease dividend distributions and the Federal Reserve Board has limited capital distributions by bank holding companies and intermediate holding companies. Restrictions and regulatory actions of this kind could impede access to funds that UBS Group AG may need to meet its obligations or to pay dividends to shareholders. In addition, UBS Group AG's right to participate in a distribution of assets upon a subsidiary's liquidation or reorganization is subject to all prior claims of the subsidiary's creditors.

Our capital instruments may contractually prevent UBS Group AG from proposing the distribution of dividends to shareholders, other than in the form of shares, and from engaging in repurchases of shares, if we do not pay interest on these instruments.

Furthermore, UBS Group AG may guarantee some of the payment obligations of certain of the Group's subsidiaries from time to time. These guarantees may require UBS Group AG to provide substantial funds or assets to subsidiaries or their creditors or counterparties at a time when UBS Group AG is in need of liquidity to fund its own obligations.

The credit ratings of UBS Group AG or its subsidiaries used for funding purposes could be lower than the ratings of the Group's operating subsidiaries, which may adversely affect the market value of the securities and other obligations of UBS Group AG or those subsidiaries on a standalone basis.

Liquidity and funding risk

Liquidity and funding management are critical to UBS's ongoing performance

The viability of our business depends on the availability of funding sources, and our success depends on our ability to obtain funding at times, in amounts, for tenors and at rates that enable us to efficiently support our asset base in all market conditions. Our funding sources have generally been stable, but could change in the future because of, among other things, general market disruptions or widening credit spreads, which could also influence the cost of funding. A substantial part of our liquidity and funding requirements are met using short-term unsecured funding sources, including retail and wholesale deposits and the regular issuance of money market securities. A change in the availability of short-term funding could occur quickly.

The addition of loss-absorbing debt as a component of capital requirements, the regulatory requirements to maintain minimum TLAC at UBS's holding company and at subsidiaries, as well as the power of resolution authorities to bail in TLAC instruments and other debt obligations, and uncertainty as to how such powers will be exercised, caused and may still cause further increase of our cost of funding, and could potentially increase the total amount of funding required, in the absence of other changes in our business.

Reductions in our credit ratings may adversely affect the market value of the securities and other obligations and increase our funding costs, in particular with regard to funding from wholesale unsecured sources, and could affect the availability of certain kinds of funding. In addition, as experienced in connection with Moody's downgrade of UBS AG's long-term debt rating in June 2012, rating downgrades can require us to post additional collateral or make additional cash payments under trading agreements. Our credit ratings, together with our capital strength and reputation, also contribute to maintaining client and counterparty confidence, and it is possible that rating changes could influence the performance of some of our businesses.

The requirement to maintain a liquidity coverage ratio of high-quality liquid assets to estimated stressed short-term net cash outflows, and other similar liquidity and funding requirements, oblige us to maintain high levels of overall liquidity, limit our ability to optimize interest income and expense, make certain lines of business less attractive and reduce our overall ability to generate profits. In particular, UBS AG is subjected to increased liquidity coverage requirements under the direction of FINMA. The liquidity coverage ratio and net stable funding ratio requirements are intended to ensure that we are not overly reliant on short-term funding and that we have sufficient long-term funding for illiquid assets. The relevant calculations make assumptions about the relative likelihood and amount of outflows of funding and available sources of additional funding in market-wide and firm-specific stress situations. In an actual stress situation, however, our funding outflows could exceed the assumed amounts.

Financial and operating performance

Management report

Accounting and financial reporting

Critical accounting estimates and judgments

In preparing our financial statements in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (the IASB), we apply judgment and make estimates and assumptions that may involve significant uncertainty at the time they are made. We regularly reassess those estimates and assumptions, which encompass historical experience, expectations of the future and other pertinent factors, to determine their continuing relevance based on current conditions, and update them as necessary. Changes in estimates and assumptions may have significant effects on the financial statements. Furthermore, actual results may differ significantly from our estimates, which could result in significant losses to the Group, beyond what we expected or provided for.

Key areas involving a high degree of judgment and areas where estimates and assumptions are significant to the consolidated financial statements include:
- expected credit loss measurement;
- fair value measurement;
- income taxes;
- provisions and contingent liabilities;
- post-employment benefit plans;
- goodwill; and
- consolidation of structured entities.

› **Refer to "Note 1a Material accounting policies" in the "Consolidated financial statements" section of this report for more information**

› **Refer to the "Risk factors" section of this report for more information**

Group performance

Income statement

	For the year ended			% change from
USD m	31.12.22	31.12.21	31.12.20	31.12.21
Net interest income	6,621	6,705	5,862	(1)
Other net income from financial instruments measured at fair value through profit or loss	7,517	5,850	6,960	28
Net fee and commission income	18,966	22,387	19,186	(15)
Other income	1,459	452	1,076	223
Total revenues	34,563	35,393	33,084	(2)
Credit loss expense / (release)	29	(148)	694	
Personnel expenses	17,680	18,387	17,224	(4)
General and administrative expenses	5,189	5,553	4,885	(7)
Depreciation, amortization and impairment of non-financial assets	2,061	2,118	2,126	(3)
Operating expenses	24,930	26,058	24,235	(4)
Operating profit / (loss) before tax	9,604	9,484	8,155	1
Tax expense / (benefit)	1,942	1,998	1,583	(3)
Net profit / (loss)	7,661	7,486	6,572	2
Net profit / (loss) attributable to non-controlling interests	32	29	15	11
Net profit / (loss) attributable to shareholders	7,630	7,457	6,557	2
Comprehensive income				
Total comprehensive income	3,167	5,119	8,312	(38)
Total comprehensive income attributable to non-controlling interests	18	13	36	39
Total comprehensive income attributable to shareholders	3,149	5,106	8,276	(38)

2022 compared with 2021

Results

In 2022, net profit attributable to shareholders increased by USD 173m, or 2%, to USD 7,630m, which included a net tax expense of USD 1,942m.

Operating profit before tax increased by USD 120m, or 1%, to USD 9,604m, reflecting lower operating expenses, partly offset by lower total revenues. Operating expenses decreased by USD 1,128m, or 4%, to USD 24,930m, which included positive foreign currency effects. This decrease was mainly driven by USD 707m lower personnel expenses and USD 364m lower general and administrative expenses. Net credit loss expenses were USD 29m, compared with net credit loss releases of USD 148m in the prior year. Total revenues decreased by USD 830m, or 2%, to USD 34,563m, which included negative foreign currency effects. Net fee and commission income decreased by USD 3,421m, partly offset by a USD 1,582m increase in total combined net interest income and other net income from financial instruments measured at fair value through profit or loss, as well as USD 1,007m higher other income.

Total revenues

Net interest income and other net income from financial instruments measured at fair value through profit or loss

Total combined net interest income and other net income from financial instruments measured at fair value through profit or loss increased by USD 1,582m to USD 14,137m.

Global Wealth Management increased by USD 1,014m to USD 6,355m, predominantly due to higher net interest income, mainly driven by an increase in deposit revenues, as rising interest rates led to higher deposit margins. This increase was partly offset by the effects of shifts to lower-margin products and higher interest rates paid to clients. In addition, loan revenues decreased, driven by lower loan margins.

The Investment Bank increased by USD 702m to USD 5,769m, mainly reflecting USD 803m higher net income in Financing, largely due to a loss of USD 861m incurred in the first half of 2021 on the default of a US-based client of our prime brokerage business. In addition, Derivatives & Solutions increased by USD 320m, driven by Rates and Foreign Exchange, which benefited from elevated volatility due to inflationary concerns and the actions of central banks, partly offset by decreases in Equity Derivatives and Credit revenues due to lower levels of client activity. The increases in Financing and Derivatives & Solutions were partly offset by a USD 409m decrease in Global Banking, mainly due to lower revenues in Leveraged Capital Markets.

Personal & Corporate Banking increased by USD 128m, predominantly driven by an increase in net interest income, mainly reflecting higher deposit revenues, as a result of rising interest rates. This increase was partly offset by a lower benefit from the Swiss National Bank deposit exemption and a decrease in deposit fees.

Group Functions recognized negative income of USD 649m, compared with negative income of USD 397m, mainly driven by higher funding costs related to deferred tax assets (DTAs) and capitalized software in Group Services and negative net effects of accounting asymmetries, including hedge accounting ineffectiveness, within Group Treasury. These changes were partly offset by higher valuation gains on auction rate and other securities in Non-core and Legacy Portfolio.

› **Refer to "Note 3 Net interest income and other net income from financial instruments measured at fair value through profit or loss" in the "Consolidated financial statements" section of this report for more information**

Net interest income and other net income from financial instruments measured at fair value through profit or loss

	For the year ended			% change from
USD m	31.12.22	31.12.21	31.12.20	31.12.21
Net interest income from financial instruments measured at amortized cost and fair value through other comprehensive income	5,218	5,274	4,563	(1)
Net interest income from financial instruments measured at fair value through profit or loss and other	1,403	1,431	1,299	(2)
Other net income from financial instruments measured at fair value through profit or loss	7,517	5,850	6,960	28
Total	14,137	12,555	12,822	13
Global Wealth Management	6,355	5,341	5,039	19
of which: net interest income	*5,273*	*4,244*	*4,027*	*24*
of which: transaction-based income from foreign exchange and other intermediary activity [1]	*1,082*	*1,097*	*1,012*	*(1)*
Personal & Corporate Banking	2,685	2,557	2,459	5
of which: net interest income	*2,191*	*2,120*	*2,049*	*3*
of which: transaction-based income from foreign exchange and other intermediary activity [1]	*494*	*437*	*409*	*13*
Asset Management	(23)	(13)	(16)	75
Investment Bank [2]	5,769	5,067	5,643	14
Global Banking	*187*	*596*	*585*	*(69)*
Global Markets	*5,582*	*4,471*	*5,057*	*25*
Group Functions	(649)	(397)	(302)	64

1 Mainly includes spread-related income in connection with client-driven transactions, foreign currency translation effects and income and expenses from precious metals, which are included in the income statement line Other net income from financial instruments measured at fair value through profit or loss. The amounts reported on this line are one component of Transaction-based income in the management discussion and analysis of Global Wealth Management and Personal & Corporate Banking in the "Global Wealth Management" and "Personal & Corporate Banking" sections of this report, respectively. 2 Investment Bank information is provided at the business line level rather than by financial statement reporting line in order to reflect the underlying business activities, which is consistent with the structure of the management discussion and analysis in the "Investment Bank" section of this report.

Net fee and commission income

Net fee and commission income decreased by USD 3,421m to USD 18,966m.

Underwriting fees decreased by USD 884m to USD 579m, mainly driven by lower equity underwriting revenues from public offerings in the Investment Bank, reflecting lower levels of client activity.

Net brokerage fees decreased by USD 841m to USD 3,282m, driven by Global Wealth Management, reflecting lower levels of client activity, and by the Investment Bank, mainly in relation to Cash Equities, partly offset by higher net income from foreign exchange products.

Investment fund fees decreased by USD 848m, driven by Asset Management and Global Wealth Management, mainly reflecting negative market performance. In addition, performance-based fee income in Asset Management decreased, mainly in Hedge Fund Businesses and Equities. Fees for portfolio management and related services decreased by USD 703m, predominantly driven by Global Wealth Management, also reflecting negative market performance, partly offset by incremental revenues from net new fee-generating assets.

M&A and corporate finance fees decreased by USD 298m to USD 804m, primarily reflecting lower revenues from merger and acquisition transactions in our Global Banking business in the Investment Bank, due to a decrease in the number of transactions that closed in 2022.

› **Refer to "Note 4 Net fee and commission income" in the "Consolidated financial statements" section of this report for more information**

Other income

Other income increased by USD 1,007m to USD 1,459m, mainly driven by higher gains from disposals of associates and subsidiaries, largely reflecting a gain of USD 848m in Asset Management on the sale of our shareholding in our Japanese real estate joint venture, Mitsubishi Corp.-UBS Realty Inc. In addition, there were gains in Global Wealth Management of USD 133m on the sale of our domestic wealth management business in Spain, USD 86m on the sale of UBS Swiss Financial Advisers AG and USD 41m on the sale of our US alternative investments administration business. These gains compared with a gain of USD 100m in 2021 in Global Wealth Management from the sale of our domestic wealth management business in Austria. In addition, we recognized USD 98m of gains related to the repurchase of UBS's own debt instruments, compared with losses of USD 60m in the prior year. These gains were partly offset by USD 76m lower net gains from properties held for sale.

› **Refer to "Note 5 Other income" in the "Consolidated financial statements" section of this report for more information**

› **Refer to "Note 29 Changes in organization and acquisitions and disposals of subsidiaries and businesses" in the "Consolidated financial statements" section of this report for more information about the gains from disposals of associates and subsidiaries**

Credit loss expense / release

Total net credit loss expenses were USD 29m, compared with net credit loss releases of USD 148m in the prior year, reflecting net expenses of USD 29m related to stage 1 and 2 positions.

› **Refer to "Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement" and "Note 19 Expected credit loss measurement" in the "Consolidated financial statements" section of this report for more information about credit loss expenses / releases**

› **Refer to the "Risk factors" section of this report for more information**

Credit loss expense / (release)

USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	Total
For the year ended 31.12.22						
Stages 1 and 2	(5)	27	0	6	1	29
Stage 3	5	12	0	(18)	2	0
Total credit loss expense / (release)	0	39	0	(12)	3	29
For the year ended 31.12.21						
Stages 1 and 2	(28)	(62)	0	(34)	0	(123)
Stage 3	(1)	(24)	1	0	0	(25)
Total credit loss expense / (release)	**(29)**	**(86)**	**1**	**(34)**	**0**	**(148)**
For the year ended 31.12.20						
Stages 1 and 2	48	129	0	88	0	266
Stage 3	40	128	2	217	42	429
Total credit loss expense / (release)	**88**	**257**	**2**	**305**	**42**	**694**

Operating expenses

Personnel expenses

Personnel expenses decreased by USD 707m to USD 17,680m, mainly driven by USD 352m lower variable compensation related to financial advisors, following a decrease in compensable revenues. Furthermore, salary costs decreased by USD 294m, as an underlying increase from higher salaries and an increase in the number of employees were more than offset by foreign currency translation effects. Other personnel expenses were USD 87m lower, primarily reflecting a decrease in the number of contractors.

› **Refer to the "Compensation" section of this report for more information**

› **Refer to "Note 6 Personnel expenses," "Note 26 Post-employment benefit plans" and "Note 27 Employee benefits: variable compensation" in the "Consolidated financial statements" section of this report for more information**

General and administrative expenses

General and administrative expenses decreased by USD 364m to USD 5,189m, mainly reflecting USD 563m lower net expenses for litigation, regulatory and similar matters, as 2021 included expenses of USD 740m related to litigation provisions for the French cross-border matter. This was partly offset by higher expenses for travel and entertainment, technology, and consulting fees.

We believe that the industry continues to operate in an environment in which expenses associated with litigation, regulatory and similar matters will remain elevated for the foreseeable future, and we continue to be exposed to a number of significant claims and regulatory matters. The outcome of many of these matters, the timing of a resolution, and the potential effects of resolutions on our future business, financial results or financial condition are extremely difficult to predict.

› **Refer to "Note 7 General and administrative expenses" and "Note 17 Provisions and contingent liabilities" in the "Consolidated financial statements" section of this report for more information**

Operating expenses

	For the year ended			% change from
USD m	31.12.22	31.12.21	31.12.20	31.12.21
Personnel expenses	17,680	18,387	17,224	(4)
of which: salaries	*7,045*	*7,339*	*7,023*	*(4)*
of which: variable compensation	*7,954*	*8,280*	*7,520* [3]	*(4)*
of which: performance awards	*3,205*	*3,190*	*3,209*	*0*
of which: financial advisors [1]	*4,508*	*4,860*	*4,091*	*(7)*
of which: other	*241*	*229*	*220*	*5*
of which: other personnel expenses [2]	*2,681*	*2,768*	*2,680* [3]	*(3)*
General and administrative expenses	5,189	5,553	4,885	(7)
of which: net expenses for litigation, regulatory and similar matters	*348*	*911*	*197*	*(62)*
of which: other general and administrative expenses	*4,841*	*4,642*	*4,688*	*4*
Depreciation, amortization and impairment of non-financial assets	2,061	2,118	2,126	(3)
Total operating expenses	24,930	26,058	24,235	(4)

1 Consists of cash and deferred compensation awards and is based on compensable revenues and firm tenure using a formulaic approach. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 2 Consists of expenses related to contractors, social security, post-employment benefit plans, and other personnel expenses. Refer to "Note 6 Personnel expenses" in the "Consolidated financial statements" section of this report for more information. 3 During 2020, UBS modified the conditions for continued vesting of certain outstanding deferred compensation awards for qualifying employees, resulting in an expense of approximately USD 280m, of which USD 240m is disclosed within Variable compensation and USD 40m within Other personnel expenses in this table.

Tax

Income tax expenses of USD 1,942m were recognized for the Group in 2022, representing an effective tax rate of 20.2%, compared with USD 1,998m for 2021, which represented an effective tax rate of 21.1%. The income tax expenses for 2022 included Swiss tax expenses of USD 715m and non-Swiss tax expenses of USD 1,227m.

The Swiss tax expenses included current tax expenses of USD 730m related to taxable profits of UBS Switzerland AG and other Swiss entities. They also included a deferred tax benefit of USD 15m.

The non-Swiss tax expenses included current tax expenses of USD 718m related to taxable profits earned by non-Swiss subsidiaries and branches and net deferred tax expenses of USD 509m. Expenses of USD 678m, which primarily related to the amortization of DTAs previously recognized in relation to tax losses carried forward and deductible temporary differences of UBS Americas Inc., were partly offset by a benefit of USD 169m in respect of net upward revaluations of DTAs for certain entities, primarily in connection with our business planning process.

The effective tax rate for the year of 20.2% is lower than our projected rate for the year of 24%, primarily as a result of the aforementioned deferred tax benefit of USD 169m in respect of net upward revaluations of DTAs and because no tax expenses were recognized in respect of pre-tax gains from dispositions of UBS subsidiaries in 2022.

Excluding any potential effects from the remeasurement of DTAs in connection with the business planning process and any material jurisdictional statutory tax rate changes that could be enacted, we expect a tax rate for 2023 of around 23%.

› **Refer to "Note 8 Income taxes" in the "Consolidated financial statements" section of this report for more information**
› **Refer to the "Risk factors" section of this report for more information**

Total comprehensive income attributable to shareholders

In 2022, total comprehensive income attributable to shareholders was USD 3,149m, reflecting net profit of USD 7,630m and negative other comprehensive income (OCI), net of tax, of USD 4,481m.

OCI related to cash flow hedges was negative USD 4,793m, mainly reflecting net unrealized losses on US dollar hedging derivatives resulting from significant increases in the relevant US dollar long-term interest rates.

Foreign currency translation OCI was negative USD 525m, mainly due to the weakening of the Swiss franc (1%) and the euro (6%) against the US dollar.

Defined benefit plan OCI, net of tax, was negative USD 10m. Total net pre-tax OCI related to the Swiss pension plan was negative USD 285m. This was predominantly driven by an extraordinary employer contribution of USD 209m that increased the gross plan assets and resulted in an offsetting OCI loss as no net pension asset could be recognized on the balance sheet as of 31 December 2022 due to the asset ceiling. As announced in 2018, UBS agreed to mitigate the effects from changes to the Swiss pension plan implemented in 2019 and contributed CHF 646m (USD 698m) in three installments in 2020, 2021 and 2022. The extraordinary contribution of USD 209m in the first quarter of 2022 reflected the third and final installment paid.

Total pre-tax OCI related to our non-Swiss pension plans was positive USD 212m, mostly driven by the UK pension plan, which recorded positive net pre-tax OCI of USD 162m. The positive OCI in the UK plan reflected gains of USD 1,474m from the remeasurement of the defined benefit obligation (DBO), partly offset by a negative return on plan assets of USD 1,312m. The DBO remeasurement effect was mainly driven by a gain of USD 1,451m due to an increase in the applicable discount rate.

OCI related to own credit on financial liabilities designated at fair value was positive USD 796m, primarily due to a widening of our own credit spreads.

- **Refer to "Statement of comprehensive income" in the "Consolidated financial statements" section of this report for more information**
- **Refer to "Note 1b Changes in accounting policies, comparability and other adjustments" in the "Consolidated financial statements" section of this report for more information about the reclassification of a portfolio of assets from Financial assets measured at fair value through OCI to Other financial assets measured at amortized cost in 2022**
- **Refer to "Note 20 Fair value measurement" in the "Consolidated financial statements" section of this report for more information about own credit on financial liabilities designated at fair value**
- **Refer to "Note 25 Hedge accounting" in the "Consolidated financial statements" section of this report for more information about cash flow hedges of forecast transactions**
- **Refer to "Note 26 Post-employment benefit plans" in the "Consolidated financial statements" section of this report for more information about OCI related to defined benefit plans**

Sensitivity to interest rate movements

As of 31 December 2022, we estimate that a parallel shift in yield curves by +100 basis points could lead to a combined increase in annual net interest income of approximately USD 1.5bn in Global Wealth Management and Personal & Corporate Banking in the first year after such a shift. Of this increase, approximately USD 0.8bn, USD 0.4bn and USD 0.2bn would result from changes in Swiss franc, US dollar and euro interest rates, respectively. A parallel shift in yield curves by −100 basis points could lead to a combined decrease in annual net interest income of approximately USD 1.5bn in Global Wealth Management and Personal & Corporate Banking in the first year after such a shift, showing similar currency contributions as for the aforementioned increase in rates.

These estimates are based on a hypothetical scenario of an immediate change in interest rates, equal across all currencies and relative to implied forward rates as of 31 December 2022 applied to our banking book. These estimates further assume no change to balance sheet size and structure, constant foreign exchange rates, and no specific management action. The benefit of the negative rates exemption threshold provided by the Swiss National Bank is not in scope of this net interest income sensitivity disclosure. As average implied forward rates were above 100 basis points across all tenors as of 31 December 2022, the impact would have been negligible. These estimates do not represent a forecast of our net interest income and actual changes in net interest income could differ significantly from the amounts referred to above.

Seasonal characteristics

Our revenues may show seasonal patterns, notably in the Investment Bank and transaction-based revenues for Global Wealth Management, and typically reflect the highest client activity levels in the first quarter, with lower levels throughout the rest of the year, especially during the summer months and the end-of-year holiday season.

Key figures

Below we provide an overview of selected key figures of the Group. For further information about key figures related to capital management, refer to the "Capital, liquidity and funding, and balance sheet" section of this report.

Cost / income ratio

The cost / income ratio was 72.1%, compared with 73.6%, mainly reflecting a decrease in operating expenses, partly offset by a decrease in total revenues.

Return on common equity tier 1 capital

The annualized return on our common equity tier 1 (CET1) capital was 17.0%, compared with 17.5%, reflecting a USD 2.2bn increase in average CET1 capital, with a partly offsetting effect driven by a USD 173m increase in net profit attributable to shareholders.

CET1 capital

CET1 capital increased by USD 0.2bn to USD 45.5bn as of 31 December 2022, mainly as a result of operating profit before tax of USD 9.6bn with associated current tax expenses of USD 1.4bn, partly offset by share repurchases of USD 5.6bn under our share repurchase programs, dividend accruals of USD 1.7bn, negative foreign currency effects of USD 0.5bn and compensation- and own share-related capital components of USD 0.3bn.

Risk-weighted assets

Risk-weighted assets (RWA) increased by USD 17.4bn to USD 319.6bn, primarily driven by increases of USD 10.4bn in credit and counterparty credit risk RWA, USD 4.7bn in operational risk RWA, and USD 2.4bn in market risk RWA.

CET1 capital ratio

Our CET1 capital ratio decreased to 14.2% from 15.0%, mainly reflecting a USD 17.4bn increase in RWA.

Leverage ratio denominator
The leverage ratio denominator (the LRD) decreased by USD 40.4bn to USD 1,028.5bn, driven by currency effects of USD 24.5bn and a USD 15.9bn decrease due to asset size and other movements.

CET1 leverage ratio
Our CET1 leverage ratio increased to 4.42% from 4.24%, predominantly due to the aforementioned decrease in the LRD.

Going concern leverage ratio
Our going concern leverage ratio was unchanged at 5.7%, as the aforementioned decrease in the LRD was offset by a USD 2.2bn decrease in the going concern capital.

Personnel
The number of personnel employed as of 31 December 2022 increased by 1,212 to 72,597 (full-time equivalents) compared with 31 December 2021.

Equity, CET1 capital and returns

	As of or for the year ended		
USD m, except where indicated	31.12.22	31.12.21	31.12.20
Net profit			
Net profit attributable to shareholders	7,630	7,457	6,557
Equity			
Equity attributable to shareholders	56,876	60,662	59,445
Less: goodwill and intangible assets	6,267	6,378	6,480
Tangible equity attributable to shareholders	50,609	54,283	52,965
Less: other CET1 deductions	5,152	9,003	13,075
CET1 capital	45,457	45,281	39,890
Return on equity			
Return on equity (%)	13.3	12.6	11.3
Return on tangible equity (%)	14.9	14.1	12.8
Return on CET1 capital (%)	17.0	17.5	17.4

Global Wealth Management

Global Wealth Management[1]

USD m, except where indicated	As of or for the year ended 31.12.22	31.12.21	% change from 31.12.21
Results			
Net interest income	5,273	4,244	24
Recurring net fee income[2]	10,282	11,170	(8)
Transaction-based income[2]	3,137	3,836	(18)
Other income	275	168	63
Total revenues	18,967	19,419	(2)
Credit loss expense / (release)	0	(29)	
Operating expenses	13,989	14,665	(5)
Business division operating profit / (loss) before tax	4,977	4,783	4
Performance measures and other information			
Pre-tax profit growth (year-on-year, %)[2]	4.1	19.0	
Cost / income ratio (%)[2]	73.8	75.5	
Average attributed equity (USD bn)[3]	20.0	18.8	6
Return on attributed equity (%)[2,3]	24.9	25.4	
Financial advisor compensation[4]	4,508	4,860	(7)
Net new fee-generating assets (USD bn)[2]	60.1	106.9	
Fee-generating assets (USD bn)[2]	1,271	1,482	(14)
Fee-generating asset margin (bps)[2]	79.5	82.6	
Net new money (USD bn)[2]	40.5	111.1	
Invested assets (USD bn)[2]	2,815	3,303	(15)
Loans, gross (USD bn)[5]	225.0	234.1	(4)
Customer deposits (USD bn)[5]	348.2	369.8	(6)
Impaired loan portfolio as a percentage of total loan portfolio, gross (%)[2,6]	0.3	0.2	
Advisors (full-time equivalents)	9,215	9,329	(1)

1 Comparatives may differ as a result of adjustments following organizational changes, restatements due to the retrospective adoption of new accounting standards or changes in accounting policies, and events after the reporting period. 2 Refer to "Alternative performance measures" in the appendix to this report for the definition and calculation method. Since the second quarter of 2022, assets related to our Global Financial Intermediaries business have been excluded from fee-generating assets, given that fee-generating investment management products, such as mandates, are not central to this business. Furthermore, client commitments into closed-ended private-market investment funds are included as fee-generating assets once recurring fees are charged, rather than when commitments are funded. These changes have been applied prospectively. 3 Refer to "Capital management" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information. 4 Relates to licensed professionals with the ability to provide investment advice to clients in the Americas. Consists of cash and deferred compensation awards and is based on compensable revenues and firm tenure using a formulaic approach. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. Recruitment loans to financial advisors were USD 1,751m as of 31 December 2022. 5 Loans and Customer deposits in this table include customer brokerage receivables and payables, respectively, which are presented in a separate reporting line on the balance sheet. 6 Refer to the "Risk management and control" section of this report for more information about (credit-)impaired exposures. Excludes loans to financial advisors.

2022 compared with 2021

Results

Profit before tax increased by USD 194m, or 4%, to USD 4,977m, mainly driven by lower operating expenses, as 2021 included expenses of USD 657m related to litigation provisions for the French cross-border matter, partly offset by lower total revenues.

Total revenues

Total revenues decreased by USD 452m, or 2%, to USD 18,967m, due to decreases across recurring net fee and transaction-based income, partly offset by increases in net interest and other income.

Net interest income increased by USD 1,029m, or 24%, to USD 5,273m, mainly due to an increase in deposit revenues, as rising interest rates led to higher deposit margins. This increase was partly offset by the effects of shifts to lower-margin products and higher interest rates paid to clients. Loan revenues decreased, driven by lower loan margins.

Recurring net fee income decreased by USD 888m, or 8%, to USD 10,282m, primarily driven by negative market performance and foreign currency effects, partly offset by incremental revenues from net new fee-generating assets.

Transaction-based income decreased by USD 699m, or 18%, to USD 3,137m, mainly reflecting lower levels of client activity in Asia Pacific, Americas and EMEA.

Other income increased by USD 107m to USD 275m, including a USD 133m gain from the sale of our domestic wealth management business in Spain, an USD 86m gain from the sale of UBS Swiss Financial Advisers AG and a USD 41m gain from the sale of our US alternative investments administration business in 2022. 2021 included a gain of USD 100m related to the sale of our domestic wealth management business in Austria. Additionally, 2022 included lower gains on our equity ownership of SIX Group and lower gains from sales of securities positions.

Credit loss expense / release
Net credit loss expenses were zero, as net expenses related to credit-impaired (stage 3) positions were entirely offset by net releases from stage 1 and 2 positions, compared with net releases of USD 29m.

Operating expenses
Operating expenses decreased by USD 676m, or 5%, to USD 13,989m, primarily due to 2021 including the aforementioned expenses of USD 657m related to litigation provisions for the French cross-border matter. Operating expenses in 2022 included lower personnel expenses, primarily as a result of lower financial advisor variable compensation following a decrease in compensable revenues, and benefited from positive foreign currency effects. These effects were partly offset by higher technology expenses and higher expenses for professional fees, travel and entertainment, outsourcing, and marketing in 2022.

Pre-tax profit growth
Pre-tax profit growth in 2022 was 4.1%, compared with 19.0% in 2021. Our target range is 10–15% over the cycle.

Cost / income ratio
The cost / income ratio decreased to 73.8% from 75.5%, reflecting positive operating leverage.

Fee-generating assets
Fee-generating assets decreased by USD 211bn, or 14%, to USD 1,271bn, mainly driven by net negative market performance and foreign currency effects. Net new fee-generating asset inflows were USD 60.1bn, with inflows in all regions, and resulted in an annualized net new fee-generating asset growth rate of 4.1%.

Loans
Loans decreased by USD 9.1bn, or 4%, to USD 225.0bn, primarily driven by negative foreign exchange effects and net new loan outflows of USD 2.5bn.

› **Refer to the "Risk management and control" section of this report for more information**

Customer deposits
Customer deposits decreased by USD 21.6bn to USD 348.2bn, mainly driven by US dollar deposit shifts into other products, as well as negative foreign currency effects.

Regional breakdown of performance measures

As of or for the year ended 31.12.22 *USD bn, except where indicated*	Americas[1]	Switzerland	EMEA[2]	Asia Pacific	Global Wealth Management[3]
Total revenues (USD m)	10,634	1,859	3,913	2,556	18,967
Operating profit / (loss) before tax (USD m)	1,748	817	1,490	943	4,977
Cost / income ratio (%)[4]	83.7	55.2	61.9	63.2	73.8
Loans, gross	101.2[5]	45.1	43.4	34.5	225.0
Net new loans	9.0	2.5	(1.4)	(13.2)	(2.5)
Fee-generating assets[4]	779	119	259	114	1,271
Net new fee-generating assets[4]	17.2	9.1	20.3	13.7	60.1
Net new fee-generating asset growth rate (%)[4]	1.9	7.0	6.1	11.8	4.1
Invested assets[4]	1,581	253	541	437	2,815
Net new money[4]	7.0	12.3	21.9	(0.6)	40.5
Advisors (full-time equivalents)	6,245	676	1,372	847	9,215

1 Including the following business units: United States and Canada; and Latin America. 2 Including the following business units: Europe; Central & Eastern Europe, Greece and Israel; and Middle East and Africa. 3 Including minor functions, which are not included in the four regions individually presented in this table, with USD 5m of total revenues, USD 21m of operating loss before tax, USD 0.7bn of loans, USD 0.6bn of net new loan inflows, USD 0.8bn of fee-generating assets, USD 0.1bn of net new fee-generating asset outflows, USD 3bn of invested assets, USD 0.1bn of net new money outflows and 74 advisors in 2022. 4 Refer to "Alternative performance measures" in the appendix to this report for the definition and calculation method. 5 Loans include customer brokerage receivables, which are presented in a separate reporting line on the balance sheet.

Regional comments: 2022 compared with 2021

Americas
Profit before tax decreased by USD 253m to USD 1,748m, mainly driven by higher operating expenses, including an increase in net expenses for litigation, regulatory and similar matters. Total revenues decreased by USD 22m to USD 10,634m, mainly driven by lower recurring net fee and transaction-based income, partly offset by higher net interest income. The cost / income ratio increased to 83.7% from 81.4%. Loans increased 10% to USD 101.2bn, reflecting USD 9.0bn of net new loan inflows. Net new fee-generating assets were USD 17.2bn.

Switzerland

Profit before tax increased by USD 67m to USD 817m, mostly driven by lower operating expenses, as 2021 included expenses of USD 85m related to litigation provisions for the French cross-border matter. Total revenues decreased by USD 41m to USD 1,859m, mainly driven by lower recurring net fee income, partly offset by higher net interest and transaction-based income. The cost / income ratio decreased to 55.2% from 60.8%. Loans increased 4% to USD 45.1bn, driven by net new loan inflows of USD 2.5bn, partly offset by negative foreign currency effects. Net new fee-generating assets were USD 9.1bn.

EMEA

Profit before tax increased by USD 678m to USD 1,490m, primarily driven by lower operating expenses, as 2021 included expenses of USD 572m related to litigation provisions for the French cross-border matter. Total revenues decreased by USD 35m to USD 3,913m, due to lower recurring net fee and transaction-based income, partly offset by an increase in net interest income, as well as an increase in other income, which was driven by the aforementioned gains from sales. The cost / income ratio decreased to 61.9% from 79.6%. Loans decreased 12% to USD 43.4bn, mainly reflecting negative foreign currency effects and net new loan outflows of USD 1.4bn. Net new fee-generating assets were USD 20.3bn.

Asia Pacific

Profit before tax decreased by USD 294m to USD 943m. Total revenues decreased by USD 343m to USD 2,556m, mostly driven by lower transaction-based and recurring net fee income, partly offset by an increase in net interest income. The cost / income ratio increased to 63.2% from 57.4%. Loans decreased 29% to USD 34.5bn, driven by net new loan outflows of USD 13.2bn, as clients reduced their debts in light of market uncertainty, as well as negative foreign currency effects. Net new fee-generating assets were USD 13.7bn.

Personal & Corporate Banking

Personal & Corporate Banking – in Swiss francs[1]

	As of or for the year ended		% change from
CHF m, except where indicated	31.12.22	31.12.21	31.12.21
Results			
Net interest income	2,087	1,941	8
Recurring net fee income[2]	812	774	5
Transaction-based income[2]	1,154	1,079	7
Other income	46	110	(58)
Total revenues	**4,099**	**3,904**	**5**
Credit loss expense / (release)	**36**	**(79)**	
Operating expenses	**2,337**	**2,397**	**(2)**
Business division operating profit / (loss) before tax	**1,726**	**1,587**	**9**
Performance measures and other information			
Pre-tax profit growth (year-on-year, %)[2]	8.8	35.1	
Cost / income ratio (%)[2]	57.0	61.4	
Average attributed equity (CHF bn)[3]	8.8	8.4	6
Return on attributed equity (%)[2,3]	19.5	19.0	
Net interest margin (bps)[2]	147	140	
Fee and trading income for Corporate & Institutional Clients[2]	810	791	2
Investment products for Personal Banking (CHF bn)[2]	21.6	23.5	(8)
Net new investment products for Personal Banking (CHF bn)[2]	1.99	2.66	
Active Digital Banking clients in Personal Banking (%)[2,4]	74.3	70.3	
Active Mobile Banking clients in Personal Banking (%)[2]	56.5	46.7	
Active Digital Banking clients in Corporate & Institutional Clients (%)[2]	80.0	79.3	
Loans, gross (CHF bn)	142.9	139.3	3
Customer deposits (CHF bn)	167.2	162.1	3
Impaired loan portfolio as a percentage of total loan portfolio, gross (%)[2,5]	0.8	0.9	

1 Comparatives may differ as a result of adjustments following organizational changes, restatements due to the retrospective adoption of new accounting standards or changes in accounting policies, and events after the reporting period. 2 Refer to "Alternative performance measures" in the appendix to this report for the definition and calculation method. 3 Refer to "Capital management" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information. 4 In 2022, 86.0% of clients of Personal Banking were "activated users" of Digital Banking (i.e., clients who had logged into Digital Banking at least once in the course of their relationship with UBS). 5 Refer to the "Risk management and control" section of this report for more information about (credit-)impaired exposures.

2022 compared with 2021

Results

Profit before tax increased by CHF 139m, or 9%, to CHF 1,726m, reflecting higher total revenues and lower operating expenses, partly offset by net credit loss expenses, compared with net credit loss releases in 2021.

Total revenues

Total revenues increased by CHF 195m, or 5%, to CHF 4,099m, reflecting increases across all income lines except other income.

Net interest income increased by CHF 146m to CHF 2,087m, mainly driven by higher deposit revenues, as a result of rising interest rates. This increase was partly offset by a lower benefit from the Swiss National Bank deposit exemption and lower deposit fees.

Recurring net fee income increased by CHF 38m to CHF 812m, primarily driven by higher revenues from account fees.

Transaction-based income increased by CHF 75m to CHF 1,154m, largely driven by higher revenues from credit card and foreign exchange transactions, reflecting a continued increase in spending on travel and leisure by clients following the easing of COVID-19-related restrictions in certain countries compared with 2021.

Other income decreased by CHF 64m to CHF 46m, mostly due to lower gains on our equity ownership of SIX Group. The prior year also included a gain of CHF 26m from the sale of several small properties in that year.

Credit loss expense / release

Net credit loss expenses were CHF 36m, compared with net releases of CHF 79m. Stage 1 and 2 net credit loss expenses were CHF 25m. Prior-year stage 1 and 2 net credit loss releases were CHF 57m, largely resulting from a partial release of a post-model adjustment during the year, as well as model updates. Stage 3 net credit loss expenses were CHF 11m, compared with net releases of CHF 23m in 2021.

Operating expenses

Operating expenses decreased by CHF 60m, or 2%, to CHF 2,337m, mostly due to 2021 including expenses of CHF 76m (USD 83m) related to litigation provisions for the French cross-border matter.

Cost / income ratio

The cost / income ratio was 57.0%, compared with 61.4% in 2021, reflecting both higher total revenues and lower operating expenses.

Personal & Corporate Banking – in US dollars[1]

	As of or for the year ended		% change from
USD m, except where indicated	31.12.22	31.12.21	31.12.21
Results			
Net interest income	2,191	2,120	3
Recurring net fee income[2]	852	846	1
Transaction-based income[2]	1,212	1,178	3
Other income	48	119	(60)
Total revenues	4,302	4,263	1
Credit loss expense / (release)	39	(86)	
Operating expenses	2,452	2,618	(6)
Business division operating profit / (loss) before tax	1,812	1,731	5
Performance measures and other information			
Pre-tax profit growth (year-on-year, %)[2]	4.7	37.5	
Cost / income ratio (%)[2]	57.0	61.4	
Average attributed equity (USD bn)[3]	9.3	9.2	1
Return on attributed equity (%)[2,3]	19.5	18.9	
Net interest margin (bps)[2]	146	142	
Fee and trading income for Corporate & Institutional Clients[2]	851	864	(1)
Investment products for Personal Banking (USD bn)[2]	23.4	25.8	(9)
Net new investment products for Personal Banking (USD bn)[2]	2.11	2.90	
Active Digital Banking clients in Personal Banking (%)[2,4]	74.3	70.3	
Active Mobile Banking clients in Personal Banking (%)[2]	56.5	46.7	
Active Digital Banking clients in Corporate & Institutional Clients (%)[2]	80.0	79.3	
Loans, gross (USD bn)	154.6	152.8	1
Customer deposits (USD bn)	180.8	177.8	2
Impaired loan portfolio as a percentage of total loan portfolio, gross (%)[2,5]	0.8	0.9	

1 Comparatives may differ as a result of adjustments following organizational changes, restatements due to the retrospective adoption of new accounting standards or changes in accounting policies, and events after the reporting period. 2 Refer to "Alternative performance measures" in the appendix to this report for the definition and calculation method. 3 Refer to "Capital management" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information. 4 In 2022, 86.0% of clients of Personal Banking were "activated users" of Digital Banking (i.e., clients who had logged into Digital Banking at least once in the course of their relationship with UBS). 5 Refer to the "Risk management and control" section of this report for more information about (credit-)impaired exposures.

Asset Management

Asset Management[1]

	As of or for the year ended		% change from
USD m, except where indicated	31.12.22	31.12.21	31.12.21
Results			
Net management fees[2]	2,050	2,320	(12)
Performance fees	64	260	(75)
Net gain from disposal of a joint venture / an associate	848	37	
Total revenues	2,961	2,617	13
Credit loss expense / (release)	0	1	
Operating expenses	1,564	1,586	(1)
Business division operating profit / (loss) before tax	1,397	1,030	36
Performance measures and other information			
Pre-tax profit growth (year-on-year, %)[3]	35.7	(29.2)	
Cost / income ratio (%)[3]	52.8	60.6	
Average attributed equity (USD bn)[4]	1.7	2.0	(13)
Return on attributed equity (%)[3,4]	81.2	51.8	
Gross margin on invested assets (bps)[3]	28	23	
Information by business line / asset class			
Net new money (USD bn)[3]			
Equities	(12.8)	10.3	
Fixed Income	36.5	22.7	
of which: money market	*26.3*	*(3.1)*	
Multi-asset & Solutions	(1.3)	6.8	
Hedge Fund Businesses	2.3	5.7	
Real Estate & Private Markets	0.2	(0.6)	
Total net new money[5]	24.8	44.9	
of which: net new money excluding money market	*(1.6)*	*48.0*	
Invested assets (USD bn)[3]			
Equities	456	580	(21)
Fixed Income	296	285	4
of which: money market	*119*	*92*	*29*
Multi-asset & Solutions	155	193	(19)
Hedge Fund Businesses	55	55	1
Real Estate & Private Markets	102	98	4
Total invested assets	1,064	1,211	(12)
of which: passive strategies	*443*	*540*	*(18)*
Information by region			
Invested assets (USD bn)[3]			
Americas	298	287	4
Asia Pacific	150	190	(21)
Europe, Middle East and Africa (excluding Switzerland)	263	334	(21)
Switzerland	354	399	(11)
Total invested assets	1,064	1,211	(12)
Information by channel			
Invested assets (USD bn)[3]			
Third-party institutional	606	707	(14)
Third-party wholesale	116	145	(20)
UBS's wealth management businesses	342	359	(5)
Total invested assets	1,064	1,211	(12)

1 Comparatives may differ as a result of adjustments following organizational changes, restatements due to the retrospective adoption of new accounting standards or changes in accounting policies, and events after the reporting period. 2 Net management fees include transaction fees, fund administration revenues (including net interest and trading income from lending activities and foreign exchange hedging as part of the fund services offering), distribution fees, incremental fund-related expenses, gains or losses from seed money and co-investments, funding costs, the negative pass-through impact of third-party performance fees, and other items that are not Asset Management's performance fees. 3 Refer to "Alternative performance measures" in the appendix to this report for the definition and calculation method. 4 Refer to "Capital management" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information. 5 A net new money inflow of USD 4.1bn was recognized in the fourth quarter of 2022 for the provision of hedge fund services to Global Wealth Management Americas.

2022 compared with 2021

Results

Profit before tax increased by USD 367m, or 36%, to USD 1,397m. This increase reflected a gain of USD 848m from the sale of our shareholding in the Mitsubishi Corp.-UBS Realty Inc. joint venture in the second quarter of 2022. Profit before tax in 2021 included a post-tax gain of USD 37m related to the sale of our minority interest in Clearstream Fund Centre AG. Excluding these gains, profit before tax decreased by USD 443m, or 45%, to USD 550m, reflecting lower net management and performance fees.

› **Refer to "Note 29 Changes in organization and acquisitions and disposals of subsidiaries and businesses" in the "Consolidated financial statements" section of this report for more information about the aforementioned sales**

Total revenues

Total revenues increased by USD 344m, or 13%, to USD 2,961m. Excluding the aforementioned gains from sales, total revenues decreased by USD 466m, or 18%.

Net management fees decreased by USD 270m, or 12%, to USD 2,050m, on a lower average invested asset base, reflecting negative market performance and foreign currency effects.

Performance fees decreased by USD 196m to USD 64m, mainly in Hedge Fund Businesses and Equities.

Operating expenses

Operating expenses decreased by USD 22m, or 1%, to USD 1,564m, mainly reflecting positive foreign currency effects, lower personnel expenses and lower net expenses for litigation, regulatory and similar matters, as well as lower consulting expenses. These decreases were almost entirely offset by higher expenses for technology, market data services, travel, regulatory, and risk management.

Cost / income ratio

The cost / income ratio was 52.8%, compared with 60.6% in 2021. Excluding the aforementioned gains from sales, the cost / income ratio was 74.0%, compared with 61.5% in 2021.

Invested assets

Invested assets decreased to USD 1,064bn from USD 1,211bn, reflecting negative market performance of USD 137bn and negative foreign currency effects of USD 32bn, partly offset by net new money inflows of USD 25bn. Excluding money market flows, net new money was negative USD 2bn.

Investment performance

As of year-end 2022, Morningstar assigned a four- or five-star rating to 62% of our retail and institutional funds assets under management (AuM) (both actively managed and passive), on an AuM-weighted basis. Furthermore, 47% of our actively managed open-ended retail and institutional funds AuM are ranked, on an AuM-weighted basis over a three-year investment period, above their respective peer median.

Investment performance as of 31 December 2022

In %	Total traditional investments	Equities	Fixed Income	Multi-asset
% of UBS Asset Management fund assets rated as 4- or 5-star[1,2]	62	71	55	41
% of UBS Asset Management fund assets above peer median over a 3-year investment period[1,3]	47	46	52	44

1 Morningstar® Essentials Quantitative Star Rating & Rankings; © Morningstar 2023, extract date 12 January 2023. All rights reserved. The information contained herein: (1) is proprietary to Morningstar and / or its content providers; (2) may not be copied or distributed; (3) is not warranted to be accurate, complete or timely; and (4) does not constitute advice of any kind, whether investment, tax, legal or otherwise. User is solely responsible for ensuring that it complies with all laws, regulations and restrictions applicable to it. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information, except where such damages or losses cannot be limited or excluded by law in your jurisdiction. Past performance is no guarantee of future results. For more detailed information about the Morningstar Rating, including its methodology, please go to: https://s21.q4cdn.com/198919461/files/doc_downloads/othe_disclosure_materials/MorningstarRatingforFunds.pdf. 2 Percentage of AuM to which Morningstar has assigned a four- or five-star rating. AuM reflect the AuM of Asset Management's retail and institutional funds (both actively managed and passive) across all domiciles for which Asset Management owns the investment performance, i.e., Asset Management is either the sole portfolio manager or co-portfolio manager. Universe is approximately 31% of all active and passive traditional assets of Asset Management (Equities, Fixed Income excluding money market, and Multi-asset) as of 31 December 2022. 3 Percentage of AuM above peer median over a three-year investment period. AuM reflect the AuM of Asset Management's actively managed open-ended retail and institutional funds across all domiciles for which Asset Management owns the investment performance, i.e., Asset Management is either the sole portfolio manager or co-portfolio manager. Universe is approximately 29% of all active traditional assets of Asset Management (Equities, Fixed Income excluding money market, and Multi-asset) as of 31 December 2022.

Investment Bank

Investment Bank[1]

	As of or for the year ended		% change from
USD m, except where indicated	31.12.22	31.12.21	31.12.21
Results			
Advisory	733	988	(26)
Capital Markets	854	2,170	(61)
Global Banking	1,587	3,158	(50)
Execution Services	1,643	1,894	(13)
Derivatives & Solutions	3,665	3,422	7
Financing	1,822	979	86
Global Markets	7,129	6,296	13
of which: Equities	*4,970*	*4,581*	*8*
of which: Foreign Exchange, Rates and Credit	*2,160*	*1,715*	*26*
Total revenues	8,717	9,454	(8)
Credit loss expense / (release)	(12)	(34)	(65)
Operating expenses	6,832	6,858	0
Business division operating profit / (loss) before tax	1,897	2,630	(28)
Performance measures and other information			
Pre-tax profit growth (year-on-year, %)[2]	(27.9)	5.9	
Cost / income ratio (%)[2]	78.4	72.5	
Average attributed equity (USD bn)[3]	13.0	13.0	0
Return on attributed equity (%)[2,3]	14.6	20.3	
Average VaR (1-day, 95% confidence, 5 years of historical data)	10	11	(5)

1 Comparative figures in this table may differ as a result of adjustments following organizational changes, restatements due to the retrospective adoption of new accounting standards or changes in accounting policies, and events after the reporting period. 2 Refer to "Alternative performance measures" in the appendix to this report for the definition and calculation method. 3 Refer to "Capital management" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information.

2022 compared with 2021

Results

Profit before tax decreased by USD 733m, or 28%, to USD 1,897m, driven by lower total revenues and lower net credit loss releases, partly offset by lower operating expenses.

Total revenues

Total revenues decreased by USD 737m, or 8%, to USD 8,717m, reflecting lower revenues in Global Banking, partly offset by higher revenues in Global Markets.

Global Banking

Global Banking revenues decreased by USD 1,571m, or 50%, to USD 1,587m, driven by Capital Markets and Advisory revenues, compared with a 43% decrease in the overall global fee pool.

Advisory revenues decreased by USD 255m, or 26%, to USD 733m, mostly due to lower merger and acquisition (M&A) transaction revenues, which decreased by USD 217m, or 25%, compared with a 21% decrease in the global M&A fee pool.

Capital Markets revenues decreased by USD 1,316m, or 61%, to USD 854m, primarily due to lower Equity Capital Markets (ECM) revenues, which decreased by USD 738m, or 71%, compared with a 67% decrease in the global ECM fee pool. Leveraged Capital Markets (LCM) fee revenues decreased by USD 297m, or 58%, compared with a 54% decrease in the global LCM fee pool.

Global Markets

Global Markets revenues increased by USD 833m, or 13%, to USD 7,129m, driven by higher revenues in our Financing and Derivatives & Solutions businesses, partly offset by lower revenues in Execution Services.

Execution Services revenues decreased by USD 251m, or 13%, to USD 1,643m, mainly driven by lower Cash Equities revenues.

Derivatives & Solutions revenues increased by USD 243m, or 7%, to USD 3,665m, mostly driven by an increase in Foreign Exchange and Rates, which benefited from elevated volatility due to inflationary concerns and the actions of central banks, partly offset by a decrease in Equity Derivatives revenues due to lower levels of client activity.

Financing revenues increased by USD 843m, or 86%, to USD 1,822m, predominantly due to 2021 including an USD 861m loss on the default of a US-based client of our prime brokerage business.

Global Markets Equities revenues increased by USD 389m, or 8%, to USD 4,970m, mainly driven by Equity Financing, due to the aforementioned loss in our prime brokerage business in 2021, partly offset by lower revenues in Cash Equities and Equity Derivatives.

Global Markets Foreign Exchange, Rates and Credit revenues increased by USD 445m, or 26%, to USD 2,160m, mostly driven by an increase in Foreign Exchange and Rates products, which benefited from elevated volatility due to inflationary concerns and the actions of central banks.

Credit loss expense / release

Net credit loss releases were USD 12m, primarily related to credit-impaired (stage 3) positions, compared with net releases of USD 34m in 2021.

Operating expenses

Operating expenses decreased by USD 26m, to USD 6,832m, with positive foreign currency effects being almost entirely offset by increases across a number of expense lines.

Cost / income ratio

The cost / income ratio increased to 78.4% from 72.5%, as total revenues decreased by 8% and operating expenses were in line with 2021.

Group Functions

Group Functions[1]

	As of or for the year ended		% change from
USD m	31.12.22	31.12.21	31.12.21
Results			
Total revenues	(385)	(359)	7
Credit loss expense / (release)	3	0	801
Operating expenses	92	330	(72)
Operating profit / (loss) before tax	(480)	(689)	(30)
of which: Group Treasury	*(404)*	*(446)*	*(9)*
of which: Non-core and Legacy Portfolio	*131*	*(79)*	
of which: Group Services	*(206)*	*(165)*	*25*

1 Comparatives may differ as a result of adjustments following organizational changes, restatements due to the retrospective adoption of new accounting standards or changes in accounting policies, and events after the reporting period.

2022 compared with 2021

Results

Group Functions recorded a loss before tax of USD 480m, compared with a loss of USD 689m.

Group Treasury

The Group Treasury result was negative USD 404m, compared with negative USD 446m.

The net effects of accounting asymmetries, including hedge accounting ineffectiveness, were negative USD 375m, compared with negative USD 341m. Accounting asymmetries are generally expected to mean revert to zero over time, though the length of time needed for full reversion can vary significantly, depending on market conditions.

Income related to centralized Group Treasury risk management was negative USD 2m, compared with negative USD 63m.

Non-core and Legacy Portfolio

The Non-core and Legacy Portfolio result was positive USD 131m, compared with negative USD 79m. This was mainly due to income of USD 114m related to a legacy litigation settlement and a legacy bankruptcy claim, and valuation gains of USD 81m on our USD 1.3bn portfolio of auction rate securities (ARS). Our remaining exposures to ARS were all rated investment grade as of 31 December 2022.

Group Services

The Group Services result was negative USD 206m, compared with negative USD 165m, mainly driven by higher funding costs related to deferred tax assets, partly offset by lower expenses relating to our legal entity transformation program.

Risk, capital, liquidity and funding, and balance sheet

Management report

Audited information according to IFRS 7 and IAS 1

Risk and capital disclosures provided in line with the requirements of International Financial Reporting Standard 7 (IFRS 7), *Financial Instruments: Disclosures,* and International Accounting Standard 1 (IAS 1), *Presentation of Financial Statements,* form part of the financial statements included in the "Consolidated financial statements" section of this report and are audited by the independent registered public accounting firm Ernst & Young Ltd, Basel. This information is marked as "Audited" within this section of the report. The risk profile of UBS AG consolidated does not differ materially from that of UBS Group AG consolidated. Audited information provided in the "Risk management and control" and "Capital, liquidity and funding, and balance sheet" sections applies to both UBS Group AG consolidated and UBS AG consolidated.

Signposts

The Audited | signpost that is displayed at the beginning of a section, table or chart indicates that those items have been audited. A triangle symbol – ▲ – indicates the end of the audited section, table or chart.

Risk management and control

Table of contents

Risk management and control

Overview of risks arising from our business activities

Key risks by business division and Group Functions

Business divisions and Group Functions	Key financial risks arising from business activities
Global Wealth Management	**Credit risk** from lending against securities collateral, including derivative trading activity, and lending against residential and commercial real estate collateral, as well as corporate and other lending. **Market risk** from municipal securities and taxable fixed-income securities. Interest rate risk in the banking book related to Global Wealth Management is transferred to and managed by Group Treasury.
Personal & Corporate Banking	**Credit risk** from retail business, mortgages, secured and unsecured corporate lending, commodity trade finance, lending to banks and other regulated clients, as well as a small amount of derivatives trading activity. Minimal contribution to **market risk**. Interest rate risk in the banking book related to Personal & Corporate Banking is transferred to and managed by Group Treasury.
Asset Management	**Credit risk** and **market risk** on client assets invested in Asset Management funds can impact management and performance fees and cause heightened fund outflows, liquidity risk and losses on our seed capital and co-investments. Small amounts of credit and market risk for on-balance sheet items.
Investment Bank	**Credit risk** from lending (take-and-hold, as well as temporary loan underwriting activities), derivatives trading and securities financing. **Market risk** from primary underwriting activities and secondary trading.
Group Functions	**Credit** and **market risk** arising from management of the Group's balance sheet, capital, profit or loss and liquidity portfolios. Structural risk arising from asset and liability management and liquidity and funding risk (managed by Group Treasury).

Non-financial risks, which include operational, financial crime, compliance, conduct, model and reputational risks, are an inevitable consequence of being in business and can arise as a result of our past and current business activities across all business divisions and Group Functions.

› **Refer to "Risk categories" in this section for more information about other financial and non-financial risks relevant to UBS**

Key risk developments

Although 2022 was a challenging year for the global economy and most markets, our lending portfolio performed well, with low credit loss expenses and a USD 0.2bn reduction in credit-impaired exposure to USD 2.5bn. Overall, we saw a USD 6bn decrease in banking product exposure driven by lower balances at central banks and lower loans and advances to Global Wealth Management customers. Traded product exposures saw a decrease of USD 3bn across our business divisions.

Market risk remained stable and at low levels, as a result of our continued focus on managing tail risks.

Risk categories

We categorize the risk exposures of our business divisions and Group Functions as outlined in the table below. Our risk appetite framework is designed to capture all risk categories.

› **Refer to "Risk appetite framework" in this section for more information**

	Risk managed by	Independent oversight by
Financial risks		
Audited I **Credit risk:** the risk of loss resulting from the failure of a client or counterparty to meet its contractual obligations toward UBS. This includes settlement risk, loan underwriting risk and step-in risk. ***Settlement risk:*** the risk of loss resulting from transactions that involve exchange of value (e.g., security versus cash) where we must deliver without first being able to determine with certainty that we will receive the consideration. ***Loan underwriting risk:*** the risk of loss arising during the holding period of financing transactions that are intended for further distribution. ***Step-in risk:*** the risk that UBS may decide to provide financial support to an unconsolidated entity that is facing stress in the absence of, or in excess of, any contractual obligations to provide such support.	Business divisions	Risk Control
Audited I **Market risk** (traded and non-traded): the risk of loss resulting from adverse movements in market variables. Market variables include observable variables, such as interest rates, foreign exchange rates, equity prices, credit spreads and commodity (including precious metal) prices, as well as variables that may be unobservable or only indirectly observable, such as volatilities and correlations. Market risk includes issuer risk and investment risk. ***Issuer risk:*** the risk of loss from changes in fair value resulting from credit-related events affecting an issuer to which we are exposed through tradable securities or derivatives referencing the issuer. ***Investment risk:*** issuer risk associated with positions held as financial investments.	Business divisions and Group Treasury	Risk Control
Country risk: the risk of loss resulting from country-specific events. Includes transfer risk, which involves a country's authorities preventing or restricting the payment of an obligation, as well as systemic risk events arising from country-specific political or macroeconomic developments.	Business divisions	Risk Control
Sustainability and climate risk: the risk that UBS negatively impacts, or is impacted by, climate change, natural capital, human rights, and other environmental, social, governance (ESG) matters. Climate risks can arise from either changing climate conditions (physical risks) or from efforts to mitigate climate change (transition risks). Sustainability and climate risk may manifest as credit, market, liquidity, and / or non-financial risks for UBS, resulting in potential adverse financial, liability and / or reputation impacts. These risks extend to the value of investments and may also affect the value of collateral (e.g., real estate).	Business divisions	Risk Control
Treasury risk: the risks associated with asset and liability management and our liquidity and funding positions, as well as structural exposures including pension risks. Audited I ***Liquidity risk:*** the risk that the firm will not be able to efficiently meet both expected and unexpected current and forecast cash flows and collateral needs without affecting either daily operations or the financial condition of the firm. Audited I ***Funding risk:*** the risk that the firm will be unable, on an ongoing basis, to borrow funds in the market on an unsecured (or even secured) basis at an acceptable price to fund actual or proposed commitments, i.e., the risk that UBS's funding capacity is not sufficient to support the firm's current business and desired strategy. ***Interest rate risk in the banking book:*** the risk to the bank's capital and earnings arising from the adverse effects of interest rate movements on the bank's banking book positions. The risk is transferred from the originating business units GWM and P&C to Group Treasury to risk manage this centrally and benefit from Group-wide netting while leaving the business units with margin management. ***Structural foreign exchange risk:*** the risk of decreases in our capital due to changes in foreign exchange rates with an adverse translation effect on capital held in currencies other than the US dollar.	Group Treasury	Risk Control
Pension risk: the risk of a negative impact on our capital as a result of deteriorating funded status from decreases in the fair value of assets held in defined benefit pension funds and / or changes in the value of defined benefit pension obligations due to changes in actuarial assumptions (e.g., discount rate, life expectancy, rate of pension increase) and / or changes to plan designs.	Group Treasury and Human Resources	Risk Control and Finance
Business risk: the potential negative impact on earnings from lower-than-expected business volumes and / or margins, to the extent they are not offset by a decrease in expenses. For example, changes in the competitive landscape, client behavior or market conditions can potentially have a negative impact.	Business divisions	Risk Control and Finance

	Risk managed by	Independent oversight by
Non-financial risks		
Compliance risk: the risk of failure to comply with laws, rules and regulations, and internal policies and procedures.	Business divisions	Group Compliance, Regulatory & Governance (GCRG)
Employment risk: the risk of not adhering to the applicable employment law, regulatory requirements and human resources practices, as well as our own internal standards.		Human Resources
Conduct risk: the risk that the conduct of the firm or its individuals unfairly impacts clients or counterparties, undermines the integrity of the financial system or impairs effective competition to the detriment of consumers.		GCRG
Financial crime risk: the risk of failure to prevent financial crime (including money laundering, terrorist financing, sanctions violations, fraud, bribery and corruption).	Business divisions and Financial Crime Prevention (FCP)	GCRG
Operational risk: the risk resulting from inadequate or failed internal processes, people or systems, or from external causes (deliberate, accidental or natural).	Business divisions	GCRG
Cybersecurity and information security risk: the risk of a malicious internal or external act, or a failure of IT hardware or software, or human error, leading to a material impact on confidentiality, integrity or availability of UBS's data or information systems.	Business divisions and the Chief Digital and Information Office (the CDIO)	GCRG
Model risk: the risk of adverse consequences (e.g., financial loss, due to legal matters, operational loss, biased business decisions, or reputational damage) resulting from decisions based on incorrect / inadequate or misused model outputs and reports.	Model owner	Risk Control
Legal risk: the financial or reputational implications resulting from the risk of: (i) being held liable for a breach of applicable laws, rules or regulations; (ii) being held liable for a breach of contractual or other legal obligations; (iii) an inability or failure to enforce or protect contractual rights or non-contractual rights sufficiently to protect UBS's interests, including the risk of being party to a claim in respect of any of the above (and the risk of loss of attorney–client privilege in the context of any such claim); (iv) a failure to adequately develop, supervise and resource legal teams or adequately supervise external legal counsel advising on business legal risk and other matters; and (v) a failure to adequately manage any potential, threatened and commenced litigation and legal proceedings, including civil, criminal, arbitration and regulatory proceedings, and / or litigation risk or any dispute or investigation that may lead to litigation or threat of any litigation.	Business divisions	Legal
Reputational risk: the risk of loss of and damage to reputation, loss of clients and investor confidence within the financial system.	All businesses and functions	All control functions

Top and emerging risks

The top and emerging risks disclosed below reflect those that we currently think have the potential to materialize within one year and which could significantly affect the Group. Investors should also carefully review all information set out in the "Risk factors" section of this report, where we discuss these and other material risks that we consider could have an effect on our ability to execute our strategy and may affect our business activities, financial condition, results of operations and business prospects.

– We remain watchful of a range of geopolitical developments across the world, including the Russia–Ukraine war, US–China and US–Iran tensions, and political changes in a number of countries. Geopolitical tensions will continue to create uncertainty, while the Russia–Ukraine war complicates the energy price outlook.
– Inflation appears to be moderating in the US and Europe, but there continue to be concerns regarding a potential resurgence and regarding the timing and extent of central bank policy responses (i.e., interest rate hikes and the tapering of quantitative easing).
– We are exposed to a number of macroeconomic issues, as well as general market conditions. As noted in "Market, credit and macroeconomic risks" in the "Risk factors" section of this report, these external pressures may have a significant adverse effect on our business activities and related financial results, primarily through reduced margins and revenues, asset impairments and other valuation adjustments. Accordingly, these macroeconomic factors are considered in the development of stress-testing scenarios for our ongoing risk management activities.
– We are exposed to substantial changes in the regulation of our businesses that could have a material adverse effect on our business, as discussed in the "Regulatory and legal developments" section of this report and in "Regulatory and legal risks" in the "Risk factors" section of this report.

- As a global financial services firm, we are subject to many different legal, tax and regulatory regimes and extensive regulatory oversight. We are exposed to significant liability risk, and we are subject to various claims, disputes, legal proceedings and government investigations, as noted in "Regulatory and legal risks" in the "Risk factors" section of this report. Information about litigation, regulatory and similar matters we consider significant is disclosed in "Note 17 Provisions and contingent liabilities" in the "Consolidated financial statements" section of this report.
- The geopolitical situation increases the likelihood of external state-driven cyber activity, and attacks are becoming increasingly sophisticated, which may result in business disruption or the corruption or loss of data. Additionally, as a result of the dynamic and material nature of recent geopolitical, environmental and health threats and the operational complexity of all our businesses, we are continually exposed to operational resilience scenarios such as process error, failed execution, system failures and fraud.
- Conduct risks are inherent in our businesses. Achieving fair outcomes for our clients, upholding market integrity and cultivating the highest standards of employee conduct are of critical importance to us. Management of conduct risks is an integral part of our risk management framework.
- Financial crime (including money laundering, terrorist financing, sanctions violations, fraud, bribery and corruption) presents significant risk. Heightened regulatory expectations and attention require investment in people and systems, while emerging technologies and changing geopolitical risks further increase the complexity of identifying and preventing financial crime. Refer to "Non-financial risk" in this section and "Strategy, management and operational risks" in the "Risk factors" section of this report for more information.
- ESG / sustainability and climate risks are in the focus of regulators and other stakeholders, in particular climate risks, nature-related risk and concerns about greenwashing, where UBS may be subject to reputational risk if not fully aligned with sustainability-related criteria. New standards and rules are developing in several jurisdictions, with the risk of divergent rules increasing and leading to an increased risk that UBS may not comply with all relevant regulations. Refer to "Sustainability and climate risk" and "Non-financial risk" in this section.
- New risks continue to emerge. For example, client demand for distributed ledger technology, blockchain-based assets and virtual currencies creates new risks, to which we currently have limited exposure and for which relevant control frameworks are being implemented.

Risk governance

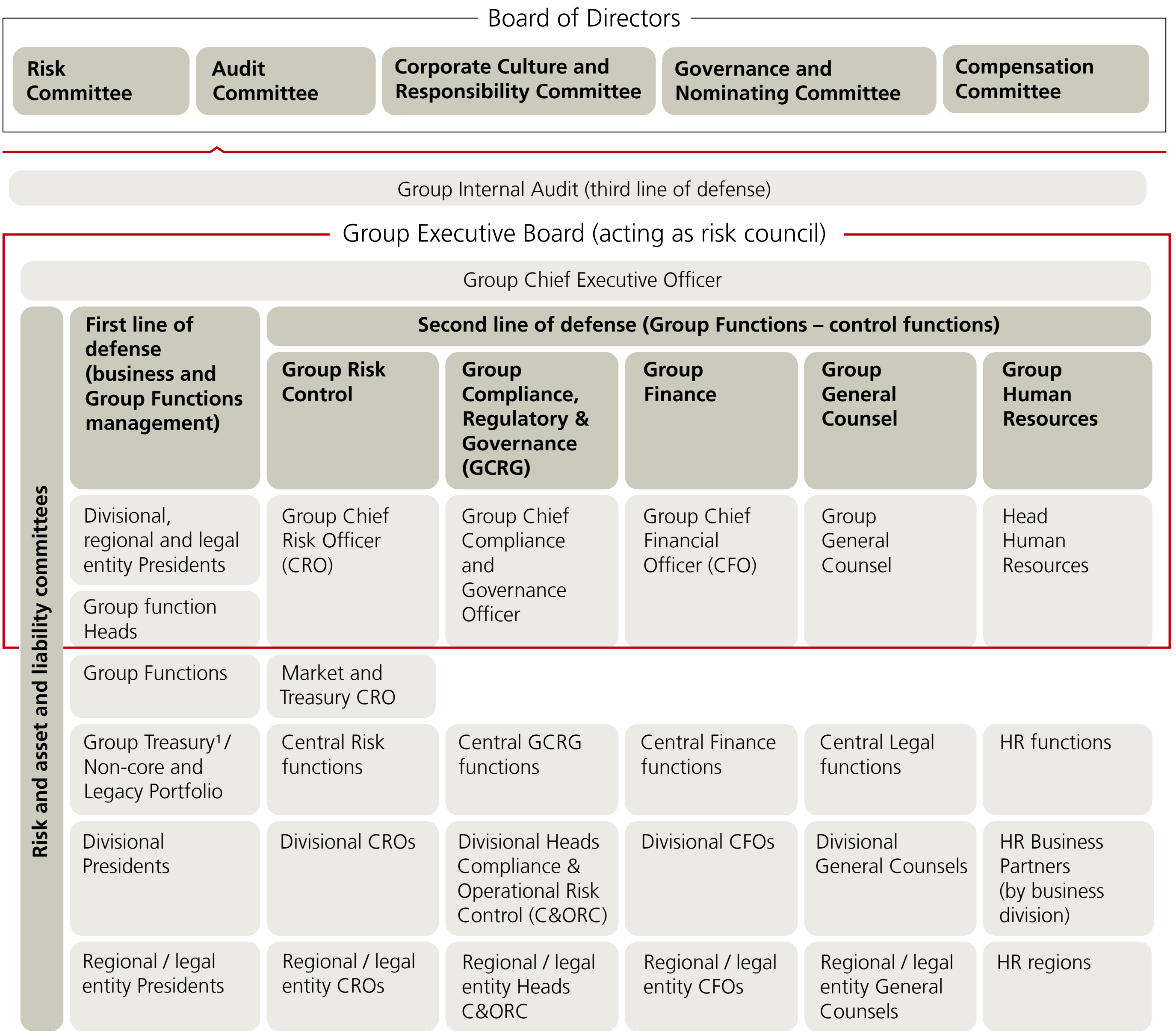
Our risk governance framework operates along three lines of defense.

Our first line of defense, business management, owns its risks and is accountable for maintaining effective processes and systems to manage them in compliance with applicable laws, rules and regulations, as well as internal standards, including identifying control weaknesses and inadequate processes.

Our second line of defense, control functions, is separate from the business and reports directly to the Group CEO. Control functions provide independent oversight, challenge financial and non-financial risks arising from the firm's business activities, and establish independent frameworks for risk assessment, measurement, aggregation, control and reporting, protecting against non-compliance with applicable laws, rules and regulations.

Our third line of defense, Group Internal Audit (GIA), reports to the Chairman and to the Audit Committee. This function assesses the design and operating effectiveness and sustainability of processes to define risk appetite, governance, risk management, internal controls, remediation activities and processes to comply with legal and regulatory requirements and internal governance standards.

The key roles and responsibilities for risk management and control are shown in the chart below and described further below.



1 Part of Group Finance.

Audited | *The Board of Directors* (the BoD) approves the risk management and control framework of the Group, including the Group and business division overall risk appetite. The BoD is supported by its Risk Committee, which monitors and oversees the Group's risk profile and the implementation of the risk framework approved by the BoD, and approves the Group's risk appetite methodology. The Corporate Culture and Responsibility Committee (the CCRC) helps the BoD meet its duty to safeguard and advance UBS's reputation for responsible and sustainable conduct, reviewing stakeholder concerns and expectations pertaining to UBS's societal contribution and corporate culture. The Audit Committee assists the BoD with its oversight duty relating to financial reporting and internal controls over financial reporting, and the effectiveness of whistleblowing procedures and the external and internal audit functions.

The *Group Executive Board* (the GEB) has overall responsibility for establishing and implementing a risk management and control framework in the Group, managing the risk profile of the Group as a whole.

The *Group Chief Executive Officer* has responsibility and accountability for the management and performance of the Group, has risk authority over transactions, positions and exposures, and allocates business divisions and Group Functions risk limits approved by the BoD.

The *business division Presidents and Group functional heads* are responsible for the operation and management of their business divisions / Group Functions, including controlling the dedicated financial resources and risk appetite of the business divisions.

The *regional Presidents* ensure cross-divisional collaboration in their regions and are mandated to inform the GEB about any regional activities and issues that may give rise to actual or potentially material regulatory or reputational concerns.

The *Group Chief Risk Officer* (the Group CRO) is responsible for developing the Group's risk management and control framework (including risk principles and risk appetite) for credit, market, country, treasury, model and sustainability and climate risks. This includes risk measurement and aggregation, portfolio controls and risk reporting. The Group CRO sets risk limits and approves credit and market risk transactions and exposures. Risk Control is also the central function for model risk management and control for all models used in UBS. A framework of policies and authorities support the risk control process.

The *Group Chief Compliance and Governance Officer* is responsible for developing the Group's non-financial risk framework, which sets the general requirements for identification, management, assessment and mitigation of non-financial risk, and for ensuring that all non-financial risks are identified, owned and managed according to the non-financial risk appetite objectives, supported by an effective control framework.

The *Group Chief Financial Officer* is responsible for transparency in assessing the financial performance of the Group and the business divisions, and for managing the Group's financial accounting, controlling, forecasting, planning and reporting. Additional responsibilities include managing UBS's tax affairs, as well as treasury and capital management, including liquidity and funding risk and UBS's regulatory ratios, Finance Artificial Intelligence & Data Analytics strategy and Group M&A.

The *Group General Counsel* manages the Group's legal affairs (including litigation involving UBS), ensuring effective and timely assessment of legal matters impacting the Group or its businesses, and managing and reporting all litigation matters.

The *Head Human Resources* is responsible for independent oversight and challenge of employment-related risks.

Group Internal Audit (GIA) independently assesses the effectiveness of processes to define strategy and risk appetite and overall adherence to the approved strategy. It also assesses the effectiveness of governance processes and risk management, including compliance with legal and regulatory requirements and internal governance documents. The Head GIA reports to the Chairman of the BoD. GIA also has a functional reporting line to the BoD Audit Committee.

Some of these roles and responsibilities are replicated for significant legal entities of the Group. Designated *legal entity risk officers* oversee and control financial and non-financial risks for significant legal entities of UBS as part of the legal entity control framework, which complements the Group's risk management and control framework. ▲

Risk appetite framework

We have a defined Group-level risk appetite, covering all financial and non-financial risk types, via a complementary set of qualitative and quantitative risk appetite statements. This is reviewed and recalibrated annually and presented to the BoD for approval.

Our risk appetite is defined at the aggregate Group level and reflects the types of risk that we are willing to accept or wish to avoid. It is set via complementary qualitative and quantitative risk appetite statements defined at a firm-wide level and is embedded throughout our business divisions and legal entities by Group, business division and legal entity policies, limits and authorities. Our risk appetite is reviewed and recalibrated annually, with the aim of ensuring that risk-taking at every level of the organization is in line with our strategic priorities, our capital and liquidity plans, our *Pillars, Principles and Behaviors*, and minimum regulatory requirements. The "Risk appetite framework" chart below shows the key elements of the framework, which is described in detail in this section.

Qualitative risk appetite statements aim to ensure we maintain the desired risk culture. Quantitative risk appetite objectives are designed to enhance UBS's resilience against the effects of potential severe adverse economic or geopolitical events. These risk appetite objectives cover UBS's minimum capital and leverage ratios, solvency, earnings, liquidity and funding, and are subject to periodic review, including the yearly business planning process. These objectives are complemented by non-financial risk appetite objectives, which are set for each of our non-financial risk categories. A standardized quantitative firm-wide non-financial risk appetite has been established at the Group and business division levels. Non-financial risk events exceeding predetermined risk tolerances, expressed as percentages of UBS's total revenue, must be escalated as per the firm-wide escalation framework to the respective business division President or higher, as appropriate.

The quantitative risk appetite objectives are supported by a comprehensive suite of risk limits set at a portfolio level to monitor specific portfolios and to control potential risk concentrations.

The status of risk appetite objectives is evaluated each month and reported to the BoD and the GEB. As our risk appetite may change over time, portfolio limits and associated approval authorities are subject to periodic reviews and changes, particularly in the context of our annual business planning process.

Our risk appetite framework is governed by a single overarching policy and conforms to the Financial Stability Board's Principles for an Effective Risk Appetite Framework.

Risk appetite framework

Risk appetite framework

Risk appetite statements

Risk principles, governance, roles and responsibilities	Risk objectives, measures and controls
– Risk management and control principles – Code of Conduct and Ethics – Total Reward Principles – Organization regulations / policies – Roles and responsibilities	– Group-wide risk appetite objectives – Non-financial risk appetite objectives – Risk measurement frameworks – Authorities and limits

Risk reporting and disclosure, including internal, regulatory and external reporting

Risk principles and risk culture

Maintaining a strong risk culture is a prerequisite for success in today's highly complex operating environment and a source of sustainable competitive advantage.

Our risk appetite framework combines all the important elements of our risk culture, expressed in our *Pillars, Principles and Behaviors*, our risk management and control principles, our Code of Conduct and Ethics, and our Total Reward Principles. Together these aim to align our decisions with the Group's strategy, principles and risk appetite. They help create a solid foundation for promoting risk awareness, leading to appropriate risk-taking and the establishing of robust risk management and control processes. These principles are supported by a range of initiatives covering employees at all levels, for example the *UBS House View on Leadership*, which is a set of explicit expectations that establishes consistent leadership standards across UBS, and our Principles of Good Supervision, which establish clear expectations of managers and employees regarding supervisory responsibilities, specifically: to take responsibility; to know and organize their business; to know their employees and what they do; to create a good risk culture; and to respond to and resolve issues.

› **Refer to "Employees" in the "How we create value for our stakeholders" section of this report for more information about our Pillars, Principles and Behaviors**

› **Refer to the Code of Conduct and Ethics of UBS at *ubs.com/code* for more information**

Risk management and control principles

Protection of financial strength	Protecting UBS's financial strength by controlling our risk exposure and avoiding potential risk concentrations at individual exposure levels, at specific portfolio levels and at an aggregate firm-wide level across all risk types.
Protection of reputation	Protecting our reputation through a sound risk culture characterized by a holistic and integrated view of risk, performance and reward, and through full compliance with our standards and principles, particularly our Code of Conduct and Ethics.
Business management accountability	Maintaining management accountability, whereby business management owns all risks assumed throughout the Group and is responsible for the continuous and active management of all risk exposures to provide for balanced risk and return.
Independent controls	Independent control functions that monitor the effectiveness of the businesses' risk management and oversee risk-taking activities.
Risk disclosure	Disclosure of risks to senior management, the BoD, investors, regulators, credit rating agencies and other stakeholders with an appropriate level of comprehensiveness and transparency.

Whistleblowing policies and procedures exist to encourage an environment where staff are comfortable raising concerns. There are multiple channels via which individuals may, either openly or anonymously, escalate suspected breaches of laws, regulations, rules and other legal requirements, our Code of Conduct and Ethics, policies or relevant professional standards. We are committed to ensuring there is appropriate training and communication to staff and legal entity representatives, including information about new regulatory requirements.

Mandatory training programs cover various compliance-related and risk-related topics, including operational risk and anti-money laundering. Additional specialized training is provided depending on employees' specific roles and responsibilities; e.g., credit risk and market risk training for those working in trading areas. Our non-financial risk framework aims to identify and manage financial, regulatory and reputational risks, as well as risks to clients and markets.

Quantitative risk appetite objectives

Our quantitative risk appetite objectives aim to ensure that our aggregate risk exposure remains within desired risk capacity, based on capital and business plans. The specific definition of risk capacity for each objective is aimed at ensuring we have sufficient capital, earnings, funding and liquidity to protect our businesses and exceed minimum regulatory requirements under a severe stress event. The risk appetite objectives are evaluated during the annual business planning process and approved by the BoD. The comparison of risk exposure with risk capacity is a key consideration in decisions on potential adjustments to the business strategy, risk profile, and the level of capital returns to shareholders.

In the annual business planning process, UBS's business strategy is reviewed, the risk profile that our operations and activities result in is assessed, and that risk profile stressed. We use both scenario-based stress tests and statistical risk measurement techniques to assess the effects of severe stress events at a firm-wide level. These complementary frameworks capture exposures to material risks across our business divisions and Group Functions.

› **Refer to "Risk measurement" in this section for more information about our stress testing and statistical stress frameworks**

2022 quantitative risk appetite objectives

Group-wide quantitative risk appetite objectives

Minimum capital objectives
CET1 capital is sufficient to meet minimum RWA-based capital requirements even if a severe stress event were to occur.

Minimum leverage ratio objectives
CET1 capital is sufficient to meet minimum leverage-ratio-based capital requirements even if a severe stress event were to occur.

Solvency objectives
CET1 capital plus contingent capital is sufficient to ensure that the probability of loss for the firm's debt holders is consistent with the firm's target credit rating.

Earnings objectives
Losses do not exceed average historic earnings even if a severe stress event were to occur.

Liquidity objectives
Ensure that the firm has sufficient liquidity to survive a severe three-month idiosyncratic and market-wide liquidity stress event without government support, allowing for discrete management actions.

Funding objectives
Ensure that the firm has sufficient long-term funding to maintain franchise assets at a constant level under stressed market conditions for up to one year without government support, allowing for discrete management actions.

Risk capacity

Projected earnings
adjusted to reflect business risk

Capital
adjusted to reflect stress impact on capital-relevant elements

Risk exposure

Statistical measures
earnings-at-risk, capital-at-risk, risk-based capital

Stress measures
combined stress test

Credit risk | **Country risk** | **Liquidity and funding risk** | **Pension risk**
Market risk[1] | **Non-financial risk** | **Structural foreign-exchange risk**

Granular limit framework

1 Includes interest rate risk. Refer to "Risk categories" in this section for more information.

Our risk capacity is underpinned by performance targets and capital guidance as per our business plan. When determining our risk capacity in case of a severe stress event, we estimate projected earnings under stress, factoring in lower expected income and expenses. We also consider capital impacts under stress from deferred tax assets, pension plan assets and liabilities, and accruals for capital returns to shareholders.

Risk appetite objectives define the aggregate risk exposure acceptable at the firm-wide level, given our risk capacity. The maximum acceptable risk exposure is supported by a full set of risk limits, which are cascaded to businesses and portfolios. These limits aim to ensure that our risks remain in line with risk appetite.

Risk appetite statements at the business division level are derived from the firm-wide risk appetite. They may also include division-specific strategic goals related to that division's activities and risks. Risk appetite statements are also set for certain legal entities, which must be consistent with the firm-wide risk appetite framework and approved in accordance with Group and legal entity regulations. Differences may exist that reflect the specific nature, size, complexity and regulations applicable to the relevant legal entity.

Internal risk reporting

Comprehensive and transparent reporting of risks is central to our risk governance framework's control and oversight responsibilities and required by our risk management and control principles. Accordingly, risks are reported at a frequency and level of detail commensurate with the extent and variability of the risk and the needs of the various governance bodies, regulators and risk authority holders.

The Group Risk Report provides a detailed qualitative and quantitative monthly overview of developments in financial and non-financial risks at the firm-wide level, including the status of our risk appetite objectives and the results of firm-wide stress testing. The Group Risk Report is distributed internally to the BoD and the GEB, and senior members of Risk Control, GIA, Finance and Legal. Risk reports are also produced for significant Group entities (entities subject to enhanced standards of corporate governance) and significant branches.

Granular divisional risk reports are provided to the respective business division CROs and business division Presidents. This monthly reporting is supplemented with daily or weekly reports, at various levels of granularity, covering market and credit risks for the business divisions to enable risk officers and senior management to monitor and control the Group's risk profile.

Our internal risk reporting covers financial and non-financial risks and is supported by risk data and measurement systems that are also used for external disclosure and regulatory reporting. Dedicated units within Risk Control assume responsibility for measurement, analysis and reporting of risk and for overseeing the quality and integrity of risk-related data. Our risk data and measurement systems are subject to periodic review by GIA, following a risk-based audit approach.

Model risk management

Introduction

We rely on models to inform risk management and control decisions, to measure risks or exposures, value instruments or positions, conduct stress testing, assess adequacy of capital, and manage clients' assets and our own assets. Models may also be used to measure and monitor compliance with rules and regulations, for surveillance activities, or to meet financial or regulatory reporting requirements.

Model risk is defined as the risk of adverse consequences (e.g., financial losses or reputational damage) resulting from incorrect or misused models.

Model governance framework

Our model governance framework establishes requirements for identifying, measuring, monitoring, reporting, controlling and mitigating model risk. All the models that we use are subject to governance and controls throughout their life cycles, with rigor, depth and frequency determined by the model's materiality and complexity. This is designed to ensure that risks arising from model use are identified, understood, managed, monitored, controlled and reported on both a model-specific and an aggregated level. Before they can be granted approval for use from the model sponsor, all our models are independently validated.

Once validated and approved for use, a model is subject to ongoing model monitoring and annual model confirmation, ensuring that the model is only used if it continues to be found fit for purpose. All models are subject to periodic model re-validation.

Our model risk governance framework follows our overarching risk governance framework, with the three lines of defense (LoD) assigned as follows.
- First LoD: model sponsors, model owners, model developers, and model users
- Second LoD: Chief Model Risk Officer, Model Risk Management & Control
- Third LoD: Group Internal Audit

An important difference as compared with how LoD are usually defined in financial and non-financial risk is that some models are owned by traditionally second LoD functions, such as Risk Control, Finance or Compliance.

Model risk appetite framework and statement

The model risk appetite framework sets out the model risk appetite statement, defines the relevant metrics and lays out how appropriate adherence is assessed.

Model oversight

Model oversight committees and forums ensure that model risk is overseen at different levels of the organization, appropriate model risk management and control actions are taken and, where necessary, escalated to the next level.

The Group Model Governance Committee is our most senior oversight and escalation body for all models in scope of our model governance framework. It is co-chaired by the Group CRO and the Group CFO and is responsible for: (i) reviewing and approving changes to the framework; (ii) approving the model risk appetite statement; (iii) overseeing adherence to the UBS model risk governance framework; and (iv) monitoring model risk at a firm-wide level.

Risk measurement

Audited I We apply a variety of methodologies and measurements to quantify the risks of our portfolios and potential risk concentrations. Risks that are not fully reflected within standard measures are subject to additional controls, which may include preapproval of specific transactions and the application of specific restrictions. Models to quantify risk are generally developed by dedicated units within control functions and are subject to independent validation. ▲

› **Refer to "Credit risk," "Market risk" and "Non-financial risk" in this section for more information about model confirmation procedures**

Stress testing

We perform stress testing to estimate losses that could result from extreme yet plausible macroeconomic and geopolitical stress events to identify, better understand and manage our potential vulnerabilities and risk concentrations. Stress testing has a key role in our limits framework at the firm-wide, business division, legal entity and portfolio levels. Stress test results are regularly reported to the BoD and the GEB. As described in "Risk appetite framework," stress testing, along with statistical loss measures, has a central role in our risk appetite and business planning processes.

Our stress testing framework has three pillars: (i) combined stress tests; (ii) an extensive set of portfolio- and risk-type-specific stress tests; and (iii) reverse stress testing.

Our *combined stress testing (CST)* framework is scenario-based and aims to quantify overall firm-wide losses that could result from various potential global systemic events. The framework captures all material risks, as covered in "Risk categories." Scenarios are forward-looking and encompass macroeconomic and geopolitical stress events calibrated to different levels of severity. We implement each scenario through the expected evolution of market indicators and economic variables under that scenario and then estimate the overall loss and capital implications were the scenario to occur. At least once a year, the Risk Committee approves the most relevant scenario, known as the binding scenario, for use as the main scenario for regular CST reporting and for monitoring risk exposure against our minimum capital, earnings and leverage ratio objectives in our risk appetite framework.

We provide detailed stress loss analyses to the Swiss Financial Market Supervisory Authority (FINMA) and regulators of our legal entities in accordance with their requirements.

Our Enterprise-wide Stress Forum (the ESF) aims to ensure the consistency and adequacy of the assumptions and scenarios used for firm-wide stress measures. As part of its responsibilities, the ESF, with input from the Think Tank, a panel of senior representatives from the business divisions, Risk Control and Economic Research, seeks to ensure that the set of stress scenarios adequately reflects current and potential developments in the macroeconomic and geopolitical environment, current and planned business activities, and actual or potential risk concentrations and vulnerabilities in our portfolios.

Each scenario captures a wide range of macroeconomic variables, including GDP, equity prices, interest rates, foreign exchange rates, commodity prices, property prices and unemployment. We use assumed changes in these macroeconomic and market variables in each scenario to stress the key risk drivers of our portfolios. We also capture the business risk resulting from lower fee, interest and trading income net of lower expenses. These effects are measured for all businesses and material risk types to calculate the aggregate estimated effect of the scenario on profit or loss, other comprehensive income, risk-weighted assets, the leverage ratio denominator and, ultimately, capital and leverage ratios. The assumed changes in macroeconomic variables are updated periodically to account for changes in the current and possible future market environment.

In 2022, the binding scenario for CST was the internal *global crisis* scenario. In this scenario, weaker fiscal conditions resulting from the COVID-19 pandemic, combined with concerns around inflation, geopolitical tensions and accelerating policy actions toward a carbon-neutral economy, lead to sovereign defaults in several emerging markets. This then spills over into a Eurozone crisis, a hard landing in China and a global downturn. The macroeconomic impact is severe, as is the immediate market impact. Volatility in the bond markets spreads to other asset classes. Greece, Portugal and Cyprus lose market access and require substantial debt restructurings, while Greece leaves the Eurozone. Weak consumer and business confidence and a fall in global markets lead to a global recession. The fiscal response in many countries is limited due to the lack of fiscal headroom, while central banks resume expansionary monetary policy. China is hit severely by the slowdown in global demand and volatility in financial markets, which further weakens emerging market economies. The scenario was updated over the course of 2022 to incorporate evolving economic conditions, including rising interest rates across the globe.

As part of the CST framework, we routinely monitored three additional stress scenarios throughout 2022:
– The *global depression* scenario explores a resurgence of COVID-19 occurring in the midst of a global market downturn. A combination of political, solvency and liquidity concerns cause several large emerging markets to default, which triggers a broader sovereign crisis. Several European economies default, and some leave the Eurozone. A negative feedback loop between collapsing demand in developed and emerging markets, declining asset values and commodity prices, and disruption in the banking system leads to a deep and prolonged recession across the globe.
– The *severe Russia–Ukraine conflict* scenario was created in early 2022 in response to developments in Ukraine and explores a sharp and persistent rise in inflation due to an escalation of geopolitical tensions, leading to a significant rise in long-term interest rates and a period of market turbulence. Economic activity slows across the globe as both business and household sentiment collapse, while credit conditions deteriorate. Despite weakness in activity, inflation remains stubbornly high, forcing central banks to begin raising their policy rates and thereby prolonging the weakness in economic activity and asset prices.
– The *US monetary crisis* scenario explores a loss of confidence in the US, which leads to a sell-off of US dollar-denominated assets, sparking an abrupt and substantial depreciation of the US dollar. The US economy is hit hard, financial markets enter a period of high volatility and other industrialized countries replicate the cyclical pattern of the US. Regional inflation trends diverge as the US experiences significant inflationary pressures while other developed markets experience deflation.

We have updated the binding stress scenario in our CST framework for 2023. The new *stagflationary geopolitical crisis* scenario assumes that a geopolitical event leads to economic regionalization and fears of prolonged stagflation. Central banks signal a firm commitment to price stability and continue to tighten monetary policy, triggering a broad rise in interest rates and impacting economic activity and asset values. The *global crisis* scenario will continue to be maintained and run for monitoring purposes.

Portfolio-specific stress tests are measures tailored to the risks of specific portfolios. Our portfolio stress loss measures are derived from data on past events, but also include forward-looking elements (e.g., we derive the expected market movements in our liquidity-adjusted stress metric using a combination of historical market behavior, based on an analysis of historical events, and forward-looking analysis, including consideration of defined scenarios not modeled on any historical events). Results of portfolio-specific stress tests may be subject to limits to explicitly control risk-taking or may be monitored without limits to identify vulnerabilities.

Reverse stress testing starts from a defined stress outcome (e.g., a specified loss amount, reputational damage, a liquidity shortfall or a breach of regulatory capital ratios) and works backward to identify economic or financial scenarios that could result in such an outcome. As such, reverse stress testing is intended to complement scenario-based stress tests by assuming "what if" outcomes that could extend beyond the range normally considered, and thereby potentially challenge assumptions regarding severity and plausibility.

We also routinely analyze the effect of increases or decreases in interest rates and changes in the structure of yield curves.

Within Group Treasury, we also perform stress testing to determine the optimal asset and liability structure, enabling us to maintain an appropriately balanced liquidity and funding position under various scenarios. These scenarios differ from those outlined above, because they focus on specific situations that could generate liquidity and funding stress, as opposed to the scenarios used in the CST framework, which focus on the effect on profit or loss and capital.

› **Refer to "Credit risk" and "Market risk" in this section for more information about stress loss measures**
› **Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information about stress testing**
› **Refer to "Note 19 Expected credit loss measurement" in the "Consolidated financial statements" section of this report for more information about scenarios used for expected credit loss measurement**

Statistical measures

We complement the scenario-based CST measures with our statistical stress measures to calculate and aggregate risks using statistical techniques to derive stress events at chosen confidence levels.

This framework is used to derive a loss distribution, considering effects on both income and expenses, based on the simulation of historically observed financial and economic risk factors in combination with the firm's actual earnings and relevant risk exposures. From that, we determine earnings-at-risk (EaR), measuring the potential shortfall in earnings (i.e., the deviation from forecast earnings) at a 95% confidence level and evaluated over a one-year horizon. EaR is used for the assessment of the earnings objectives in our risk appetite framework.

We extend the EaR measure, incorporating the effects of gains and losses recognized through other comprehensive income, to derive a distribution of potential effects of stress events on common equity tier 1 capital. From this distribution, we derive our capital-at-risk (CaR) buffer measure at a 95% confidence level to assess our capital and leverage ratio risk appetite objectives, and derive our CaR solvency measure at a 99.9% confidence level to assess our solvency risk appetite objective.

We use the CaR solvency measure as a basis for deriving the contributions of the business divisions to risk-based capital (RBC), which is a component of our equity attribution framework. RBC measures the potential capital impairment from an extreme stress event at a 99.9% confidence level.

› **Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information about the equity attribution framework**

Portfolio and position limits

UBS maintains a comprehensive set of risk limits across its major risk portfolios. These portfolio limits are set based on our risk appetite and periodically reviewed and adjusted as part of the business planning process.

Firm-wide stress and statistical metrics are complemented by more granular portfolio and position limits, triggers and targets. Combining these measures provides a comprehensive framework for control of the key risks of our business divisions, as well as significant legal entities.

We apply limits to a variety of exposures at portfolio level, using statistical and stress-based measures, such as value-at-risk, liquidity-adjusted stress, loan underwriting limits, economic value sensitivity and portfolio default simulations for loan books. These are complemented with a set of controls for net interest income sensitivity, mark-to-market losses on available-for-sale portfolios, and the effect of foreign exchange movements on capital and capital ratios.

Portfolio measures are supplemented with counterparty- and position-level controls. Risk measures for position controls are based on market risk sensitivities and counterparty-level credit risk exposures. Market risk sensitivities include sensitivities to changes in general market risk factors (e.g., equity indices, foreign exchange rates and interest rates) and sensitivities to issuer-specific factors (e.g., changes in an issuer's credit spread or default risk). We monitor numerous market and treasury risk controls on a daily basis. Counterparty measures capture the current and potential future exposure to an individual counterparty, considering collateral and legally enforceable netting agreements.

› **Refer to "Credit risk" in this section for more information about counterparty limits**
› **Refer to "Risk appetite framework" in this section for more information about the risk appetite framework**

Risk concentrations

Audited | Risk concentrations may exist where one or several positions within or across different risk categories could result in significant losses relative to UBS's financial strength. Identifying such risk concentrations and assessing their potential impact is a critical component of our risk management and control process.

For financial risks, we consider a number of elements, such as shared characteristics of positions, the size of the portfolio and the sensitivity of positions to changes in the underlying risk factors. Also important in our assessment is the liquidity of the markets where the positions are traded, as well as the availability and effectiveness of hedges or other potential risk-mitigating factors. This includes an assessment of, for example, the provider of the hedge and market liquidity where the hedge might be traded. Particular attention is given to identification of wrong-way risk and risk on risk. Wrong-way risk is defined as a positive correlation between the size of the exposure and the likelihood of a loss. Risk on risk is when a position and its risk mitigation can be impacted by the same event.

For non-financial risks, risk concentrations may result from, for example, a single operational risk issue that is large on its own (i.e., it has the potential to produce a single high-impact loss or a number of losses that together are high impact) or related risk issues that may link together to create a high impact.

Risk concentrations are subject to increased oversight by Group Risk Control and Group Compliance, Regulatory & Governance, and assessed to determine whether they should be reduced or mitigated, depending on the available means to do so. It is possible that material losses could occur on financial or non-financial risks, particularly if the correlations that emerge in a stressed environment differ markedly from those envisaged by risk models. ▲

› **Refer to "Credit risk" and "Market risk" in this section for more information about the composition of our portfolios**
› **Refer to the "Risk factors" section of this report for more information**

Credit risk

Audited | Main sources of credit risk

- Global Wealth Management credit risk arises from lending against securities collateral, including derivative trading activity, and lending against residential and commercial real estate collateral, as well as corporate and other lending.
- A substantial portion of lending exposure arises from Personal & Corporate Banking, which offers mortgage loans, secured mainly by owner-occupied properties and income-producing real estate, as well as corporate loans, and therefore depends on the performance of the Swiss economy and real estate market.
- The Investment Bank's credit exposure arises mainly from lending, derivatives trading and securities financing. Derivatives trading and securities financing are mainly investment grade. Loan underwriting activity can be lower rated and give rise to temporary concentrated exposure.
- Credit risk within Non-core and Legacy portfolio relates to derivative transactions and securitized positions. ▲

Credit loss expense / release

Total net credit loss expenses were USD 29m in 2022, compared with net credit loss releases of USD 148m in the prior year, reflecting net expenses of USD 29m related to stage 1 and 2 positions.

Stage 1 and 2 expected credit loss expenses of USD 29m relate to lending to corporate clients not secured by mortgages (USD 21m), mainly driven by scenario effects related to downward revision of GDP and higher interest rate assumptions, and lending secured by mortgages (USD 16m), mainly driven by scenario effects related to higher interest rate assumptions, especially in the newly introduced stagflationary geopolitical crisis scenario, and adverse house price assumptions, partly offset by releases from other lending (USD 9m).

› **Refer to "Note 1 Summary of material accounting policies," "Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement" and "Note 19 Expected credit loss measurement" in the "Consolidated financial statements" section of this report for more information about IFRS 9 and expected credit losses**

Credit loss expense / (release)

USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	Total
For the year ended 31.12.22						
Stages 1 and 2	(5)	27	0	6	1	29
Stage 3	5	12	0	(18)	2	0
Total credit loss expense / (release)	0	39	0	(12)	3	29
For the year ended 31.12.21						
Stages 1 and 2	(28)	(62)	0	(34)	0	(123)
Stage 3	(1)	(24)	1	0	0	(25)
Total credit loss expense / (release)	**(29)**	**(86)**	**1**	**(34)**	**0**	**(148)**
For the year ended 31.12.20						
Stages 1 and 2	48	129	0	88	0	266
Stage 3	40	128	2	217	42	429
Total credit loss expense / (release)	**88**	**257**	**2**	**305**	**42**	**694**

Audited | Overview of measurement, monitoring and management techniques

- Credit risk from transactions with individual counterparties is based on our estimates of probability of default (PD), exposure at default (EAD) and loss given default (LGD). Limits are established for individual counterparties and groups of related counterparties covering banking and traded products, and for settlement amounts. Risk authorities are approved by the Board of Directors and are delegated to the Group CEO, the Group CRO and divisional CROs, based on risk exposure amounts, internal credit rating and potential for losses.
- Limits apply not only to the current outstanding amount but also to contingent commitments and the potential future exposure of traded products.
- The Investment Bank monitoring, measurement and limit framework distinguishes between exposures intended to be held to maturity (take-and-hold exposures) and those intended for distribution or risk transfer (temporary exposures).
- We use models to derive portfolio credit risk measures of expected loss, statistical loss and stress loss at Group-wide and business division levels, and to establish portfolio limits.

– Credit risk concentrations can arise if clients are engaged in similar activities, located in the same geographical region or have comparable economic characteristics, e.g., if their ability to meet contractual obligations would be similarly affected by changes in economic, political or other conditions. To avoid credit risk concentrations, we establish limits / operational controls that constrain risk concentrations at portfolio, sub-portfolio or counterparty levels for sector exposure, country risk and specific product exposures. ▲

Credit risk profile of the Group

The exposures detailed in this section are based on management's view of credit risk, which differs in certain respects from the expected credit loss (ECL) measurement requirements of International Financial Reporting Standards (IFRS).

Internally, we put credit risk exposures into two broad categories: banking products and traded products. Banking products include drawn loans, guarantees and loan commitments, amounts due from banks, balances at central banks, and other financial assets at amortized cost. Traded products include over-the-counter (OTC) derivatives, exchange-traded derivatives (ETDs) and securities financing transactions (SFTs), consisting of securities borrowing and lending, and repurchase and reverse repurchase agreements.

Banking and traded products exposure in our business divisions and Group Functions

	31.12.22					
USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	Total
Banking products[1,2]						
Gross exposure	334,621	236,508	1,454	76,585	37,986	687,152
of which: loans and advances to customers (on-balance sheet)	*219,385*	*154,643*	*(1)*	*12,754*	*1,221*	*388,003*
of which: guarantees and loan commitments (off-balance sheet)	*13,147*	*28,610*	*0*	*12,920*	*7,486*	*62,163*
Traded products[2,3]						
Gross exposure	8,328	320	0	34,370		43,018
of which: over-the-counter derivatives	*6,416*	*304*	*0*	*11,218*		*17,938*
of which: securities financing transactions	*0*	*0*	*0*	*17,055*		*17,055*
of which: exchange-traded derivatives	*1,912*	*15*	*0*	*6,097*		*8,024*
Other credit lines, gross[4]	12,084	23,092	0	6,105	109	41,390
Total credit-impaired exposure, gross (stage 3)[1]	757	1,380	0	312	6	2,455
Total allowances and provisions for expected credit losses (stages 1 to 3)	215	701	0	168	7	1,091
of which: stage 1	*68*	*138*	*0*	*49*	*4*	*259*
of which: stage 2	*57*	*156*	*0*	*54*	*0*	*267*
of which: stage 3	*90*	*406*	*0*	*64*	*3*	*564*

	31.12.21					
USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	Total
Banking products[1,2]						
Gross exposure	337,266	229,334	1,520	59,352	65,514	692,985
of which: loans and advances to customers (on-balance sheet)	*228,598*	*152,847*	*0*	*13,720*	*3,445*	*398,611*
of which: guarantees and loan commitments (off-balance sheet)	*10,772*	*29,737*	*0*	*14,994*	*4,947*	*60,450*
Traded products[2,3]						
Gross exposure	9,582	783	0	35,950		46,314
of which: over-the-counter derivatives	*7,186*	*766*	*0*	*9,767*		*17,719*
of which: securities financing transactions	*0*	*0*	*0*	*18,566*		*18,566*
of which: exchange-traded derivatives	*2,396*	*17*	*0*	*7,617*		*10,030*
Other credit lines, gross[4]	12,947	24,174	0	3,629	28	40,778
Total credit-impaired exposure, gross (stage 3)[1]	729	1,617	0	264	0	2,610
Total allowances and provisions for expected credit losses (stages 1 to 3)	264	709	0	188	4	1,165
of which: stage 1	*89*	*126*	*0*	*64*	*4*	*282*
of which: stage 2	*41*	*146*	*0*	*34*	*0*	*220*
of which: stage 3	*135*	*438*	*0*	*90*	*0*	*662*

1 ECL gross exposure including other financial assets at amortized cost, but excluding cash, receivables from securities financing transactions, cash collateral receivables on derivative instruments, financial assets at FVOCI, irrevocable committed prolongation of existing loans and unconditionally revocable committed credit lines and forward starting reverse repurchase and securities borrowing agreements. 2 Internal management view of credit risk, which differs in certain respects from IFRS. 3 As counterparty risk for traded products is managed at counterparty level, no further split between exposures in the Investment Bank and Group Functions is provided. 4 Unconditionally revocable committed credit lines.

Banking products

- › **Refer to "Note 1 Summary of material accounting policies" in the "Consolidated financial statements" section of this report for more information about our accounting policy for allowances and provisions for ECL**
- › **Refer to "Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement" and "Note 19 Expected credit loss measurement" in the "Consolidated financial statements" section of this report for more information about ECL measurement requirements under IFRS**
- › **Refer to "Note 13a Other financial assets measured at amortized cost" in the "Consolidated financial statements" section of this report for more details**

Global Wealth Management

Gross banking products exposure within Global Wealth Management decreased slightly to USD 335bn from USD 337bn.

Our Global Wealth Management loan portfolio is mainly secured by securities (Lombard loans) and by residential real estate. Most of our USD 154bn of Lombard loans, including traded products collateralized by securities, were of high quality, with 89% rated as investment grade based on our internal ratings and an average loan-to-value (LTV) of 49%. Moreover, Lombard loans are typically uncommitted, short term in nature and can be canceled immediately if the collateral quality deteriorates and margin calls are not met. In 2022, the Lombard book, including traded products, decreased by approximately 11%, while keeping a stable risk profile with regard to collateral concentrations with no material losses. The decrease was primarily driven by clients in Asia Pacific deleveraging on the back of ongoing market volatility. The share of non-standard Lombard loans, for example those with less liquid or concentrated collateral, slightly increased to 5% of the total Lombard book from 4%.

The mortgage book increased by approximately 8%, driven by higher volumes of mortgage loans in the US residential real estate portfolios (average LTV 48%) and by further expansion of the commercial real estate business to USD 5bn.

Other financings represent approximately 6% of the total banking products exposures and are consolidated in a corporate and other portfolio that increased by approximately 68% in 2022, mainly driven by private equity subscription facilities in the US, which are mostly investment grade rated.

Collateralization of Loans and advances to customers[1]

	UBS		*of which: Global Wealth Management*		*of which: Personal & Corporate Banking*		*of which: Investment Bank*	
USD m, except where indicated	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Secured by collateral	367,159	377,857	*216,993*	*225,591*	*138,851*	*138,344*	*10,724*	*11,200*
Residential real estate	*172,700*	*168,696*	*62,200*	*58,655*	*110,500*	*110,041*	*0*	*0*
Commercial / industrial real estate	*25,271*	*22,682*	*4,955*	*3,338*	*19,795*	*18,878*	*520*	*466*
Cash	*33,550*	*37,504*	*30,514*	*34,175*	*3,036*	*3,114*	*0*	*215*
Securities	*115,941*	*128,665*	*107,253*	*115,901*	*2,228*	*2,214*	*5,869*	*7,829*
Other collateral	*19,698*	*20,310*	*12,071*	*13,523*	*3,293*	*4,098*	*4,334*	*2,690*
Subject to guarantees	2,957	3,954	*144*	*616*	*2,758*	*3,338*	*55*	*0*
Uncollateralized and not subject to guarantees	17,887	16,801	*2,247*	*2,391*	*13,034*	*11,166*	*1,976*	*2,519*
Total loans and advances to customers, gross	388,003	398,611	*219,385*	*228,598*	*154,643*	*152,847*	*12,754*	*13,720*
Allowances	(783)	(850)	*(138)*	*(168)*	*(559)*	*(574)*	*(83)*	*(108)*
Total loans and advances to customers, net of allowances	387,220	397,761	*219,247*	*228,431*	*154,084*	*152,273*	*12,672*	*13,612*
Collateralized loans and advances to customers in % of total loans and advances to customers, gross (%)	94.6	94.8	*98.9*	*98.7*	*89.8*	*90.5*	*84.1*	*81.6*

1 Collateral arrangements generally incorporate a range of collateral, including cash, securities, real estate and other collateral. UBS applies a risk-based approach that generally prioritizes collateral according to its liquidity profile.

Personal & Corporate Banking

Gross banking products exposure within Personal & Corporate Banking increased to USD 237bn, compared with USD 229bn in 2021. Net banking products exposure (excluding exposure reallocated from Group Treasury) was largely unchanged at USD 186bn (CHF 172bn), of which approximately 66% was classified as investment grade, broadly unchanged from 2021. Around 48% of the exposure is categorized in the lowest LGD bucket, i.e., 0–25%, compared with 50% in 2021. Personal & Corporate Banking's gross loan portfolio was USD 155bn (CHF 143bn) compared with USD 153bn (CHF 139bn) in 2021. This portfolio is predominantly denominated in Swiss francs and the increase in Swiss franc terms was largely offset by the effect of the US dollar appreciating. As of 31 December 2022, 90% of this portfolio was secured by collateral, mainly residential and commercial property. Of the total unsecured amount, 86% related to cash flow-based lending to corporate counterparties and 3% related to lending to public authorities. Based on our internal ratings, 53% of the unsecured loan portfolio was rated as investment grade, compared with 50% in 2021.

Our Swiss corporate banking products take-and-hold portfolio, which was USD 36bn (CHF 33bn) and unchanged compared with 2021, consists of loans, guarantees and loan commitments to multi-national and domestic counterparties. The small and medium-sized entity (SME) portfolio, in particular, is well diversified across industries. However, such companies are reliant on the domestic economy and the economies to which they export, in particular the EU and the US.

Our commodity trade finance portfolio focuses on energy and base-metal trading companies, where the related commodity price risk is hedged to a large extent by the commodity trader. The majority of limits in this business are uncommitted, transactional and short-term in nature. Our portfolio size was USD 7bn (CHF 7bn) as of 31 December 2022, compared with USD 8bn (CHF 7bn) in 2021, with a considerable part of the exposure correlating with commodity prices.

Our exposure to banks consists primarily of contingent claims and was USD 5bn (CHF 5bn), compared with USD 6bn (CHF 5bn) in 2021.

Despite the Russia–Ukraine war, higher energy prices and supply chain bottlenecks, as well as the onset of monetary policy tightening, credit losses were at a low level in 2022. The delinquency ratio was 0.2% for the corporate portfolio, compared with 0.3% at the end of 2021.

› **Refer to "Credit risk models" in this section for more information about loss given default, rating grades and rating agency mappings**

Swiss mortgage loan portfolio

Our Swiss mortgage loan portfolio secured by residential and commercial real estate in Switzerland continues to be our largest loan portfolio. These mortgage loans, totaling USD 170bn (CHF 157bn), mainly originate from Personal & Corporate Banking, but also from Global Wealth Management Region Switzerland. Of these mortgage loans, USD 154bn (CHF 142bn) related to residential properties that the borrower was either occupying or renting out, with full recourse to the borrower. Of this USD 154bn (CHF 142bn), USD 111bn (CHF 103bn) is related to properties occupied by the borrower, with an average LTV ratio of 51%, compared with 52% as of 31 December 2021. The average LTV for newly originated loans for this portfolio was 63%, compared with 64% in 2021. The remaining USD 43bn (CHF 39bn) of the Swiss residential mortgage loan portfolio related to properties rented out by the borrower and the average LTV of that portfolio was 51%, compared with 52% as of 31 December 2021. The average LTV for newly originated Swiss residential mortgage loans for properties rented out by the borrower was 54%, compared with 55% in 2021.

As illustrated in the "Swiss mortgages: distribution of net exposure at default (EAD) across exposure segments and loan-to-value (LTV) buckets" table below, 99.9% of the aggregate amount of Swiss residential mortgage loans would continue to be covered by the real estate collateral even if the value assigned to that collateral were to decrease 20%, and more than 99% would remain covered by the real estate collateral even if the value assigned to that collateral were to decrease 30%.

Personal & Corporate Banking: distribution of banking products exposure across internal UBS ratings and loss given default (LGD) buckets[1]

USD m, except where indicated	31.12.22						31.12.21	
		LGD buckets				Weighted average		Weighted average
Internal UBS rating[2]	Exposure	0–25%	26–50%	51–75%	76–100%	LGD (%)	Exposure	LGD (%)
Investment grade	123,358	67,254	44,236	9,162	2,706	28	121,520	27
Sub-investment grade	62,219	22,924	25,168	11,790	2,336	35	63,141	34
of which: 6–9	*56,774*	*21,053*	*22,976*	*10,592*	*2,153*	*35*	*57,955*	*34*
of which: 10–13	*5,445*	*1,871*	*2,193*	*1,199*	*182*	*36*	*5,185*	*36*
Defaulted / Credit-impaired	1,380	24	1,151	205		42	1,617	42
Total exposure before deduction of allowances and provisions	186,957	90,202	70,555	21,158	5,042	30	186,278	29
Less: allowances and provisions	(664)						(674)	
Net banking products exposure[1]	186,293						185,604	

1 Excluding balances at central banks and Group Treasury reallocations. 2 The ratings of the major credit rating agencies, and their mapping to our internal rating scale, are shown in the "Internal UBS rating scale and mapping of external ratings" table in this section.

Personal & Corporate Banking: loans uncollateralized and not subject to guarantees by industry sector

	31.12.22		31.12.21	
	USD m	%	USD m	%
Construction	172	1.3	166	1.5
Financial institutions	3,878	29.8	2,786	25.0
Hotels and restaurants	135	1.0	119	1.1
Manufacturing	1,715	13.2	1,555	13.9
Private households	1,473	11.3	1,488	13.3
Public authorities	416	3.2	419	3.8
Real estate and rentals	547	4.2	574	5.1
Retail and wholesale	2,230	17.1	1,971	17.7
Services	2,242	17.2	1,908	17.1
Other	226	1.7	180	1.6
Exposure, gross	13,034	100.0	11,166	100.0

Swiss mortgages: distribution of net exposure at default (EAD) across exposure segments and loan-to-value (LTV) buckets[1]

USD bn, except where indicated		31.12.22								31.12.21
		LTV buckets								
Exposure segment		≤30%	31–50%	51–60%	61–70%	71–80%	81–100%	>100%	Total	Total
Residential mortgages	Net EAD	91.5	38.4	9.6	3.9	1.0	0.1	0.0	144.5	143.9
	as a % of row total	63	27	7	3	1	0	0	100	
Income-producing real estate	Net EAD	15.6	6.1	1.3	0.5	0.1	0.0	0.0	23.7	22.2
	as a % of row total	66	26	6	2	1	0	0	100	
Corporates	Net EAD	7.2	2.7	0.7	0.4	0.2	0.1	0.0	11.2	10.9
	as a % of row total	64	24	6	3	1	1	0	100	
Other segments	Net EAD	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.9	0.9
	as a % of row total	67	22	5	3	2	1	0	100	
Mortgage-covered exposure	Net EAD	114.8	47.4	11.6	4.9	1.2	0.3	0.1	180.3	177.9
	as a % of total	64	26	6	3	1	0	0	100	
Mortgage-covered exposure 31.12.21	Net EAD	111.2	47.0	12.2	5.5	1.5	0.3	0.1	177.9	
	as a % of total	63	26	7	3	1	0	0		

1 The amount of each mortgage loan is allocated across the LTV buckets to indicate the portion at risk at the various value levels shown; for example, a loan of 75 with an LTV ratio of 75% (i.e., a collateral value of 100) would result in allocations of 30 in the less-than-30% LTV bucket, 20 in the 31–50% bucket, 10 in the 51–60% bucket, 10 in the 61–70% bucket and 5 in the 71–80% bucket.

Investment Bank

The Investment Bank's lending activities are largely associated with corporate and non-bank financial institutions. The business is broadly diversified across industry sectors, but concentrated in North America.

The gross banking products exposure increased to USD 77bn as of 31 December 2022, compared with USD 59bn as of 31 December 2021, mostly driven by balances at central banks allocated to the business division. Excluding balances at central banks and Group Treasury reallocations, gross banking products exposure decreased to USD 32bn from USD 35bn in 2021, mostly driven by a decrease in irrevocable loan commitments. Based on our internal ratings, 50% of this gross banking products exposure was classified as investment grade. The vast majority of the gross banking products exposure had an estimated LGD below 50%.

Total mandated temporary loan underwriting exposure ended 2022 at USD 2.6bn, compared with USD 6.6bn at the end of the prior year. USD 2.3bn of commitments had not yet been distributed as originally planned as of 31 December 2022. Loan underwriting exposures are classified as held for trading, with fair values reflecting market conditions at the end of 2022.

› **Refer to "Credit risk models" in this section for more information about LGD, rating grades and rating agency mappings**

Investment Bank: distribution of banking products exposure across internal UBS ratings and loss given default (LGD) buckets[1]

USD m, except where indicated	31.12.22						31.12.21	
		LGD buckets						
Internal UBS rating[2]	Exposure	0–25%	26–50%	51–75%	76–100%	Weighted average LGD (%)	Exposure	Weighted average LGD (%)
Investment grade	15,878	4,182	7,867	2,127	1,702	37	18,302	36
Sub-investment grade	15,522	4,872	6,324	4,128	198	23	16,250	20
of which: 6–9	*9,174*	*2,746*	*2,380*	*3,879*	*169*	*17*	*10,467*	*14*
of which: 10–13	*6,348*	*2,127*	*3,944*	*249*	*29*	*32*	*5,783*	*31*
Defaulted / Credit-impaired	312	273	27	9	3	21	264	33
Banking products exposure[1]	31,712	9,327	14,218	6,264	1,904	30	34,815	28

1 Excluding balances at central banks and Group Treasury reallocations. 2 The ratings of the major credit rating agencies, and their mapping to our internal rating scale, are shown in the "Internal UBS rating scale and mapping of external ratings" table in this section.

Investment Bank: banking products exposure by geographical region[1]

	31.12.22		31.12.21	
	USD m	%	USD m	%
Asia Pacific	4,766	15.0	5,154	14.8
Latin America	1,209	3.8	1,327	3.8
Middle East and Africa	183	0.6	212	0.6
North America	15,409	48.6	16,282	46.8
Switzerland	461	1.5	453	1.3
Rest of Europe	9,684	30.5	11,387	32.7
Exposure[1]	31,712	100.0	34,815	100.0

1 Excluding balances at central banks and Group Treasury reallocations.

Investment Bank: banking products exposure by industry sector[1]

	31.12.22		31.12.21	
	USD m	%	USD m	%
Banks	4,409	13.9	4,908	14.1
Chemicals	583	1.8	645	1.9
Electricity, gas, water supply	363	1.1	359	1.0
Financial institutions, excluding banks	14,587	46.0	13,353	38.4
Manufacturing	1,361	4.3	1,692	4.9
Mining	878	2.8	1,024	2.9
Public authorities	259	0.8	619	1.8
Real estate and construction	1,685	5.3	1,581	4.5
Retail and wholesale	1,654	5.2	2,793	8.0
Technology and communications	2,324	7.3	3,736	10.7
Transport and storage	499	1.6	414	1.2
Other	3,110	9.8	3,691	10.6
Exposure[1]	31,712	100.0	34,815	100.0

1 Excluding balances at central banks and Group Treasury reallocations.

Group Functions

Gross banking products exposure within Group Functions, which arises primarily in connection with treasury activities, decreased by USD 28bn to USD 38bn from balances at central banks. The decrease was mainly due to shifts within the high-quality liquid asset portfolio from cash into securities, a reduction in short-term debt, decreases in customer deposits, and outflows related to the share repurchase programs.

› **Refer to "Balance sheet assets" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information**

› **Refer to the "Group Functions" section of this report for more information**

Traded products

Audited | Counterparty credit risk (CCR) arising from traded products, which include OTC derivatives, ETD exposures and SFTs, originating in the Investment Bank, Non-core and Legacy Portfolio, and Group Treasury, is generally managed on a close-out basis. This takes into account possible effects of market movements on the exposure and any associated collateral over the time it would take to close out our positions. In the Investment Bank, limits are applied to the potential future exposure per counterparty, with the size of the limit dependent on the counterparty's creditworthiness (as determined by Risk Control). Limit frameworks are also used to control overall exposure to specific classes or categories of collateral on a portfolio level. Such portfolio limits are monitored and reported to senior management.

Trading in OTC derivatives is conducted through central counterparties where practicable. Where central counterparties are not used, we have clearly defined policies and processes for trading on a bilateral basis. Trading is typically conducted under bilateral International Swaps and Derivatives Association or similar master netting agreements, which generally allow for close-out and netting of transactions in case of default, subject to applicable law. For most major market participant counterparties, we use two-way collateral agreements under which either party can be required to provide collateral in the form of cash or marketable securities when the exposure exceeds specified levels. This collateral typically consists of well-rated government debt or other collateral permitted by applicable regulations. For certain counterparties, an initial margin is taken to cover some or all of the calculated close-out exposure. This is in addition to the variation margin taken to settle changes in market value of transactions. Regulations on margining uncleared OTC derivatives continue to evolve. These generally expand the scope of bilateral derivatives activity subject to margining. They will also result in greater amounts of initial margin received from, and posted to, certain bilateral trading counterparties than had been required in the past. These changes should result in lower close-out risk over time. ▲

In the tables below, OTC derivatives exposures are generally presented as net positive replacement values after the application of legally enforceable netting agreements and the deduction of cash and marketable securities held as collateral. SFT exposures are reported taking into account collateral received, and ETD exposures take into account collateral margin calls.

› **Refer to "Note 10 Derivative instruments" in the "Consolidated financial statements" section of this report for more information about OTC derivatives settled through central counterparties**

› **Refer to "Note 21 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of this report for more information about the effect of netting and collateral arrangements on derivative exposures**

Investment Bank, Non-core and Legacy Portfolio and Group Treasury: traded products exposure

USD m	OTC derivatives	SFTs	ETDs	Total	Total
		31.12.22			31.12.21
Total exposure, before deduction of credit valuation adjustments and hedges	11,218	17,055	6,097	34,370	35,950
Less: credit valuation adjustments and allowances	(34)	(1)	0	(35)	(34)
Less: credit protection bought (credit default swaps, notional)	(109)			(109)	(119)
Net exposure after credit valuation adjustments, allowances and hedges	11,075	17,055	6,097	34,226	35,797

Investment Bank, Non-core and Legacy Portfolio and Group Treasury: distribution of net OTC derivatives and SFT exposure across internal UBS ratings and loss given default (LGD) buckets

USD m, except where indicated	31.12.22						31.12.21	
		LGD buckets				Weighted average		Weighted average
Internal UBS rating[1]	Exposure	0–25%	26–50%	51–75%	76–100%	LGD (%)	Exposure	LGD (%)
Net OTC derivatives exposure								
Investment grade	10,757	310	8,791	444	1,212	48	9,297	47
Sub-investment grade	318	13	114	14	177	72	317	59
of which: 6–9	*285*	*9*	*89*	*13*	*174*	*76*	*249*	*62*
of which: 10–12	*28*	*0*	*25*	*0*	*2*	*41*	*46*	*64*
of which: 13 and defaulted	*5*	*3*	*0*	*2*	*0*	*23*	*22*	*14*
Total net OTC derivatives exposure, after credit valuation adjustments and hedges	11,075	322	8,905	458	1,389	49	9,615	48
Net SFT exposure								
Investment grade	16,682	279	14,414	999	990	40	17,937	40
Sub-investment grade	373	0	151	45	177	71	629	69
Total net SFT exposure	17,055	279	14,565	1,044	1,166	41	18,566	41

1 The ratings of the major credit rating agencies, and their mapping to our internal rating scale, are shown in the "Internal UBS rating scale and mapping of external ratings" table in this section.

Investment Bank, Non-core and Legacy Portfolio and Group Treasury: net OTC derivatives and SFT exposure by geographical region

	Net OTC derivatives exposure				Net SFT exposure			
	31.12.22		31.12.21		31.12.22		31.12.21	
	USD m	%	USD m	%	USD m	%	USD m	%
Asia Pacific	1,249	11.3	1,586	16.5	4,906	28.8	5,380	29.0
Latin America	117	1.1	111	1.2	34	0.2	20	0.1
Middle East and Africa	615	5.6	112	1.2	483	2.8	360	1.9
North America	2,200	19.9	1,830	19.0	3,177	18.6	4,473	24.1
Switzerland	1,055	9.5	688	7.2	466	2.7	559	3.0
Rest of Europe	5,839	52.7	5,288	55.0	7,988	46.8	7,774	41.9
Exposure	11,075	100.0	9,615	100.0	17,055	100.0	18,566	100.0

Investment Bank, Non-core and Legacy Portfolio and Group Treasury: net OTC derivatives and SFT exposure by industry sector

	Net OTC derivatives exposure				Net SFT exposure			
	31.12.22		31.12.21		31.12.22		31.12.21	
	USD m	%	USD m	%	USD m	%	USD m	%
Banks	1,288	11.6	986	10.3	869	5.1	1,654	8.9
Chemicals	71	0.6	14	0.1	0	0.0	0	0.0
Electricity, gas, water supply	118	1.1	103	1.1	0	0.0	0	0.0
Financial institutions, excluding banks	8,614	77.8	7,174	74.6	14,865	87.2	15,866	85.5
Manufacturing	97	0.9	50	0.5	0	0.0	0	0.0
Mining	20	0.2	51	0.5	0	0.0	0	0.0
Public authorities	655	5.9	810	8.4	1,320	7.7	926	5.0
Retail and wholesale	29	0.3	22	0.2	0	0.0	0	0.0
Transport, storage and communication	115	1.0	255	2.6	0	0.0	0	0.0
Other	69	0.6	150	1.6	0	0.0	120	0.6
Exposure	11,075	100.0	9,615	100.0	17,055	100.0	18,566	100.0

Credit risk mitigation

Audited | We actively manage credit risk in our portfolios by taking collateral against exposures and by utilizing credit hedging. ▲

Lending secured by real estate

Audited | We use a scoring model as part of a standardized front-to-back process for credit decisions on originating or modifying Swiss mortgage loans. The model's two key factors are the LTV ratio and an affordability calculation. ▲

The calculation of affordability takes into account interest payments, minimum amortization requirements and potential property maintenance costs in relation to gross income or rental income for rental properties. Interest payments are estimated using a predefined framework, which considers the potential for significant interest rate increases over the lifetime of the loan. The interest rate is set at 5% per annum in the context of the current environment.

For residential properties occupied by the borrower, the maximum LTV for the standard approval process is 80% and 60% for holiday homes and luxury real estate. For other properties, the maximum LTV allowed within the standard approval process ranges from 30% to 80%, depending on the type and age of the property, and the amount of renovation work needed.

Audited | The value we assign to each property is based on the lowest value determined from model-derived valuations, the purchase price, an asset value for income-producing real estate (IPRE), and, in some cases, an additional external valuation. ▲

Two separate models provided by a market-leading external vendor are used to derive property valuations for owner-occupied residential properties (ORPs) and IPRE. We estimate the current value of an ORP using a regression model (a hedonic model) based on statistical comparison against current transaction data. We derive the value of a property from the characteristics of the real estate itself, as well as those of its location. In addition to the initial valuation, values for ORPs are updated quarterly over the lifetime of the loan using region-specific real estate price indices. The price indices are sourced from an external vendor and subject to internal validation and benchmarking. We use these valuations quarterly to compute indexed LTV for all ORPs. A portfolio-specific monitoring system considers these along with other risk measures (e.g., rating and behavioral information) to identify higher-risk loans and triggers an assessment and reappraisal by client advisors and credit officers as needed.

For IPRE, the capitalization rate model is used to determine the property valuation by discounting estimated sustainable future income using a capitalization rate based on various attributes. These attributes consider regional and specific property characteristics, such as market and location data (e.g., vacancy rates), benchmarks (e.g., for running costs), and certain other standardized input parameters (e.g., property condition). Updated information regarding rental income from IPRE is requested from the client at least once every three years. Our portfolio-specific monitoring system alerts us to changes in rental income and other risk measures (e.g., LTV, rating, behavioral information), and triggers an assessment and reappraisal by client advisors and credit officers as needed.

To take market developments into account for these models, the external vendor regularly updates the parameters and / or refines the architecture for each model. Model changes and parameter updates are subject to the same validation procedures as our internally developed models.

Audited | We similarly apply underwriting guidelines for our Global Wealth Management Region Americas mortgage loan portfolio, taking into account loan affordability and collateral sufficiency. LTV standards are defined for the various mortgage types, such as residential mortgages or investment properties, based on associated risk factors, such as property type, loan size, and purpose. The maximum LTV allowed within the standard approval process ranges from 45% to 80%. In addition to LTV, other credit risk metrics, such as debt-to-income ratios, credit scores and required client reserves, are also part of our underwriting guidelines.

A risk limit framework is applied to the Global Wealth Management Region Americas mortgage loan portfolio. Limits are set to govern exposures within LTV categories, geographic concentrations, portfolio growth and high-risk mortgage segments, such as interest-only loans. These limits are monitored by a specialized credit risk monitoring team and reported to senior management. Supplementing this limit framework is a real estate lending policy and procedures framework, set up to govern real estate lending activities. Quality assurance and quality control programs monitor compliance with mortgage underwriting and documentation requirements.

For our mortgage loan portfolio in the Global Wealth Management regions of EMEA and Asia Pacific, we apply global underwriting guidelines with regional variations to allow for regulatory and market differentials. As in other regions, the underwriting guidelines take into account affordability and collateral sufficiency. Affordability is assessed at a stressed interest rate using, for residential real estate, the borrowers' sustainable income and declared liabilities, and for commercial real estate the quality and sustainability of rental income. For interest-only loans, a declared and evidenced repayment strategy must be in place. The applicable LTV for each mortgage is based on the quality and liquidity of the property and assessed against valuations from bank-appointed third-party valuers. Maximum LTV varies from 30% to 70%, depending on the type and location of the property, as well as other factors. Collateral sufficiency is often further supported by personal guarantees from related third parties. The overall portfolio is centrally assessed against a number of stress scenarios to ensure that exposures remain within predefined stress limits. ▲

› **Refer to "Swiss mortgage loan portfolio" in this section for more information about LTV in our Swiss mortgage portfolio**

Lombard lending

Audited | Lombard loans are secured by pledges of marketable securities, guarantees and other forms of collateral. Eligible financial securities are primarily liquid and actively traded transferable securities (such as bonds and equities), and other transferable securities, such as approved structured products for which regular prices are available and the issuer of the security provides a market. To a lesser degree, less liquid collateral is also used.

We derive lending values by applying discounts (haircuts) to the pledged collateral's market value. Haircuts for marketable securities are calculated to cover a possible change in value over a given close-out period and confidence level. Less liquid or more volatile collateral will typically have larger haircuts.

We assess concentration and correlation risks across collateral posted at a counterparty level, and at a divisional level across counterparties. We also perform targeted Group-wide reviews of concentration. Concentration of collateral in single securities, issuers or issuer groups, industry sectors, countries, regions or currencies may result in higher risk and reduced liquidity. In such cases, the lending value of the collateral, margin call and close-out levels are adjusted accordingly. ▲

Exposures and collateral values are monitored daily, with the aim of ensuring that the credit exposure is always within the established risk tolerance. A shortfall occurs when the lending value drops below the exposure; if it exceeds a defined trigger level, a margin call is initiated, requiring the client to provide additional collateral, reduce the exposure or take other action to bring exposure in line with the agreed lending value of the collateral. If a shortfall is not corrected within the required period, a close-out is initiated, through which collateral is liquidated, open derivative positions are closed and guarantees are called.

We conduct stress testing of collateralized exposures to simulate market events that reduce collateral value, increase exposure of traded products, or do both. For certain classes of counterparties, limits on such calculated stress exposures are applied and controlled at a counterparty level. Also, portfolio limits are applied across certain businesses or collateral types.

› **Refer to "Stress loss" in this section for more information about our stress testing**

Credit hedging

Audited | We use single-name credit default swaps (CDSs), credit-index CDSs, bespoke protection and other instruments to actively manage credit risk in the Investment Bank and Non-core and Legacy Portfolio. The aim is to reduce concentrations of risk from specific counterparties, sectors or portfolios and, for CCR, the profit or loss effect arising from changes in credit valuation adjustments (CVAs).

We have strict guidelines with regard to taking credit hedges into account for credit risk mitigation purposes. For example, when monitoring exposures against counterparty limits, we do not usually apply certain credit risk mitigants, such as proxy hedges (credit protection on a correlated but different name) or credit-index CDSs, to reduce counterparty exposures. Buying credit protection also creates credit exposure with regard to the protection provider. We monitor and limit exposures to credit protection providers, and also monitor the effectiveness of credit hedges as part of our overall credit exposures to the relevant counterparties. Trading with such counterparties is typically collateralized. For credit protection purchased to hedge the lending portfolio, this includes monitoring mismatches between the maturity of credit protection purchased and the maturity of the associated loan. Such mismatches result in basis risk and may reduce the effectiveness of the credit protection. Mismatches are routinely reported to credit officers and mitigating actions are taken when necessary. ▲

› **Refer to "Note 10 Derivative instruments" in the "Consolidated financial statements" section of this report for more information**

Mitigation of settlement risk

To mitigate settlement risk, we reduce actual settlement volumes by using multi-lateral and bi-lateral agreements with counterparties, including payment netting.

Foreign exchange transactions are our most significant source of settlement risk. We are a member of Continuous Linked Settlement (CLS), an industry utility that provides a multi-lateral framework to settle transactions on a delivery-versus-payment basis, thus reducing foreign-exchange-related settlement risk relative to the volume of business. However, mitigation of settlement risk through CLS and other means does not fully eliminate credit risk in foreign exchange transactions resulting from changes in exchange rates prior to settlement, which is managed as part of our overall credit risk management of OTC derivatives.

Credit risk models

Basel III – A-IRB credit risk models

Audited | We have developed tools and models to estimate future credit losses that may be implicit in our current portfolio.

Exposures to individual counterparties are measured using three generally accepted parameters: PD, EAD and LGD. For a given credit facility, the product of these three parameters results in the expected loss (the EL). These parameters are the basis for the majority of our internal measures of credit risk, and key inputs for regulatory capital calculation under the advanced internal ratings-based (A-IRB) approach of the Basel III framework. We also use models to derive the portfolio credit risk measures of EL, statistical loss and stress loss. ▲

› **Refer to the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors,* for more information about the regulatory capital calculation under the advanced internal ratings-based approach**

Key features of our main credit risk models

	Portfolio in scope	Asset class	Model approach	Number of main models	Main drivers	Number of years of loss data[1]
Probability of default	Sovereigns and central banks	Central governments and central banks	Scorecard	1	Political, institutional and economic indicators	>10
	Owner-occupied mortgages in Switzerland and the US	Retail: residential mortgages	Scorecard	2	Behavioral data, affordability relative to income, property type, loan-to-value. Separate models for mortgages in Switzerland and the US	28
	Income-producing real estate mortgages	Retail: residential mortgages, Corporates: specialized lending	Scorecard	1	Loan-to-value, debt service coverage, financial data (for large corporates only), behavioral data. Weights of risk drivers differ between corporate and private clients	28
	Lombard lending	Retail: other retail, Corporates: other lending	Merton type	2	Separate models for structured margin lending and standard Lombard. Key risk drivers for both models: loan-to-value, historical asset returns, behavioral data	13–16
	Small and medium-sized enterprises	Corporates: other lending	Scorecard	1	Financial data including balance sheet ratios and profit and loss, behavioral data. Weights of risk drivers differ depending on the corporate client sub-segment	28
	Credit cards in Switzerland	Retail: qualifying revolving retail and other retail, Corporates: other lending	Scorecard	1	Client type and characteristics (revolver, transactor, new client, dormant client), and behavioral data	17
	Banks	Banks and securities dealers	Scorecard	4	Financial data including balance sheet ratios and profit and loss. Separate models for banks – developed markets, banks – emerging markets, broker-dealers and investment banks, and private banks	15
	Commodity traders	Corporates: specialized lending	Scorecard	1	Financial data including balance sheet ratios and profit and loss, as well as non-financial criteria	24
	Aircraft financing	Corporates: other lending	Scorecard	1	Loan-to-value, AuM, strength of legal framework of source of wealth, and behavioral factors	16
	Large corporates	Corporates: other lending	Scorecard / market data	3	Financial data including balance sheet ratios and profit and loss, and market data. Separate rating tools for corporates with publicly traded and highly liquid stocks (market intelligence tool), private corporates, and leveraged corporates	15
	Other portfolios	Corporates: other lending, Public-sector entities and multi-lateral development banks	Scorecard / pooled rating approach / rating template	10	Financial data and/or historical portfolio performance for pooled ratings. Separate models for hedge funds, managed funds, private equity funds, insurance companies, commercial real estate loans, debt REITs, mortgage originators, public-sector entities and multi-lateral development banks / supranationals	15
Loss given default	Owner-occupied mortgages in Switzerland and the US	Retail: residential mortgages	Statistical model	2	Loan-to-value, time since last valuation. Separate models for mortgages in Switzerland and the US	11–14
	Income-producing real estate mortgages	Retail: residential mortgages, Corporates: specialized lending	Statistical model	1	Loan-to-value, time since last valuation, property type, location indicator	11
	Lombard lending	Retail: other retail, Corporates: other lending	Statistical model, simulation	2	Separate models for structured margin lending and standard Lombard. Key risk drivers for both models: historical observed loss rates, liquidity	13–14
	Small and medium-sized enterprises	Corporates: other lending	Statistical model	2	Separate models for mortgage and non-mortgage LGDs. Mortgage models: loan-to-value, time since last valuation, property type, location indicator. Non-mortgage models: historical observed loss rates	11–17
	Credit cards in Switzerland	Retail: qualifying revolving retail and other retail, Corporates: other lending	Statistical model	1	Collateral, accrued interests, client characteristics.	17
	Investment Bank – all counterparties	Across the asset classes	Statistical model	2	Counterparty and facility specific, including industry segment, collateral, seniority, legal environment and bankruptcy procedures. Specific model for sovereign LGDs based on econometric modeling of past default events using GDP per capita, government debt, and other quantitative and qualitative factors such as the share of multi-lateral debt service, the size of the banking sector and institutional quality	>10
Exposure at default	Banking products	Across the asset classes	Statistical model	3	Separate models based on exposure type (committed credit lines, revocable credit lines, contingent products)	>10
	Traded products	Across the asset classes	Statistical model	2	Product-specific market drivers, e.g., interest rates. Separate models for OTC derivatives, ETDs and SFTs that generate the simulation of risk factors used for the credit exposure measure	n/a

1 For sovereign and Investment Bank PD models, the length of internal portfolio history is shown in "Number of years of loss data."

Audited I

Internal UBS rating scale and mapping of external ratings

Internal UBS rating	1-year PD range in %	Description	Moody's Investors Service mapping	S&P mapping	Fitch mapping
0 and 1	0.00–0.02	Investment grade	Aaa	AAA	AAA
2	0.02–0.05		Aa1 to Aa3	AA+ to AA–	AA+ to AA–
3	0.05–0.12		A1 to A3	A+ to A–	A+ to A–
4	0.12–0.25		Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB
5	0.25–0.50		Baa3	BBB–	BBB–
6	0.50–0.80	Sub-investment grade	Ba1	BB+	BB+
7	0.80–1.30		Ba2	BB	BB
8	1.30–2.10		Ba3	BB–	BB–
9	2.10–3.50		B1	B+	B+
10	3.50–6.00		B2	B	B
11	6.00–10.00		B3	B–	B–
12	10.00–17.00		Caa1 to Caa2	CCC+ to CCC	CCC+ to CCC
13	>17		Caa3 to C	CCC- to C	CCC- to C
Counterparty is in default	Default	Defaulted		D	D

Probability of default

PD estimates the likelihood of a counterparty defaulting on its contractual obligations over the next 12 months, and is assessed using rating tools tailored to the various categories of counterparties. The "Key features of our main credit risk models" table above gives an overview of the approaches used for our main asset classes and presents the main drivers of the PD. The rating tools for these asset classes are also calibrated to our internal credit rating scale (masterscale), designed to ensure a consistent assessment of default probabilities across counterparties.

The ratings of major credit rating agencies, and their mapping to our masterscale and internal PD bands, are shown in the "Internal UBS rating scale and mapping of external ratings" table above. For Moody's and S&P, the mapping is based on the long-term average of one-year default rates available from these rating agencies, with Fitch ratings being mapped to the equivalent S&P ratings. For each external rating category, the average default rate is compared with our internal PD bands to derive a periodically reviewed mapping to our internal rating scale.

Exposure at default

EAD is the amount we expect to be owed by a counterparty at the time of possible default. We derive EAD from current exposure to the counterparty and possible future exposure development.

The EAD of an on-balance sheet loan is its notional amount, while for off-balance sheet commitments that are not drawn, credit conversion factors (CCFs) are used in order to obtain an expected on-balance sheet amount.

For traded products, we derive EAD by modeling the range of possible exposure outcomes at various points in time using scenario and statistical techniques. We assess the net amount that may be owed to us or that we may owe to others, taking into account the effect of market movements over the potential time it would take to close out positions.

We assess exposures where there is a material correlation between the factors driving the credit quality of the counterparty and those driving the potential future value of our traded products exposure (wrong-way risk), and we have established specific controls to mitigate such risks.

Loss given default

LGD is the magnitude of the likely loss if there is a default. Our LGD estimates, which consider downturn conditions, include loss of principal, interest and other amounts less recovered amounts. We determine LGD based on the likely recovery rate of claims against defaulted counterparties, which depends on the type of counterparty and any credit mitigation due to collateral or guarantees. Our estimates are supported by internal loss data and external information, where available. If we hold collateral, such as marketable securities or a mortgage on a property, LTV ratios are typically a key parameter in determining LGD. For risk-weighted asset (RWA) calculation, floors are applied to LGD in line with regulation.

Expected loss

We use the concept of expected loss to quantify future credit losses that may be implicit in our current portfolio. The expected loss for a given credit facility is a product of the three components described above, i.e., PD, EAD and LGD. We aggregate the expected loss for individual counterparties to derive expected portfolio credit losses.

IFRS 9 – ECL credit risk models

Expected credit loss

Expected credit loss (ECL) is defined as the difference between contractual cash flows and those UBS expects to receive, discounted at the effective interest rate (EIR). For loan commitments and other credit facilities in scope of ECL requirements, expected cash shortfalls are determined by considering expected future drawdowns. Rather than focusing on an average through-the-cycle (TTC) expected annual loss, the purpose of ECL is to estimate the amount of losses inherent in a portfolio based on current conditions and future outlook (a point-in-time (PIT) measure), whereby such a forecast has to include all information available without undue cost and effort, and address multiple scenarios where there is perceived non-linearity between changes in economic conditions and their effect on credit losses. From a credit risk modeling perspective, ECL parameters are generally derivations of the factors assessed for regulatory Basel III EL.

Comparison of Basel III EL and IFRS 9 ECL credit risk models

The IFRS 9 ECL concept has a number of key differences from our Basel III credit risk models, both in the loss estimation process and the result thereof. Most notably, regulatory Basel III EL parameters are TTC / downturn estimates, which might include a margin of conservatism, while IFRS 9 ECL parameters are typically PIT, reflecting current economic conditions and future outlook. The table below summarizes the main differences. Stage 1 and 2 ECL expenses in 2022 were USD 29m and respective allowances and provisions as of 31 December 2022 were USD 526m. This included ECL allowances and provisions of USD 485m related to positions under the Basel III advanced internal ratings-based (A-IRB) approach. Basel III EL for non-defaulted positions increased by USD 37m to USD 956m.

› **Refer to "Note 1 Summary of material accounting policies" in the "Consolidated financial statements" section of this report for more information about our accounting policy for allowances and provisions for ECL including key definitions relevant for the ECL calculation under IFRS 9**

The table below shows the main differences between the two expected loss measures.

	Basel III EL (advanced internal ratings-based approach)	IFRS 9 ECL
Scope	The Basel III A-IRB approach applies to most credit risk exposures. It includes transactions measured at amortized cost, at fair value through profit or loss and at fair value through OCI, including loan commitments and financial guarantees.	The IFRS 9 ECL calculation mainly applies to financial assets measured at amortized cost and debt instruments measured at fair value through OCI, as well as loan commitments and financial guarantees not at fair value through profit or loss.
12-month versus lifetime expected loss	The Basel III A-IRB approach takes into account expected losses resulting from expected default events occurring within the next 12 months.	In the absence of a significant increase in credit risk (SICR), a maximum 12-month ECL is recognized to reflect lifetime cash shortfalls that will result if a default event occurs in the 12 months after the reporting date (or a shorter period if the expected lifetime is less). Once an SICR event has occurred, a lifetime ECL is recognized considering expected default events over the life of the transaction.
Exposure at default (EAD)	EAD is the amount we expect a counterparty to owe us at the time of a possible default. For banking products, EAD equals book value as of the reporting date; for traded products, the vast majority of EAD is modeled. EAD is expected to remain constant over a 12-month period. For loan commitments, a credit conversion factor is applied to model expected future drawdowns over the 12-month period, irrespective of the actual maturity of a particular transaction. The credit conversion factor includes downturn adjustments.	EAD is generally calculated on the basis of the cash flows that are expected to be outstanding at the individual points in time during the life of the transaction, discounted to the reporting date using the effective interest rate. For loan commitments, a credit conversion factor is applied to model expected future drawdowns over the life of the transaction without including downturn assumptions. In both cases, the time period is capped at 12 months, unless an SICR has occurred.
Probability of default (PD)	PD estimates are determined on a through-the-cycle (TTC) basis. They represent historical average PDs, taking into account observed losses over a prolonged historical period, and therefore are less sensitive to movements in the underlying economy.	PD estimates will be determined on a point-in-time (PIT) basis, based on current conditions and incorporating forecasts for future economic conditions at the reporting date.
Loss given default (LGD)	LGD includes prudential adjustments, such as downturn LGD assumptions and floors. Similar to PD, LGD is determined on a TTC basis.	LGD should reflect the losses that are reasonably expected and prudential adjustments should therefore not be applied. Similar to PD, LGD is determined on the basis of a PIT approach.
Use of scenarios	n / a	Multiple forward-looking scenarios have to be taken into account to determine a probability-weighted ECL.

Further key aspects of credit risk models

Stress loss

We complement our statistical modeling approach with scenario-based stress loss measures. Stress tests are run regularly to monitor potential effects of extreme, but nevertheless plausible, events on our portfolios, under which key credit risk parameters are assumed to deteriorate substantially. Where we consider it appropriate, we apply limits on this basis.

Stress scenarios and methodologies are tailored to portfolios' natures, ranging from regionally focused to global systemic events, and varying in time horizon.

› **Refer to "Stress testing" in this section for more information about our stress testing framework**

Credit risk model confirmation

Our approach to model confirmation involves both quantitative methods, such as monitoring compositional changes in portfolios and results of backtesting, and qualitative assessments, such as feedback from users on model output as a practical indicator of a model's performance and reliability.

Material changes in portfolio composition may invalidate the conceptual soundness of a model. We therefore perform regular analyses of the evolution of portfolios to identify such changes in the structure and credit quality of portfolios. This includes analyses of changes in key attributes, changes in portfolio concentration measures and changes in RWA.

› **Refer to "Model risk management" in this section for more information**

Backtesting

We monitor the performance of models by backtesting and benchmarking them, with model outcomes compared with actual results, based on our internal experience and externally observed results. To assess the predictive power of credit exposure models for traded products, such as OTC derivatives and ETD products, we statistically compare predicted future exposure distributions at different forecast horizons with realized values.

For PD, we derive a predicted distribution of the number of defaults. The observed number of defaults is compared with the upper tail of the predicted distribution. If the observed number of defaults is higher than a given upper tail quantile, we conclude there is evidence that the model may underpredict the number of defaults. Based on historical long-run average default rates and, if required, additional margin of conservatism, we also derive PD calibration targets and a lower boundary. As a general rule, if the portfolio average PD lies below the derived lower boundary, the rating tool is recalibrated.

For LGD, backtesting statistically tests whether the mean difference between the observed and predicted LGD is zero. If the test fails, there is evidence that our predicted LGD is too low. In such cases, and where these differences are outside expectations, models are recalibrated.

Main credit risk models backtesting by regulatory asset class

	Length of time series used for the calibration (in years)	Actual rates in %			Estimated average rates at the start of 2022 in %
		Average of last 5 years[1]	Min. of last 5 years[2]	Max. of last 5 years[2]	
Probability of default[3]					
Central governments and central banks	>10[4]	0.00	0.00	0.00	0.43
Banks and securities dealers	>10	0.03	0.00	0.13	0.65
Public-sector entities, multi-lateral development banks	>10	0.05	0.00	0.21	0.23
Corporates: specialized lending	>10	0.30	0.11	0.60	1.26
Corporates: other lending[5]	>10	0.28	0.20	0.34	0.44
Retail: residential mortgages	>20	0.20	0.14	0.25	0.49
Retail: qualifying revolving retail exposure[5]	>10	0.71	0.63	0.79	0.83
Retail: other retail[5]	>10	0.09	0.05	0.19	0.20
Loss given default					
Central governments and central banks	>10				47.72
Banks and securities dealers	>10				53.38
Public-sector entities, multi-lateral development banks	>10				27.40
Corporates: specialized lending	>10	2.16	0.00	9.51	22.80
Corporates: other lending[5]	>10	15.92	5.09	24.68	38.24
Retail: residential mortgages	>20	0.45	0.00	0.72	22.75
Retail: qualifying revolving retail exposure[5]	>10	24.88	20.27	27.42	47.87
Retail: other retail[5]	>10	8.20	4.80	13.54	24.37
Credit conversion factors					
Corporates	>10	21.65	6.93	38.08	38.10

1 Average of all observations over the last five years. 2 Minimum / maximum annual average of observations in any single year from the last five years. Yearly averages are only calculated where five or more observations occurred during that year. 3 Average PD estimation is based on all rated clients in the portfolio. 4 Sovereign PD model is calibrated to UBS masterscale, length of time series shows span of internal history for this portfolio. 5 During 2021, a new PD and LGD model for credit cards went live. Obligors subject to this model contribute to Corporates: other lending, Retail: qualifying revolving retail exposure, and Retail: other retail.

CCFs, used for the calculation of EAD for undrawn facilities with corporate counterparties, are dependent on several credit facility contractual dimensions. We compare the predicted amount drawn with observed historical use of such facilities by defaulted counterparties. If any statistically significant deviation is observed, the relevant CCFs are redefined.

The "Main credit risk models backtesting by regulatory asset class" table above compares the current model calibration for PD, LGD and CCFs with historical observed values over the last five years.

Changes to models and model parameters during the period

As part of our continuous efforts to enhance models to reflect market developments and newly available data, we updated several models in 2022.

In Personal & Corporate Banking and Global Wealth Management, we updated the PD model for owner-occupied residential properties in Switzerland and the LGD model for mortgages in Switzerland. In Global Wealth Management, we also recalibrated the PD model for aircraft financing and implemented some model updates for the standard Lombard model.

In the Investment Bank, a new PD model for private equity counterparties was introduced, and a redeveloped PD model for hedge funds went live. Additionally, we have implemented a new model for structured margin lending.

For CCR models, we recalibrated the market parameters in the SFT model, enhancing and automating the process, which is run on a daily basis. The transition from LIBOR required a number of model changes for CCR models, for traded products to be able to consume the new alternative reference rate curves.

Where required, changes to models and model parameters were approved by FINMA before being made.

› **Refer to "Risk-weighted assets" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information about the effect of the changes to models and model parameters on credit risk RWA**

Future credit risk-related regulatory capital developments

In December 2017, the Basel Committee on Banking Supervision (the BCBS) announced the finalization of the Basel III framework. In December 2022, the Swiss State Secretariat for International Finance changed the expected date on which the final Basel III guidelines are to enter into force, from 1 July 2024 to 1 January 2025. The updated framework makes a number of revisions to the internal ratings-based (IRB) approaches, namely: (i) removing the option of using the A-IRB approach for certain asset classes (including large and medium-sized corporate clients, and banks and other financial institutions); (ii) placing floors on certain model inputs under the IRB approach, e.g., PD and LGD; and (iii) introducing various requirements to reduce RWA variability (e.g., for LGD).

The published framework has a number of requirements that are subject to national discretion. Also, revisions to the credit valuation adjustment (CVA) framework were published, including the removal of the advanced CVA approach. UBS has a close dialogue with FINMA to discuss in detail the implementation objectives and prepare for a smooth transition of the capital regime for credit risk.

› **Refer to "Capital management objectives, planning and activities" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information about the development of RWA**

› **Refer to "Risk measurement" in this section for more information about our approach to model confirmation procedures**

› **Refer to the "Regulatory and legal developments" and "Risk factors" sections of this report for more information**

Credit policies for distressed assets

Non-performing

Audited | In line with the regulatory definition, we report a claim as non-performing when: (i) it is more than 90 days past due; (ii) it is subject to restructuring proceedings, where preferential conditions concerning interest rates, subordination, tenor, etc. have been granted in order to avoid default of the counterparty (forbearance); (iii) the counterparty is subject to bankruptcy / enforced liquidation proceedings in any form, even if there is sufficient collateral to cover the due payment; or (iv) there is other evidence that payment obligations will not be fully met without recourse to collateral.

Default and credit-impaired

UBS uses a single definition of default for classifying assets and determining the PD of its obligors for risk modeling purposes. The definition of default is based on quantitative and qualitative criteria. A counterparty is classified as defaulted when material payments of interest, principal or fees are overdue for more than 90 days, or more than 180 days for certain exposures in relation to loans to private and commercial clients in Personal & Corporate Banking and to private clients of Global Wealth Management Region Switzerland. UBS does not consider the general 90-day presumption for default recognition appropriate for those portfolios, given the cure rates, which show that strict application of the 90-day criterion would not accurately reflect the inherent credit risk. Counterparties are also classified as defaulted when: bankruptcy, insolvency proceedings or enforced liquidation have commenced; obligations have been restructured on preferential terms (forbearance); or there is other evidence that payment obligations will not be fully met without recourse to collateral. The latter may be the case even if, to date, all contractual payments have been made when due. If one claim against a counterparty is defaulted on, generally all claims against the counterparty are treated as defaulted.

An instrument is classified as credit-impaired if the counterparty is classified as defaulted and / or the instrument is identified as purchased or originated credit-impaired (POCI). An instrument is POCI if it has been purchased at a deep discount to its carrying amount following a risk event of the issuer or originated with a defaulted counterparty. Once a financial asset is classified as defaulted / credit-impaired (except POCI), it is reported as a stage 3 instrument and remains as such unless all past due amounts have been rectified, additional payments have been made on time, the position is not classified as credit-restructured, and there is general evidence of credit recovery. A three-month probation period is applied before a transfer back to stages 1 or 2 can be triggered. However, most instruments remain in stage 3 for a longer period. As of 31 December 2022, we had no instruments classified as POCI on our books. ▲

Forbearance (credit restructuring)

Audited | If payment default is imminent or default has already occurred, we may grant concessions to borrowers in financial difficulties that we would otherwise not consider in the normal course of business, such as offering preferential interest rates, extending maturity, modifying the schedule of repayments, debt / equity swap, subordination, etc. When a forbearance measure takes place, each case is considered individually and the exposure is generally classified as defaulted. Forbearance classification remains until the loan is repaid or written off, non-preferential conditions are granted that supersede the preferential conditions, or the counterparty has recovered and the preferential conditions no longer exceed our risk tolerance.

Contractual adjustments when there is no evidence of imminent payment default, or where changes to terms and conditions are within our usual risk tolerance, are not considered to be forborne. ▲

Loss history statistics

An instrument is classified as credit-impaired if the counterparty has defaulted. This also includes credit-impaired exposures for which no loss has occurred or for which no allowance has been recognized (e.g., we expect to fully recover the exposures via collateral held).

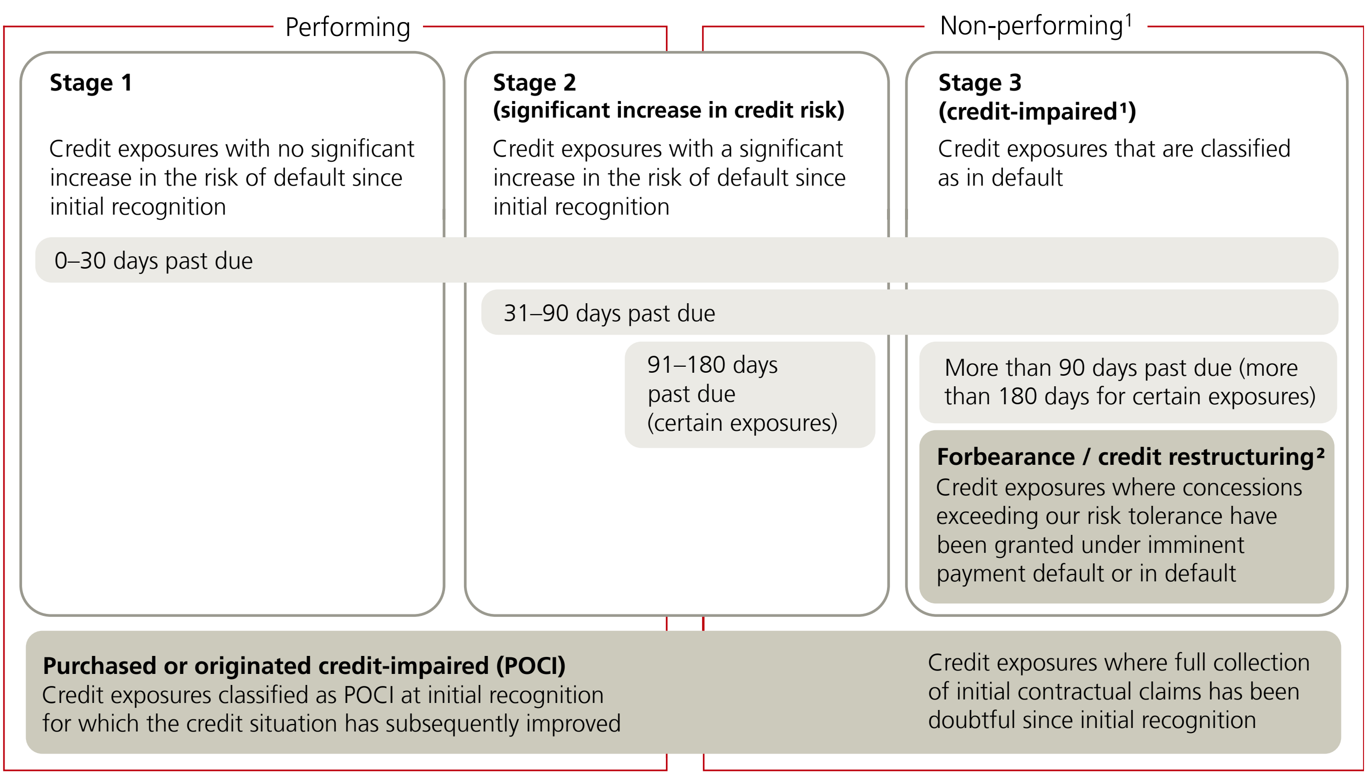
Coverage ratios are calculated for the core loan portfolio by taking ECL allowances and provisions divided by the gross carrying amount of the exposures. Core loan exposure is defined as the sum of Loans and advances to customers and Loans to financial advisors.

The total combined on- and off-balance sheet coverage ratio was at 21 basis points as of 31 December 2022, 1 basis point lower than on 31 December 2021. The combined stage 1 and 2 ratio of 10 basis points was unchanged compared with 31 December 2021; the stage 3 ratio was 22%, 2 percentage points lower than as of 31 December 2021.

› **The majority of the credit-impaired exposure relates to loans and advances in our Swiss domestic business. Refer to "Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement" and "Note 19 Expected credit loss measurement" in the "Consolidated financial statements" section of this report for more information about ECL measurement and the calculation of the coverage ratio**

› **Refer to "Note 13a Other financial assets measured at amortized cost" in the "Consolidated financial statements" section of this report for more details**

Exposure categorization



1 Excluding purchased or originated credit-impaired instruments. 2 May include purchased or originated credit-impaired instruments.

Loss history statistics

USD m, except where indicated	31.12.22	31.12.21	31.12.20	31.12.19	31.12.18
Banking products, core exposure on- and off-balance sheet, gross[1]	491,556	499,839	479,176	408,331	410,117
of which: loans and advances to banks and customers (gross)	*402,801*	*414,099*	*396,049*	*340,003*	*338,000*
Credit-impaired exposure, gross (stage 3)	2,455	2,610	3,778	3,113	3,154
of which: credit-impaired loans and advances to banks and customers (stage 3)	*2,012*	*2,150*	*2,945*	*2,309*	*2,300*
Non-performing loans and advances to banks and customers	2,333	2,387	3,176	2,466	2,419
ECL allowances and provisions for credit losses[2]	1,091	1,165	1,468	1,029	1,054
of which: core loan exposure (all stages)	*1,043*	*1,132*	*1,426*	*987*	*1,003*
of which: loans and advances to banks and customers (all stages)	*789*	*857*	*1,076*	*770*	*780*
of which: loans and advances to banks and customers (stage 3)	*474*	*572*	*703*	*559*	*549*
Write-offs (stage 3)	95	137	356	142	210
of which: write-offs for loans and advances to banks and customers	*74*	*118*	*348*	*122*	*192*
Credit loss expense / (release)[3]	29	(148)	694	78	118
Ratios					
Credit-impaired loans and advances to banks and customers as a percentage of loans and advances to banks and customers (gross)	0.5	0.5	0.7	0.7	0.7
Non-performing loans and advances to banks and customers as a percentage of loans and advances to banks and customers (gross)	0.6	0.6	0.8	0.7	0.7
ECL allowances for loans and advances to banks and customers as a percentage of loans and advances to banks and customers (gross)	0.2	0.2	0.3	0.2	0.2
Write-offs as a percentage of average loans and advances to banks and customers (gross) outstanding during the period	0.0	0.0	0.1	0.0	0.1

1 Core loan exposure is defined as the sum of Loans and advances to customers and Loans to financial advisors. 2 Includes provisions for ECL of guarantees and loan commitments and allowances for securities financing transactions. 3 Includes credit loss expense / (release) for other financial assets at amortized cost, guarantees, loan commitments, and securities financing transactions.

Market risk

Audited I Main sources of market risk

Market risks arise from both trading and non-trading business activities.

– Trading market risks are mainly connected with primary debt and equity underwriting and securities and derivatives trading for market-making and client facilitation in our Investment Bank, as well as the remaining positions in Non-core and Legacy Portfolio in Group Functions and our municipal securities trading business in Global Wealth Management.
– Non-trading market risks arise predominantly in the form of interest rate and foreign exchange risks connected with personal banking and lending in our wealth management business, our Swiss personal and corporate banking business, the Investment Bank's lending business, and treasury activities.
– Group Treasury assumes market risks in the process of managing interest rate risk, structural foreign exchange risk and the Group's liquidity and funding profile, including high-quality liquid assets (HQLA).
– Equity and debt investments can also give rise to market risks, as can some aspects of employee benefits, such as defined benefit pension schemes. ▲

Audited I Overview of measurement, monitoring and management techniques

– Market risk limits are set for the Group, the business divisions, Group Treasury and Non-core and Legacy Portfolio at granular levels in the various business lines, reflecting the nature and magnitude of the market risks.
– Management value-at-risk (VaR) measures exposures under the market risk framework, including trading market risks and some non-trading market risks. Non-trading market risks not included in VaR are also covered in the risks controlled by Market & Treasury Risk Control, as set out below.
– Our primary portfolio measures of market risk are liquidity-adjusted stress (LAS) loss and VaR. Both are common to all business divisions and subject to limits that are approved by the Board of Directors (the BoD).
– These measures are complemented by concentration and granular limits for general and specific market risk factors. Our trading businesses are subject to multiple market risk limits, which take into account the extent of market liquidity and volatility, available operational capacity, valuation uncertainty, and, for our single-name exposures, issuer credit quality.
– Trading market risks are managed on an integrated basis at portfolio level. As risk factor sensitivities change due to new transactions, transaction expiries or changes in market levels, risk factors are dynamically rehedged to remain within limits. We do not generally seek to distinguish in the trading portfolio between specific positions and associated hedges.

– Issuer risk is controlled by limits applied at business division level based on jump-to-zero measures, which estimate maximum default exposure (the default event loss assuming zero recovery).
– Non-trading foreign exchange risks are managed under market risk limits, with the exception of Group Treasury management of consolidated capital activity.

Our Market & Treasury Risk Control function applies a holistic risk framework, setting the appetite for treasury-related risk-taking activities across the Group. Key elements of the framework include an overarching economic value sensitivity limit, set by the BoD, and the sensitivity of net interest income to changes in interest rates targets, set by the Group CEO. Limits are also set by the BoD to balance the effect of foreign exchange movements on our CET1 capital and CET1 capital ratio. Non-trading interest rate and foreign exchange risks are included in Group-wide statistical and stress testing metrics, which flow into our risk appetite framework.

Equity and debt investments are subject to a range of risk controls, including preapproval of new investments by business management and Risk Control and regular monitoring and reporting. They are also included in Group-wide statistical and stress testing metrics. ▲

› **Refer to "Currency management" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information about Group Treasury's management of foreign exchange risks**
› **Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information about the sensitivity of our CET1 capital and CET1 capital ratio to currency movements**

Market risk stress loss

The measurement and management of market risks include an extensive set of stress tests and scenario analyses, continuously evaluated to ensure that losses resulting from an extreme yet plausible event do not exceed our risk appetite.

Liquidity-adjusted stress

LAS is our primary stress loss measure for Group-wide market risk. The LAS framework captures the economic losses that could arise under specified stress scenarios. This is partially done by replacing the standard 1-day and 10-day holding period assumptions used for management and regulatory VaR with liquidity-adjusted holding periods, as explained below. Shocks are applied to positions based on expected market movements in the liquidity-adjusted holding periods resulting from the specified scenario.

The holding periods used for LAS are calibrated to reflect the time needed to reduce or hedge the risk of positions in each major risk factor in a stressed environment, assuming maximum utilization of the relevant position limits. We apply minimum holding periods, regardless of observed liquidity levels, as identification of and reaction to a crisis may not always be immediate.

The expected market movements are derived using historical market behavior (based on analysis of historical events) and forward-looking analysis including consideration of defined scenarios that have not occurred in the past.

LAS-based limits apply at several levels: Group, business division, Group Treasury, and Non-core and Legacy Portfolio; business area; and sub-portfolio. LAS is also the core market risk component of our combined stress test framework and therefore integral to our overall risk appetite framework.

› **Refer to "Risk appetite framework" in this section for more information**
› **Refer to "Stress testing" in this section for more information about our stress testing framework**

Value-at-risk

VaR definition

Audited | VaR is a statistical measure of market risk, representing the potential market risk losses over a set time horizon (holding period) at an established level of confidence. VaR assumes no change in the Group's trading positions over the set time horizon.

We calculate VaR daily. The profit or loss distribution VaR is derived from our internally developed VaR model, which simulates returns over the holding period for those risk factors our trading positions are sensitive to, and subsequently quantifies the profit / loss effect of these risk factor returns on trading positions. Risk factor returns associated with general interest rate, foreign exchange and commodities risk factor classes are based on a pure historical simulation approach, using a five-year look-back window. Risk factor returns for selected issuer-based risk factors (e.g., equity prices and credit spreads) are split into systematic and residual issuer-specific components using a factor model approach. Systematic returns are based on historical simulation, and residual returns on a Monte Carlo simulation. VaR model profit or loss distribution is derived from the sum of systematic and residual returns in such a way that we consistently capture systematic and residual risk. Correlations among risk factors are implicitly captured via a historical simulation approach. When modeling risk factor returns, we consider the stationarity properties of the historical time series of risk factor changes. Depending on the stationarity properties of the risk factors within a given factor class, we model the factor returns using absolute returns or logarithmic returns. Risk factor return distributions are updated fortnightly.

Our VaR model does not have full revaluation capability, but we source full revaluation grids and sensitivities from front-office systems, enabling us to capture material non-linear profit-or-loss effects.

We use a single VaR model for both internal management purposes and determining market risk risk-weighted assets (RWA), although we consider different confidence levels and time horizons. For internal management purposes, we establish risk limits and measure exposures using VaR at a 95% confidence level with a 1-day holding period, aligned to the way we consider the risks associated with our trading activities. The regulatory measure of market risk used to underpin the market risk capital requirement under Basel III requires a measure equivalent to a 99% confidence level using a 10-day holding period. To calculate a 10-day holding period VaR, we use 10-day risk factor returns, with all observations equally weighted.

Additionally, the portfolio populations for management and regulatory VaR are slightly different. The one for regulatory VaR meets regulatory requirements for inclusion in regulatory VaR. Management VaR includes a broader range of positions. For example, regulatory VaR excludes credit spread risks from the securitization portfolio, which are treated instead under the securitization approach for regulatory purposes.

We also use stressed VaR (SVaR) for the calculation of market risk RWA. SVaR uses broadly the same methodology as regulatory VaR and is calculated using the same population, holding period (10-day) and confidence level (99%). Unlike regulatory VaR, the historical data set for SVaR is not limited to five years, instead covering the period from 1 January 2007 to the present. In deriving SVaR, we seek the largest 10-day holding period VaR for the current Group portfolio across all one-year look-back windows from 1 January 2007 to the present. SVaR is computed weekly. ▲

› **Refer to the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors,* for more information about the regulatory capital calculation under the advanced internal ratings-based approach**

Management VaR for the period

We continued to maintain management VaR at low levels, with average VaR at USD 11m, unchanged compared with 2021.

Audited |

Management value-at-risk (1-day, 95% confidence, 5 years of historical data) of our business divisions and Group Functions by general market risk type[1]

	For the year ended 31.12.22								
USD m	Min.	Max.	Average	31.12.22	Equity	Interest rates	Credit spreads	Foreign exchange	Commodities
Min.					2	8	4	2	2
Max.					17	18	9	11	7
Average					6	10	5	3	3
31.12.22					6	10	4	3	3
Total management VaR, Group	6	18	11	9	*Average (per business division and risk type)*				
Global Wealth Management	1	2	1	1	*0*	*1*	*1*	*0*	*0*
Personal & Corporate Banking	0	0	0	0	*0*	*0*	*0*	*0*	*0*
Asset Management	0	0	0	0	*0*	*0*	*0*	*0*	*0*
Investment Bank	6	17	10	8	*6*	*9*	*5*	*3*	*3*
Group Functions	3	5	4	5	*1*	*4*	*3*	*1*	*0*
Diversification effect[2,3]			(5)	(5)	*(1)*	*(3)*	*(4)*	*(1)*	*0*

	For the year ended 31.12.21								
USD m	Min.	Max.	Average	31.12.21	Equity	Interest rates	Credit spreads	Foreign exchange	Commodities
Min.					1	7	5	1	2
Max.					35	13	11	9	5
Average					7	9	7	3	3
31.12.21					8	11	7	6	3
Total management VaR, Group	4	36	11	12	*Average (per business division and risk type)*				
Global Wealth Management	1	3	1	2	*0*	*1*	*2*	*0*	*0*
Personal & Corporate Banking	0	0	0	0	*0*	*0*	*0*	*0*	*0*
Asset Management	0	0	0	0	*0*	*0*	*0*	*0*	*0*
Investment Bank	3	36	11	11	*7*	*9*	*7*	*3*	*3*
Group Functions	4	8	5	4	*0*	*4*	*4*	*1*	*0*
Diversification effect[2,3]			(6)	(5)	*0*	*(5)*	*(5)*	*(1)*	*0*

1 Statistics at individual levels may not be summed to deduce the corresponding aggregate figures. The minima and maxima for each level may well occur on different days, and likewise, the VaR for each business line or risk type, being driven by the extreme loss tail of the corresponding distribution of simulated profits and losses for that business line or risk type, may well be driven by different days in the historical time series, rendering invalid the simple summation of figures to arrive at the aggregate total. 2 Difference between the sum of the standalone VaR for the business divisions and Group Functions and the VaR for the Group as a whole. 3 As the minima and maxima for different business divisions and Group Functions occur on different days, it is not meaningful to calculate a portfolio diversification effect.

▲

VaR limitations

Audited | Actual realized market risk losses may differ from those implied by VaR for a variety of reasons.

- VaR is calibrated to a specified level of confidence and may not indicate potential losses beyond this confidence level.
- The 1-day time horizon used for VaR for internal management purposes (10-day for regulatory VaR) may not fully capture market risk of positions that cannot be closed out or hedged within the specified period.
- In some cases, VaR calculations approximate the effect of changes in risk factors on the values of positions and portfolios. This may happen due to the number of risk factors included in the VaR model needing to be limited.
- Effects of extreme market movements are subject to estimation errors, which may result from non-linear risk sensitivities, and the potential for actual volatility and correlation levels to differ from assumptions implicit in VaR calculations.
- Using a five-year window means sudden increases in market volatility will tend not to increase VaR as quickly as the use of shorter historical observation periods, but such increases will affect VaR for a longer period of time. Similarly, after periods of increased volatility, as markets stabilize, VaR predictions will remain more conservative for a period of time influenced by the length of the historical observation period.

SVaR is subject to the limitations noted for VaR above, but the use of one-year data sets avoids the smoothing effect of the five-year data set used for VaR and the absence of the five-year window gives a longer history of potential loss events. Therefore, although the significant period of stress during the 2007–2009 financial crisis is no longer contained in the historical five-year period used for management and regulatory VaR, SVaR continues to use that data. This approach aims to reduce the procyclicality of the regulatory capital requirements for market risks.

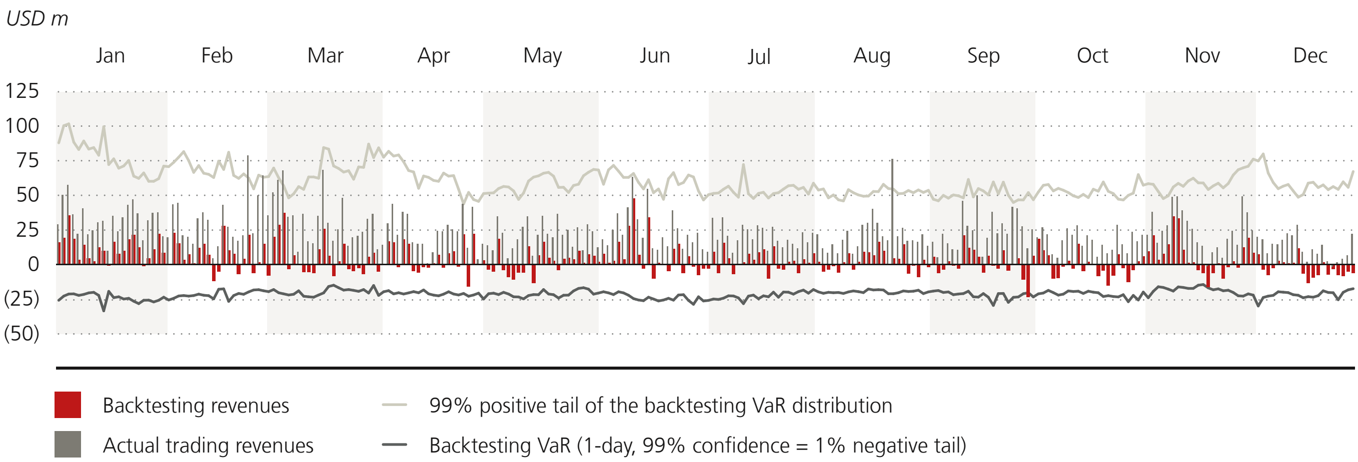
We recognize that no single measure can encompass all risks associated with a position or portfolio. We use a set of metrics with both overlapping and complementary characteristics to create a holistic framework that aims to ensure material completeness of risk identification and measurement. As a statistical aggregate risk measure, VaR supplements our liquidity-adjusted stress and comprehensive stress testing frameworks.

We also have a framework to identify and quantify potential risks not fully captured by our VaR model and refer to such risks as risks not in VaR. The framework underpins these potential risks with regulatory capital, calculated as a multiple of regulatory VaR and stressed VaR. ▲

Backtesting of VaR

VaR backtesting is a performance measurement process in which a 1-day VaR prediction is compared with the realized 1-day profit or loss (P&L). We compute backtesting VaR using a 99% confidence level and 1-day holding period for the regulatory VaR population. Since 99% VaR at UBS is defined as a risk measure that operates on the lower tail of the P&L distribution, 99% backtesting VaR is a negative number. Backtesting revenues exclude non-trading revenues, such as valuation reserves, fees and commissions, and revenues from intraday trading, so as to provide for a like-for-like comparison. A backtesting exception occurs when backtesting revenues are lower than the previous day's backtesting VaR.

Group: development of regulatory backtesting revenues[1] and actual trading revenues[2] against backtesting VaR[3] (1-day, 99% confidence)



1 Excludes non-trading revenues, such as valuation reserves, commissions and fees, and revenues from intraday trading. 2 Includes backtesting revenues and revenues from intraday trading. 3 Based on Basel III regulatory VaR, excludes CVA positions and their eligible hedges, which are subject to the standalone CVA charge.

Statistically, given the 99% confidence level, two or three backtesting exceptions a year can be expected. More than four exceptions could indicate that the VaR model is not performing appropriately, as could too few exceptions over a long period. However, as noted for VaR limitations above, a sudden increase (or decrease) in market volatility relative to the five-year window could lead to a higher (or lower) number of exceptions. Therefore, Group-level backtesting exceptions are investigated, as are exceptional positive backtesting revenues, with the results reported to senior business management, the Group CRO and the Group Chief Market & Treasury Risk Officer. Internal and external auditors and relevant regulators are also informed about backtesting exceptions.

In the "Group: development of regulatory backtesting revenues and actual trading revenues against backtesting VaR" chart above, the asymmetry between the negative and positive tails is due to the long gamma risk profile historically run in the Investment Bank. The actual trading revenues include backtesting and intraday revenues.

The number of negative backtesting exceptions within a 250-business-day window decreased to one from four by the end of 2022. The Swiss Financial Market Supervisory Authority (FINMA) VaR multiplier derived from backtesting exceptions for market risk RWA was unchanged compared with the prior year, at 3.0.

VaR model confirmation

As well as for regulatory-purposes backtesting described above, we conduct extended backtesting for internal model confirmation purposes. This includes observing model performance across the entire P&L distribution (not just the tails), and at multiple levels within the business division hierarchies.

› **Refer to "Risk measurement" in this section for more information about our approach to model confirmation procedures**

VaR model developments in 2022

Audited | In the fourth quarter of 2022, we made an upgrade to our credit spread factor model, in which we significantly increased the coverage of single-name-issuer bond spread curves. The resulting RWA decrease was offset by an RWA increase arising from the introduction of a FINMA-agreed temporary measure. ▲

Future market risk-related regulatory capital developments

In January 2019, the Basel Committee on Banking Supervision (the BCBS) published the final standards on the minimum capital requirements for market risk (the Fundamental Review of the Trading Book). In December 2022, the Swiss State Secretariat for International Finance changed the expected date on which the final Basel III guidelines are to enter into force, from 1 July 2024 to 1 January 2025. As a result, the Swiss implementation timeline would be aligned to the currently expected implementation timeline in the EU.

Key elements of the revised market risk framework include: (i) changes to the internal model-based approach, including changes to the model approval and performance measurement process; (ii) changes to the standardized approach with the aim of it being a credible fallback method for an internal model-based approach; and (iii) a revised boundary between trading book and banking book. UBS maintains a close dialogue with FINMA to discuss the implementation objectives in more detail and to provide a smooth transition of the capital regime for market risk.

In September 2021, FINMA mandated that UBS hold an RWA add-on for the omission of time decay in regulatory VaR and SVaR. The add-on reflects the outcome of discussions with FINMA regarding our regulatory VaR model, which started in late 2019. The integration of time decay into the regulatory VaR model, which would replace the add-on, is subject to further discussions between FINMA and UBS. The integration of time decay into regulatory VaR is expected to become effective in 2023. The FINMA-agreed temporary measure related to the credit spread factor model and the add-on related to time decay are expected to be removed with the integration of time decay into regulatory VaR.

› **Refer to "Risk-weighted assets" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information about the development of RWA including the regulatory add-on**
› **Refer to "Risk measurement" in this section for more information about our approach to model confirmation procedures**
› **Refer to the "Regulatory and legal developments" and "Risk factors" sections of this report for more information**

Interest rate risk in the banking book

Sources of interest rate risk in the banking book

Audited | Interest rate risk in the banking book (IRRBB) arises from balance sheet positions such as Loans and advances to banks, Loans and advances to customers, Financial assets at fair value not held for trading, Financial assets measured at amortized cost, Customer deposits, Debt issued measured at amortized cost, and derivatives, including those subject to hedge accounting. Fair value changes to these positions may affect other comprehensive income (OCI) or the income statement, depending on their accounting treatment.

Our largest banking book interest rate exposures arise from customer deposits and lending products in Global Wealth Management and Personal & Corporate Banking, as well as from debt issuance, liquidity buffers and interest rate hedges in Group Treasury. The inherent interest rate risks stemming from Global Wealth Management and Personal & Corporate Banking are generally transferred to Group Treasury, to manage them centrally together with our modeled interest rate duration assigned to equity, goodwill and real estate. This makes the netting of interest rate risks across different sources possible, while leaving the originating businesses with commercial margin and volume management. The residual interest rate risk is mainly hedged with interest rate swaps, to the vast majority of which we apply hedge accounting. Short-term exposures and most of our HQLA classified as Financial assets at fair value not held for trading are hedged with derivatives accounted for on a mark-to-market basis. Long-term fixed-rate debt issued and HQLA hedged with external interest rate swaps are designated in fair value hedge accounting relationships.

Risk management and governance

IRRBB is measured using several metrics, the most relevant of which are the following.

– Economic value of equity (EVE) sensitivity to yield curve moves is calculated as changes in the present value of future cash flows irrespective of accounting treatment. They are also the key risk factors for statistical and stress-based measures, e.g., value-at-risk and stress scenarios, as well as the regulatory interest rate scenarios. These are measured and reported daily. The regulatory IRRBB EVE exposure is the most adverse regulatory interest rate scenario that is netted across currencies. It excludes the sensitivity from additional tier 1 (AT1) capital instruments (as per specific FINMA requirements) and the modeled interest rate duration assigned to equity, goodwill and real estate. UBS also applies granular internal interest rate shock scenarios to its banking book positions to monitor its specific risk profile.
– Net interest income (NII) sensitivities to yield curve moves are calculated as changes of baseline NII over a set time horizon, which we internally compute by assuming interest rates in all currencies develop according to their market-implied forward rates and assuming constant business volumes and no specific management actions. The sensitivities are measured and reported monthly. Our Pillar 3 disclosure (as per specific FINMA requirements) excludes the contribution from cash held at central banks.

We actively manage IRRBB, with the aim of reducing the volatility of NII subject to limits and triggers for EVE and NII exposure at consolidated and significant legal entity levels.

The Group Asset and Liability Committee (ALCO) and, where relevant, ALCOs at a legal entity level perform independent oversight over the management of IRRBB, which is also subject to Group Internal Audit and model governance.

› **Refer to "Group Internal Audit" in the "Corporate governance" section of this report and to "Risk measurement" in this section for more information**

Key modeling assumptions

The cash flows from customer deposits and lending products used in calculation of EVE sensitivity exclude commercial margins and other spread components, are aggregated by daily time buckets and are discounted using risk-free rates. Our external issuances are discounted using UBS's senior debt curve, and capital instruments are modeled to the first call date. NII sensitivity, which includes commercial margins, is calculated over a one-year time horizon, assuming constant balance sheet structure and volumes, and considers embedded interest rate options.

The average repricing maturity of non-maturing deposits and loans is determined via target replication portfolios designed to protect product margins. Optimal replicating portfolios are determined at granular currency- and product-specific levels by simulating and applying a real-world market rate model to historically calibrated client rate and volume models.

We use an econometric prepayment model to forecast prepayment rates on US mortgage loans in UBS Bank USA and agency mortgage-backed securities (MBSs) held in various liquidity portfolios of UBS Americas Holding LLC consolidated. These prepayment rates are used to forecast both mortgage loan and MBS balances under various macroeconomic scenarios. The prepayment model is used for a variety of purposes, including risk management and regulatory stress testing. Swiss mortgages and fixed-term deposits generally do not carry similar optionality, due to prepayment and early redemption penalties. ▲

Effect of interest rate changes on shareholders' equity and CET1 capital

The "Accounting and capital effect of changes in interest rates" table below shows the effects on shareholders' equity and CET1 capital of gains and losses from changes in interest rates in the main banking book positions. We use derivatives to hedge interest rate risks in the banking book and these reflect changes in interest rates as an immediate fair value gain or loss, recognized either in the income statement or through OCI. Where hedged items are accrual accounted, we aim to minimize accounting asymmetries by applying hedge accounting to reflect the economic hedge relationship.

In a rising rate scenario, we would have an initial decrease in shareholders' equity as a result of fair value losses on our derivatives recognized in OCI. This would be compensated over time by increased NII for higher interest rates. The effect on CET1 capital would be much lower as gains and losses on interest rate swaps designated as cash flow hedges are not recognized for regulatory capital purposes.

Accounting and capital effect of changes in interest rates[1]

	Recognition		Shareholders' equity		CET1 capital	
	Timing	Income statement / OCI	Gains	Losses	Gains	Losses
Loans and deposits at amortized cost[2,3]	Gradual	Income statement	●	●	●	●
Other financial assets and liabilities measured at amortized cost[2]	Gradual	Income statement	●	●	●	●
Debt issued measured at amortized cost[2,3]	Gradual	Income statement	●	●	●	●
Receivables and payables from securities financing transactions[2]	Gradual	Income statement	●	●	●	●
Financial assets at fair value not held for trading	Immediate	Income statement	●	●	●	●
Financial assets at fair value through other comprehensive income	Immediate	OCI	●	●		●
Derivatives designated as cash flow hedges	Immediate	OCI[4]	●	●		
Derivatives designated as fair value hedges[5]	Immediate	Income statement	●	●	●	●
Derivatives transacted as economic hedges	Immediate	Income statement	●	●	●	●

1 Refer to the "Reconciliation of IFRS equity to Swiss SRB common equity tier 1 capital" table in the "Capital, liquidity and funding, and balance sheet" section of this report for more information about the differences between shareholders' equity and CET1 capital. 2 For fixed-rate financial instruments, changes in interest rates affect the income statement when these instruments roll over and reprice. 3 For hedge accounted items, a fair value adjustment is applied in line with the treatment of the hedging derivatives. 4 Excluding hedge ineffectiveness that is recognized in the income statement in accordance with IFRS. 5 The fair value of the derivatives is offset by the fair value adjustment of the hedged items. Under the fair value hedge program applied to cross-currency swaps and foreign currency debt, the foreign currency basis spread is excluded from the hedge designation and accounted for through OCI, which is included in CET1.

Economic value of equity sensitivity

Audited | The EVE sensitivity in the banking book to a +1-basis-point parallel shift in yield curves was negative USD 25.0m as of 31 December 2022, compared with negative USD 29.9m as of 31 December 2021, the change predominantly driven by rising market rates. This excludes the sensitivity of USD 3.4m from additional tier 1 (AT1) capital instruments (as per specific FINMA requirements) in contrast to general Basel Committee on Banking Supervision (BCBS) guidance.

The majority of our interest rate risk in the banking book is a reflection of the net asset duration that we run to offset our modeled sensitivity of net USD 19.6m (31 December 2021: USD 22.1m) assigned to our equity, goodwill and real estate, with the aim of generating a stable NII contribution. Of this, USD 14.0m and USD 4.8m are attributable to the US dollar and the Swiss franc portfolios, respectively (31 December 2021: USD 15.6m and USD 5.5m, respectively).

In addition to the sensitivity mentioned above, we calculate the six interest rate shock scenarios prescribed by FINMA. The "Parallel up" scenario, assuming all positions were fair valued, was the most severe and would have resulted in a change in EVE of negative USD 4.6bn, or 7.9%, of our tier 1 capital (31 December 2021: negative USD 6.0bn, or 10.0%), which is well below the 15% threshold as per the BCBS supervisory outlier test for high levels of interest rate risk in the banking book.

The immediate effect on our tier 1 capital in the "Parallel up" scenario as of 31 December 2022 would have been only a decrease of USD 0.4bn, or 0.6% (31 December 2021: USD 1.1bn, or 1.8%), reflecting the fact that the vast majority of our banking book is accrual accounted or subject to hedge accounting. The "Parallel up" scenario would subsequently have a positive effect on NII, assuming a constant balance sheet.

UBS also applies granular internal interest rate shock scenarios to its banking book positions to monitor the banking book's specific risk profile.

Net interest income sensitivity

The main NII sensitivity in the banking book resides in Global Wealth Management and Personal & Corporate Banking. Our investment of equity portfolio has a long duration and Group Treasury actively manages the residual IRRBB. This sensitivity is assessed using a number of scenarios assuming parallel and non-parallel shifts in yield curves, with various degrees of severity, and we have set and monitor thresholds for the NII sensitivity to immediate parallel shocks of –200 and +200 basis points under the assumption of constant balance sheet volume and structure. ▲

› **Refer to the "Group performance" section of this report for more information about sensitivity to interest rate movements**

Audited I

Interest rate risk – banking book

	31.12.22							
USD m	Effect on EVE[1] – FINMA						Effect on EVE[1] – BCBS	
Scenarios	CHF	EUR	GBP	USD	Other	Total	Additional tier 1 (AT1) capital instruments	Total
+1 bp	(4.0)	(0.7)	0.1	(20.4)	(0.1)	(25.0)	3.4	(21.6)
Parallel up[2]	(574.6)	(117.0)	33.2	(3,944.3)	(26.3)	(4,629.1)	649.7	(3,979.4)
Parallel down[2]	642.3	148.1	(45.4)	4,074.9	21.9	4,841.7	(699.8)	4,141.9
Steepener[3]	(257.0)	(92.8)	(28.2)	(1,027.4)	(3.3)	(1,408.7)	(46.8)	(1,455.5)
Flattener[4]	145.4	74.1	32.6	94.4	(2.5)	344.0	189.9	533.9
Short-term up[5]	(83.0)	34.3	42.2	(1,519.0)	(13.8)	(1,539.2)	438.6	(1,100.6)
Short-term down[6]	86.9	(33.1)	(42.5)	1,658.5	13.4	1,683.1	(455.5)	1,227.6

	31.12.21							
USD m	Effect on EVE[1] – FINMA						Effect on EVE[1] – BCBS	
Scenarios	CHF	EUR	GBP	USD	Other	Total	Additional tier 1 (AT1) capital instruments	Total
+1 bp	(5.1)	(1.1)	0.1	(23.5)	(0.4)	(29.9)	4.5	(25.4)
Parallel up[2]	(724.1)	(196.6)	33.3	(5,068.3)	(85.8)	(6,041.4)	853.4	(5,188.0)
Parallel down[2]	806.3	231.9	(32.8)	4,124.2	19.9	5,149.5	(928.4)	4,221.1
Steepener[3]	(254.3)	(69.0)	(31.1)	(821.4)	(3.7)	(1,179.6)	(9.6)	(1,189.2)
Flattener[4]	117.1	37.4	35.3	(362.3)	(34.5)	(207.0)	197.1	(10.0)
Short-term up[5]	(158.7)	(24.1)	45.4	(2,165.9)	(59.6)	(2,362.9)	531.5	(1,831.4)
Short-term down[6]	162.5	27.4	(43.7)	2,315.6	3.8	2,465.6	(553.3)	1,912.3

1 Economic value of equity. 2 Rates across all tenors move by ±150 bps for Swiss franc, ±200 bps for euro and US dollar, and ±250 bps for pound sterling. 3 Short-term rates decrease and long-term rates increase. 4 Short-term rates increase and long-term rates decrease. 5 Short-term rates increase more than long-term rates. 6 Short-term rates decrease more than long-term rates.

▲

Other market risk exposures

Own credit

We are exposed to changes in UBS's own credit reflected in the valuation of financial liabilities designated at fair value when UBS's own credit risk would be considered by market participants, except for fully collateralized liabilities or other obligations for which it is established market practice to not include an own-credit component.

› **Refer to "Note 20 Fair value measurement" in the "Consolidated financial statements" section of this report for more information about own credit**

Structural foreign exchange risk

Upon consolidation, assets and liabilities held in foreign operations are translated into US dollars at the closing foreign exchange rate on the balance sheet date. Value changes (in US dollars) of non-US dollar assets or liabilities due to foreign exchange movements are recognized in OCI and therefore affect shareholders' equity and CET1 capital.

Group Treasury uses strategies to manage this foreign currency exposure, including matched funding of assets and liabilities and net investment hedging.

› **Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information about our exposure to and management of structural foreign exchange risk**

› **Refer to "Note 10 Derivative instruments" in the "Consolidated financial statements" section of this report for more information about our hedges of net investments in foreign operations**

Equity investments and investment fund units

Audited I We make direct investments in a variety of entities and buy equity holdings in both listed and unlisted companies, with the aim of supporting our business activities and delivering strategic value to UBS. This includes investments in exchange and clearing house memberships, as well as minority investments in early-stage fintechs and technology companies via UBS Next. We may also make investments in funds that we manage in order to fund or seed them at inception or to demonstrate that our interests align with those of investors. We also buy, and are sometimes required by agreement to buy, securities and units from funds that we have sold to clients.

The fair value of equity investments tends to be influenced by factors specific to the individual investments. Equity investments are generally intended to be held for the medium or long term and may be subject to lock-up agreements. For these reasons, we generally do not control these exposures by using market risk measures applied to trading activities. However, such equity investments are subject to a different range of controls, including preapproval of new investments by business management and Risk Control, portfolio and concentration limits, and regular monitoring and reporting to senior management. They are also included in our Group-wide statistical and stress testing metrics, which flow into our risk appetite framework.

As of 31 December 2022, we held equity investments and investment fund units totaling USD 3.0bn, of which USD 1.9bn was classified as Financial assets at fair value not held for trading and USD 1.1bn as Investments in associates. ▲

› **Refer to "Note 20 Fair value measurement" and "Note 28 Interests in subsidiaries and other entities" in the "Consolidated financial statements" section of this report for more information**
› **Refer to "Note 1 Summary of material accounting policies" in the "Consolidated financial statements" section of this report for more information about the classification of financial instruments**

Debt investments

Audited | Debt investments classified as Financial assets measured at fair value through other comprehensive income as of 31 December 2022 were measured at fair value with changes in fair value recorded through Equity, and can broadly be categorized as money market instruments and debt securities primarily held for statutory, regulatory or liquidity reasons.

The risk control framework applied to debt instruments classified as Financial assets measured at fair value through other comprehensive income depends on the nature of the instruments and the purpose for which we hold them. Our exposures may be included in market risk limits or be subject to specific monitoring and interest rate sensitivity analysis. They are also included in our Group-wide statistical and stress testing metrics, which flow into our risk appetite framework.

Debt instruments classified as Financial assets measured at fair value through other comprehensive income had a fair value of USD 2.2bn as of 31 December 2022, compared with USD 8.8bn as of 31 December 2021. Effective from 1 April 2022, UBS has reclassified a portfolio of financial assets from Financial assets measured at fair value through other comprehensive income with a fair value of USD 6.9bn to Other financial assets measured at amortized cost, in line with the principles in IFRS 9, *Financial Instruments*, which require a reclassification when an entity changes its business model for managing financial assets.▲

› **Refer to "Note 20 Fair value measurement" in the "Consolidated financial statements" section of this report for more information**
› **Refer to "Economic value of equity sensitivity" in this section for more information**
› **Refer to "Note 1 Summary of material accounting policies" in the "Consolidated financial statements" section of this report for more information about the classification of financial instruments**

Pension risk

We provide a number of pension plans for past and current employees, some classified as defined benefit pension plans under IFRS that can have a material effect on our IFRS equity and CET1 capital.

Pension risk is the risk that defined benefit plans' funded status might decrease, negatively affecting our capital. This can result from falls in the value of a plan's assets or in the investment returns, increases in defined benefit obligations, or combinations of the above.

Important risk factors affecting the fair value of pension plans' assets include equity market returns, interest rates, bond yields, and real estate prices. Important risk factors affecting the present value of expected future benefit payments include high-grade bond yields, interest rates, inflation rates, and life expectancy.

Pension risk is included in our Group-wide statistical and stress testing metrics, which flow into our risk appetite framework. The potential effects are thus captured in the post-stress capital ratio calculations.

› **Refer to "Note 1 Summary of material accounting policies" and "Note 26 Post-employment benefit plans" in the "Consolidated financial statements" section of this report for more information about defined benefit plans**

UBS own share exposure

Group Treasury holds UBS Group AG shares to hedge future share delivery obligations related to employee share-based compensation awards, and also holds shares purchased under the share repurchase program. In addition, the Investment Bank holds a limited number of UBS Group AG shares, primarily in its capacity as a market-maker with regard to UBS Group AG shares and related derivatives, and to hedge certain issued structured debt instruments.

› **Refer to "UBS shares" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information**

Country risk

Country risk framework

Country risk includes all country-specific events occurring in a sovereign jurisdiction that may lead to impairment of UBS's exposures. It may take the form of: (i) sovereign risk, which is the ability and willingness of a government to honor its financial commitments; (ii) transfer risk, which arises if a counterparty or issuer cannot acquire foreign currencies following a moratorium by a central bank on foreign exchange transfers; or (iii) "other" country risk. "Other" country risk may manifest itself through, on the one hand, increased and multiple counterparty and issuer default risk (systemic risk) and, on the other hand, events that may affect a country's standing, such as adverse shocks affecting political stability or institutional and / or legal frameworks. We have a well-established risk control framework to assess the risk profiles of all countries where we have exposure.

We assign a country rating to each country, which reflects our view of the country's creditworthiness and of the probability of a country risk event occurring. Country ratings are mapped to statistically derived default probabilities, described under "Probability of default" in this section. We use this internal analysis to set the credit ratings of governments and central banks, estimate the probability of a transfer event occurring, and establish rules on how aspects of country risk should be incorporated in counterparty ratings of non-sovereign entities domiciled in the respective country.

Country ratings are also used to define our risk appetite and risk exposure to foreign countries. A country risk limit (i.e., maximum aggregate exposure) applies to exposures to counterparties or issuers of securities and financial investments in the given foreign country. We may limit the extension of credit, transactions in traded products or positions in securities based on a country risk ceiling even if our exposure to a counterparty is otherwise acceptable.

For internal measurement and control of country risk, we also consider the financial effect of market disruptions arising prior to, during and after a country crisis. These may take the form of a severe deterioration in a country's debt, equity or other asset markets, or a sharp depreciation of its currency. We use stress testing to assess potential financial effects of severe country or sovereign crises. This involves the developing of plausible stress scenarios for combined stress testing and the identification of countries that may potentially be subject to a crisis event, determining potential losses and making assumptions about recovery rates depending on the types of credit transactions involved and their economic importance to the affected countries.

Our exposures to market risks are subject to regular stress tests covering major global scenarios, which are also used for combined stress testing, where we apply market shock factors to equity indices, interest rates and currency rates in all relevant countries and consider the potential liquidity of the instruments.

Country risk exposure

Country risk exposure measure

The presentation of country risk follows our internal risk view, where the basis for measuring exposures depends on the product category in which we classified the exposures. In addition to the classification of exposures into banking products and traded products, covered in "Credit risk profile of the Group" in this section, in the trading inventory we classify issuer risk on securities such as bonds and equities, as well as risk relating to underlying reference assets for derivative positions.

As we manage the trading inventory on a net basis, we net the value of long positions against short positions with the same underlying issuer. Net exposures are, however, floored at zero per issuer in the figures presented in the following tables. As a result, we do not recognize potentially offsetting benefits of certain hedges and short positions across issuers.

We do not recognize any expected recovery values when reporting country exposures as exposure before hedges, except for risk-reducing effects of master netting agreements and collateral held in either cash or portfolios of diversified marketable securities, which we deduct from the positive exposure values. Within banking products and traded products, risk-reducing effects of credit protection are taken into account on a notional basis when determining the net of hedge exposures.

Country risk exposure allocation

In general, exposures are shown against the country of domicile of the contractual counterparty or the issuer of the security. For some counterparties whose economic substance in terms of assets or source of revenues is primarily located in a different country, the exposure is allocated to the risk domicile of those assets or revenues.

We apply a specific approach for banking products exposures to branches of banks that are located in a country other than the legal entity's domicile. In such cases, exposures are recorded in full against the country of domicile of the counterparty and additionally in full against the country where the branch is located.

In the case of derivatives, we show counterparty risk associated with positive replacement value (PRV) against the counterparty's country of domicile (presented within traded products). In addition, risk associated with an instantaneous fall in value of underlying reference assets to zero (assuming no recovery) is shown against the country of domicile of the issuer of the reference asset (presented within trading inventory). This approach allows us to capture both counterparty and, where applicable, issuer elements of risk arising from derivatives and applies comprehensively for all derivatives, including single-name credit default swaps (CDSs) and other credit derivatives.

CDSs are primarily bought and sold in relation to our trading businesses, and, to a much lesser degree, used to hedge credit valuation adjustments (CVAs). Holding CDSs for credit default protection does not necessarily protect the buyer of protection against losses, as contracts only pay out under certain scenarios. The effectiveness of our CDS protection as a hedge of default risk is influenced by several factors, including the contractual terms under which a given CDS was written. Generally, only the occurrence of credit events as defined by the CDS contract's terms (which may include, among other events, failure to pay, restructuring or bankruptcy) results in payments under the purchased credit protection contracts. For CDS contracts on sovereign obligations, repudiation can also be deemed as a default event. The determination as to whether a credit event has occurred is made by the relevant International Swaps and Derivatives Association (ISDA) determination committees (composed of various ISDA member firms) based on the terms of the CDS and the facts and circumstances surrounding the event.

Top 20 country risk exposures

The table below shows our 20 largest country exposures by product type, excluding our home country, as of 31 December 2022 compared with 31 December 2021.

Compared with the prior year, our net exposure to the UK decreased by USD 14.5bn, driven by central bank exposures due to treasury activities. Net exposure to Germany increased by USD 4.1bn, driven by central bank exposures due to treasury activities. Net exposures to Singapore increased by USD 1.9bn, driven by trading inventory due to treasury activities. Net exposure to China decreased by USD 1.7bn, predominantly driven by trading inventory across issuer risk and margin loans, as well as traded and banking products. Net exposure to France increased by USD 1.7bn, driven by trading inventory due to treasury activities. Net exposure to the US increased by USD 1.6bn, driven by mortgages, as well as trading inventory due to treasury activities with partial offsets related to securities financing transactions.

Based on the sovereign rating categories, as of 31 December 2022, 86% of our emerging market country exposure was rated investment grade, compared with 84% as of 31 December 2021.

Russia

Our direct country risk exposure to Russia contributed USD 98m to our total emerging market exposure of USD 18.6bn as of 31 December 2022, compared with a contribution of USD 634m as of 31 December 2021. This includes trade finance exposures in Personal & Corporate Banking, Nostro and cash accounts balances, and issuer risk on trading inventory within the Investment Bank.

We had no material direct country risk exposures to Belarus or to Ukraine as of 31 December 2022 and no material reliance on Russian, Belarusian or Ukrainian collateral.

Top 20 country risk net exposures by product type

USD m	Total		Banking products (loans, guarantees, loan commitments)		Traded products (counterparty risk from derivatives and securities financing) after master netting agreements and net of collateral		Trading inventory (securities and potential benefits / remaining exposure from derivatives)	
	Net of hedges[1]		Net of hedges[1]		Net of hedges		Net long per issuer	
	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
United States	117,994	116,388	81,875	79,647	6,620	8,371	29,499	28,371
United Kingdom	20,360	34,837	10,887	24,788	7,982	7,465	1,490	2,585
Japan	15,894	14,764	13,251	10,572	2,232	3,508	410	684
Germany	14,651	10,564	8,255	3,397	1,495	1,232	4,901	5,934
Singapore	10,863	8,993	3,038	3,110	2,493	2,557	5,332	3,326
France	7,996	6,301	2,056	1,356	1,335	1,711	4,605	3,235
Australia	4,893	6,397	1,365	2,674	1,833	1,786	1,696	1,937
Canada	4,722	3,933	274	1,199	620	1,044	3,827	1,689
China	3,625	5,344	1,347	1,823	295	830	1,983	2,691
South Korea	3,265	2,479	388	462	411	418	2,466	1,599
Luxembourg	3,230	3,453	2,717	2,438	87	58	427	958
Netherlands	2,866	3,020	1,074	1,183	669	830	1,123	1,007
Hong Kong SAR	2,278	3,388	938	1,914	455	367	885	1,107
Norway	1,676	1,215	80	25	396	206	1,200	983
United Arab Emirates	1,393	769	446	555	707	117	240	97
Thailand	1,383	1,469	344	208	23	26	1,017	1,235
Sweden	1,293	1,617	158	647	332	194	803	776
Austria	1,192	1,220	285	265	116	97	792	858
Monaco	1,017	1,022	1,001	984	16	28	0	10
India	975	1,119	847	991	88	87	40	41
Total top 20[2]	221,565	228,291	130,626	138,238	28,203	30,930	62,736	59,124

1 Before deduction of IFRS 9 ECL allowances and provisions. 2 Excluding Switzerland, supranationals and global funds.

Emerging markets[1] net exposure[2] by internal UBS country rating category

USD m	31.12.22	31.12.21
Investment grade	16,029	17,608
Sub-investment grade	2,594	3,261
Total	18,623	20,869

1 We classify countries as emerging markets based on per capita GDP, historical real GDP growth, alignment with international institutions (such as BIS, World Bank, IMF, MSCI) and other factors. 2 Net of credit hedges (for banking products and for traded products); net long per issuer (for trading inventory). Before deduction of IFRS 9 ECL allowances and provisions.

Sustainability and climate risk

At UBS, sustainability and climate risk is defined as the risk that UBS negatively impacts or is impacted by climate change, natural capital, human rights or other environmental, social and governance (ESG) matters.

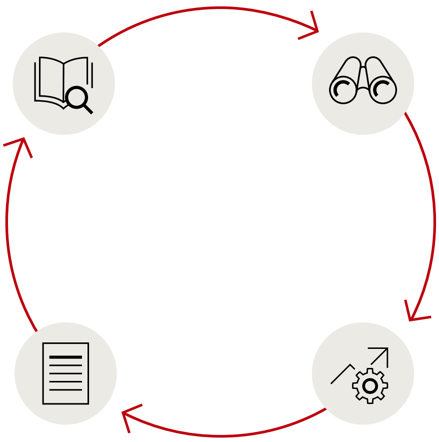
Sustainability and climate risk may manifest as credit, market, liquidity and / or non-financial risk for UBS, resulting in potential adverse financial, liability and / or reputational impacts. These risks extend to the value of investments and may also affect the value of collateral (e.g., real estate). The management of sustainability and climate risk is key, amid a global drive to meet the United Nations Sustainable Development Goals (the SDGs) and the transition to net zero, as defined by the Paris Agreement. In addition, regulators across jurisdictions increasingly seek to understand the potential financial impacts of climate change.

Our sustainability and climate risk policy framework governs client and supplier relationships, applies Group-wide to all activities, and is integrated in management practices and control principles. The sustainability and climate risk framework is embedded in our standard risk, compliance and operations processes and applied as described below.

Sustainability and climate risk framework

1 Identification and measurement

Sustainability and climate (physical and transition) risks are identified and their financial materiality is measured



2 Monitoring and risk appetite setting

Exposure to high / moderate risk sectors, emerging risks and regulations is monitored and metrics are reported internally to enable risk appetite setting

3 Management and control

Management and control processes for products, counterparties and transactions ensure material sustainability and climate risks are identified, measured, monitored and escalated

4 Reporting

Key sustainability and climate risk considerations are included in periodic risk reporting

The aforementioned processes include client onboarding, transaction due diligence, product development and investment decision processes, own operations, supply chain management, and portfolio reviews. This framework is geared toward identifying clients, transactions or suppliers potentially in breach of our standards or otherwise subject to significant controversies related to sustainability, human rights or climate change.

› **Refer to "Sustainability and climate risk policy framework" in Supplement 2 to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information**

Managing climate risk

Climate risk can arise either from changing climate conditions (physical risks) or from efforts to mitigate climate change (transition risks). The physical and transition risks from a changing climate contribute to a structural change across economies and consequently can affect banks and the financial sector as a whole through financial and non-financial impacts.

Our sustainability and climate risk (SCR) unit (part of Group Risk Control) manages material exposure to sustainability and climate risks. It also advances our firm-wide SCR initiative to build in-house capacity for the management of sustainability and climate-related risks.

Our SCR initiative follows a multi-year roadmap. It is designed to integrate sustainability and climate risk considerations into our various traditional financial and non-financial risk management frameworks, and related policies and processes. This is necessary to meet expectations regarding the management of sustainability and climate risks and to deliver on climate stress-test exercises. Our roadmap is configured to address current and emerging regulations and builds capacity through expertise and collaboration, for example, structured engagement with internal and external stakeholders (e.g., our Group Compliance, Regulatory & Governance (GCRG) function, for non-financial risks) and pertinent experts.

In 2022, the SCR initiative monitored emerging sustainability and climate risk regulation, engaged with select regulators for deep dives, and further advanced efforts toward the goal of full integration of sustainability and climate risk into our traditional risk management frameworks and stress-testing capacity. Further developments included establishing sustainable product guidelines, building new capacity to centrally structure, acquiring and deploying ESG data across the firm, and further refining governance and methodologies driving ESG reporting and disclosure.

› **Refer to "Our management of climate risks" in our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information**

UBS's lending to climate-sensitive sectors

UBS approaches climate risk identification by integrating climate risk drivers, expert-based views on their transmission channels, and climate risk methodologies (e.g., risk scores and heatmaps). This enables a materiality-driven approach to climate risk management.

› **Refer to "Climate related materiality assessment" in our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information**

The current inventory of UBS's exposure to climate-sensitive activities (transition and physical risk) at the sector level is summarized in the table below. Exposures may appear either under one or more of the risk types, as the methodologies are distinct in their approach and application and should not be added up as one total exposure figure. Climate risk analysis is a novel area of research, and, as the methodologies, tools, and data availability improve, we will further develop our risk identification and measurement approaches.

Risk exposures by sector[1,2]

	Exposure		Transition risk				Physical risk		
Sector	2020–2022 trend	2022 (USD bn)	2022 climate-sensitive exposure[3]	2022 risk-rating category[3]	2020–2022 trend in risk profile[4]	In scope of net-zero target (%)[5]	2022 climate-sensitive exposure[3]	2022 risk-rating category[3]	2020–2022 trend in risk profile[4]
Agriculture									
Agriculture, fishing and forestry	↓	0.3	0.0	Moderately low	↑		0.3	Moderate	↓
Food and beverage	↓	3.2	1.4	Moderate	↓		2.3	Moderate	↓
Financial services									
Financial services	↑	46.9	0.0	Low	↓		7.1	Moderately low	↓
Industrials									
Cement or concrete manufacture	↑	0.5	0.5	Moderately high	↓	98	0.5	Moderate	↓
Chemicals manufacture	↓	1.0	1.0	Moderately high	↓		1.0	Moderate	↑
Electronics manufacture	↓	1.8	0.0	Moderately low	↓		0.1	Moderately low	↑
Goods and apparel manufacture	↑	2.1	1.0	Moderate	↓		0.9	Moderately low	↓
Machinery manufacturing	↓	2.9	2.6	Moderate	↓		0.1	Moderately low	↓
Pharmaceuticals manufacture	↑	1.9	1.9	Moderately high	↓		0.2	Moderately low	↓
Plastics and petrochemicals manufacture	↓	0.9	0.9	Moderate	↓		0.8	Moderate	↓
Metals and mining									
Conglomerates (incl. trading)	↓	2.4	2.4	Moderate	↓		0.4	Moderately low	↓
Mining and quarrying	↓	0.4	0.0	Moderately low	↓		0.4	Moderately high	↓
Production	↑	0.4	0.4	Moderate	↓		0.1	Moderate	↑
Fossil fuels									
Downstream refining, distribution	↑	0.3	0.3	Moderate	↑		0.3	Moderate	↓
Integrated	↓	0.4	0.4	Moderately high	↓	100	0.4	Moderate	↓
Midstream transport, storage	↑	0.0	0.0	Moderate	↓		0.0	Moderate	↓
Trading	↑	5.2	5.2	Moderate	↓		5.2	Moderately high	↓
Upstream extraction	↓	0.1	0.1	Moderately high	↓	95	0.1	Moderate	↓
Real estate									
Real estate development and management	↓	5.6	1.8	Moderately low	↓		0.8	Moderately low	↓
Residential[2]	↑	158.9	0.0	Low	→	99	0.0	Low	→
Commercial[2]	↑	47.1	1.4	Moderately low	↓	97	1.7	Low	↑
Services and technology									
Services and technology	↓	19.6	0.0	Low	↓		3.0	Moderately low	↓

Risk exposures by sector[1,2] (continued)

	Exposure		Transition risk				Physical risk		
Sector	2020–2022 trend	2022 (USD bn)	2022 climate-sensitive exposure[3]	2022 risk-rating category[3]	2020–2022 trend in risk profile[4]	In scope of net-zero target (%)[5]	2022 climate-sensitive exposure[3]	2022 risk-rating category[3]	2020–2022 trend in risk profile[4]
Transportation									
Air transport	↓	1.8	1.8	Moderate	↓		1.1	Moderate	↓
Automotive	↓	0.4	0.1	Moderately low	↓		0.0	Moderately low	↓
Parts and equipment supply	↓	0.5	0.5	Moderate	↓		0.1	Moderately low	↓
Rail freight	↓	0.7	0.0	Low	↓		0.2	Moderately low	↓
Road freight	↓	0.5	0.5	Moderate	↓		0.2	Moderately low	↓
Transit	↓	0.2	0.0	Moderately low	↓		0.1	Moderately low	↓
Water transport	↓	0.4	0.0	Moderately low	↓		0.4	Moderate	↓
Utilities									
Other	↓	0.2	0.1	Moderately low	↑		0.1	Moderate	↓
Secondary energy production	↑	2.0	0.5	Moderately low	↓	91	2.0	Moderate	↓
Secondary energy trading	↓	0.0	0.0	Moderately low	↓		0.0	Moderate	↓
Private lending									
Lombard[2,6]	↓	137.3	0.0	Low	↓		0.0	Moderately low	↓
Private lending, credit cards, other[2]	↓	4.1	0.0	Not Classified	→		0.0	Not Classified	→
Total	**↓**	**450.0**	**24.9**	**Moderately low**	**↓**		**30.0**	**Moderately low**	**↓**
of which: sensitive exposure (%)			5.5				6.7		

1 Consists of total loans and advances to customers and guarantees, as well as irrevocable loan commitments (within the scope of expected credit loss), and is based on consolidated and standalone IFRS numbers, in USD bn. Metrics and trends are calculated and restated based on 2022 methodology, across three years of reporting, 2020–2022. 2 Methodologies for assessing climate-related risks are emerging and may change over time. As the methodologies, tools and data availability improve, we will further develop our risk identification and measurement approaches, including further and updated geospatial analysis of properties securing financing with UBS (real estate) and better understanding how private lending (e.g., Lombard) activities may result in direct financial impacts for UBS. For physical climate risks, UBS has identified select properties in its real estate portfolio that are vulnerable to acute climate hazards. However, real estate rating is assigned based on the riskiness of loan counterparties or qualitative estimates leveraging internal studies. 3 Climate-related risks are scored between 0 and 1, based upon sustainability and climate risk transmission channels, as outlined in Appendix 3 to our Sustainability Report 2022, available under "Annual reporting" at ubs.com/investors. Risk ratings represent a range of scores across five risk-rating categories: low, moderately low, moderate, moderately high, and high. The climate-sensitive exposure metrics are determined based upon the top three out of five rated categories: high to moderate. Legend on risk codes: not classified means the respective category of risk rating is not classified and its range of risk profiles scores 0%; low means the category of risk rating is low and its range of risk profiles scores ≤19%; moderately low means the category of risk rating is moderately low and its range of risk profiles scores >19% and ≤39%; moderate means the category of risk rating is moderate and its range of risk profiles scores >39% and ≤59%; moderately high means the category of risk rating is moderately high and its range of risk profiles scores >59% and ≤79%; high means the category of risk rating is high and its range of risk profiles scores >79% and ≤100%. 4 A material change in risk profile (discrete risk score, weighted average per sub-sector) is considered a >5% shift up, or down. 5 Calculated as a % of total exposure to the sub-sector, overall net-zero targets cover 45.6% of UBS lending, as defined in footnote 1. 6 Lombard lending rating is assigned based on the average riskiness of loans.

Transition risk heatmap

Transition risk covers the adjustment to an environmentally sustainable economy, including changes in public policies, disruptive technological developments and shifts in consumer and investor preferences. Our transition risk heatmap methodology is based on a risk-segmentation process, dividing and rating economic sectors and industry sub-segments that share similar risk vulnerability characteristics.

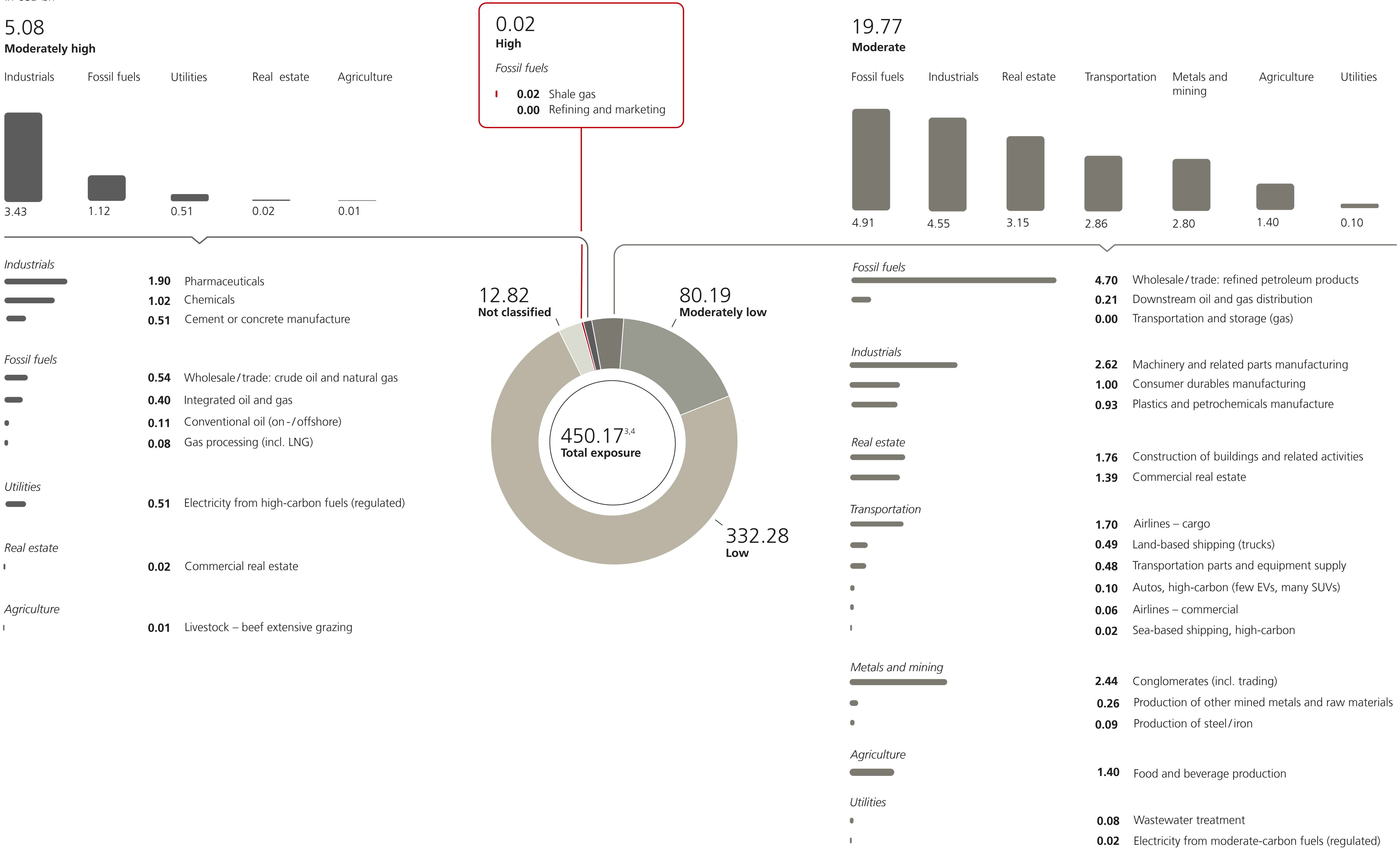
These are then scored and rated according to their vulnerability to (i) climate policy, (ii) low-carbon technology risks and (iii) revenue or demand shifts under an immediate and ambitious approach, to meeting the well-below-2°C Paris goal. We are able to use these risk ratings to support identification of potential climate-sensitive concentrations. The ratings in the heatmap are bands of scores (from 0 to 1), and reflect the levels of risk that would likely occur under an ambitious transition (in a short-term time horizon).

Our current transition risk heatmap shows that our exposure to activities rated as having high, moderately high or moderate vulnerability to climate transition risks is relatively low (as a percentage, in 2022 compared with 2021). Most year-on-year fluctuations (2021 to 2022) were in the energy sector, specifically in the oil and gas midstream and downstream segments, and were caused by increasing energy prices, as the Russia–Ukraine war tightened the global energy supply. Despite these fluctuations, we have continued to reduce our exposure to climate-sensitive sectors.

› **Refer to "Managing sustainability and climate risks" in our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information**

Climate risk heatmap (transition risk)[1,2]

In USD bn



1 Consists of total loans and advances to customers and guarantees, as well as irrevocable loan commitments (within the scope of expected credit loss), and are based on consolidated and standalone IFRS numbers.
2 Climate-related risks are scored between 0 and 1, based upon sustainability and climate risk transmission channels, as outlined in the Appendix 3 to our Sustainability Report 2022, available under "Annual reporting" at ubs.com/investors. Risk ratings represent a range of scores across, 5 risk rating categories: low, moderately low, moderate, moderately high, and high. Climate-sensitive exposure metric is determined based upon the top 3 out of 5 rated categories: high to moderate. Sectors, such as fossil fuels, are further segmented to categories reflecting a range of risk vulnerabilities from high to moderate, within the sensitive sector.
3 Total exposure calculation is subject to rounding to two decimal places, hence potential deviation from actual.
4 Methodologies for assessing climate-related risks are emerging and may change over time. As the methodologies, tools, and data availability improve, we will further develop our risk identification and measurement approaches, including updated geospatial analysis of properties securing financing with UBS (real estate) and better understanding how private lending (e.g., Lombard) activities may result in direct financial impacts to UBS. Not classified represents portion of UBS business activities where methodologies and data are not yet able to provide a rating. Lombard lending rating is assigned based on the average riskiness of loans.

Physical risk heatmap

Physical risk arises from the impact of weather events and long-term or widespread environmental changes. The physical risk heatmap methodology groups corporate counterparties based on exposure to key physical risk factors, by rating sectoral (sectoral average risk distribution), geographic (vulnerability and adaptive capacity) and value chain (sectoral average risk distribution) vulnerabilities in a climate-change trajectory in which no additional policy action is taken, and scored for the potential for financial loss in the short-term time horizon. Ratings from low to high are based on a weighted-average score (from 0 to 1), given by double-weighting sector and geography and single-weighting value chain.

› **Refer to "Managing sustainability and climate risks" in our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors***

We will continue to enhance our methodology in 2023, with relevant subject matter experts (e.g., country risk experts) and enhanced vendor data sources (e.g., systematic integration of geospatial tools and data). Our current physical risk heatmap shows that we have relatively low exposure to activities rated as having high, moderately high or moderate vulnerability to physical climate risks. Key concentrations of exposure include high volumes of real estate lending in Switzerland. Most of our lending is to the financial sector, which by its nature has a lower physical climate risk. Key exceptions are lending to property insurance companies or lending in higher-risk regions, such as South Asia.

The chart below shows the location-specific risk distribution compared with the spread of physical risk across sectoral risk ratings versus country (risk domicile, see above) risk ratings. The size of the circle indicates the relative lending exposure.

Scenario analysis and stress test exercises

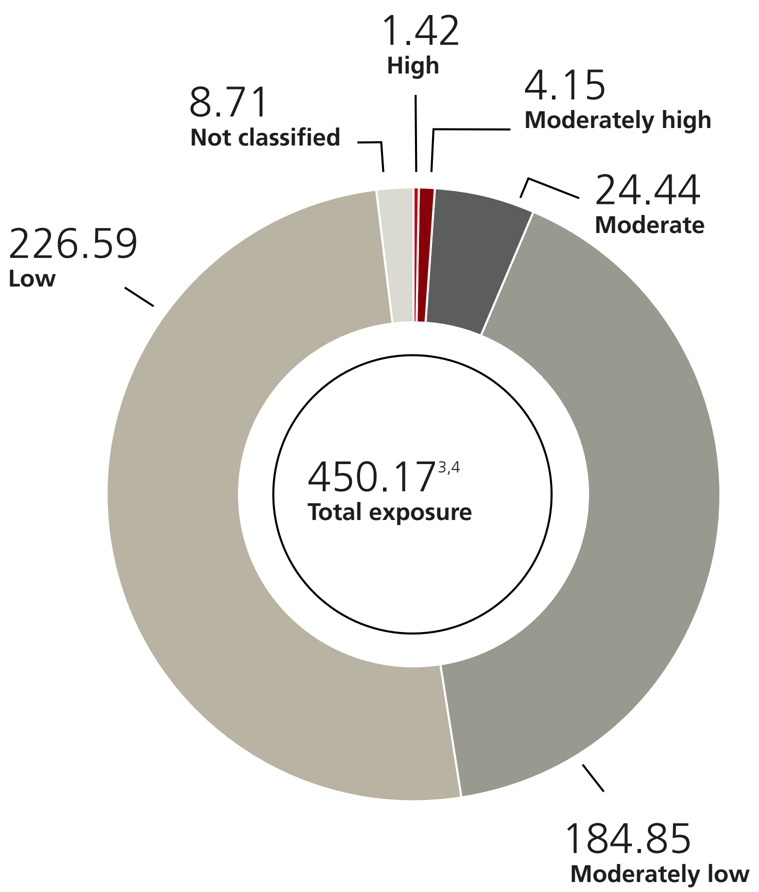
We use scenario-based approaches to assess our exposure to physical and transition risks stemming from climate change. We have introduced a series of assessments performed through industry collaborations in order to harmonize approaches for addressing methodological and data gaps. We have performed top-down balance sheet stress testing (across the Group), as well as targeted, bottom-up analysis of specific sector exposures covering short-, medium-, and long-term time horizons.

UBS first participated in regulatory scenario analysis and stress test exercises in 2021,namely the Bank of England (BoE) 2021 Climate Biennial Exploratory Scenario (CBES): Financial risks from climate change; and the Climate Risk Stress Test (CST) of the European Central Bank (the ECB). In addition, in 2021 UBS participated in climate risk assessment conducted in Switzerland jointly by FINMA and the Swiss National Bank. Throughout 2022, we engaged with a range of regulatory surveys and other requests for information from supervisors around the globe.

› **Refer to "Managing sustainability and climate risks" in our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors***

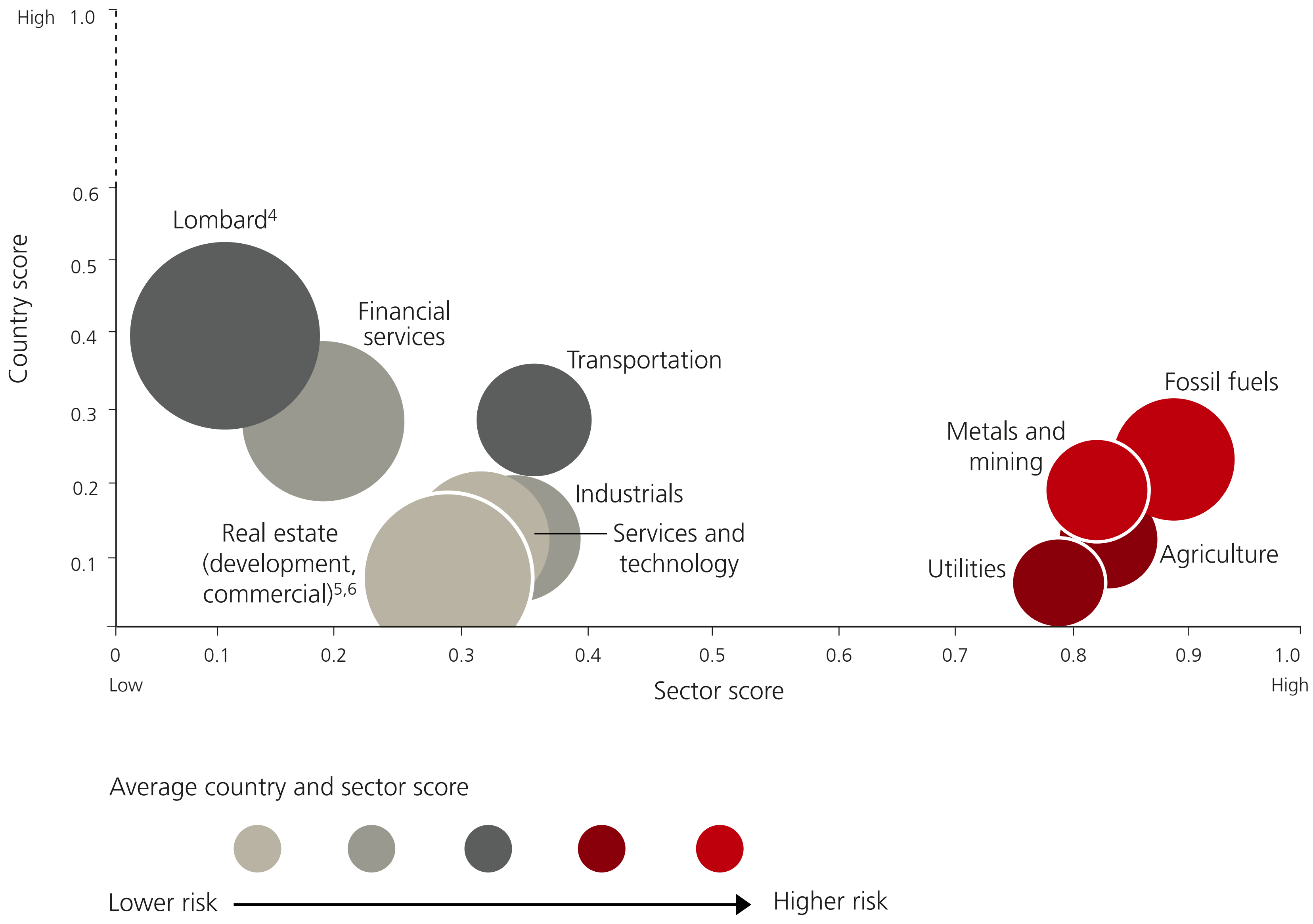
Climate risk heatmap (physical risk)[1,2]

In USD bn



Physical risk by sector and geographic (country) scores

Marker size indicates relative exposure magnitude



1 Consists of total loans and advances to customers and guarantees, as well as irrevocable loan commitments (within the scope of expected credit loss), and are based on consolidated and standalone IFRS numbers.
2 Climate-related risks are scored between 0 and 1, based upon sustainability and climate risk transmission channels, as outlined in the Appendix 3 to our Sustainability Report 2022, available under "Annual reporting" at ubs.com/investors. Risk ratings represent a range of scores across, 5 risk rating categories: low, moderately low, moderate, moderately high, and high. Climate sensitive exposure metric is determined based upon the top 3 out of 5 rated categories: high to moderate. Sectors, such as fossil fuels, are further segmented to categories reflecting a range of risk vulnerabilities from high to moderate, within the sensitive sector.
3 Total exposure calculation is subject to rounding to two decimal places, hence potential deviation from actual.
4 Methodologies for assessing climate-related risks are emerging and may change over time. As the methodologies, tools, and data availability improve, we will further develop our risk identification and measurement approaches, including updated geospatial analysis of properties securing financing with UBS (real estate) and better understanding how private lending (e.g., Lombard) activities may result in direct financial impacts to UBS. Not classified represents portion of UBS business activities where methodologies and data are not yet able to provide a rating. Lombard lending rating is assigned based on the average riskiness of loans.
5 Residential real estate is not given a sector score, therefore not included in this chart, however, is rated "low" based on periodic geospatial analysis.
6 UBS has identified select properties in its portfolio that are vulnerable to acute climate hazards, however portfolio-level risks are inherently low, given the integration of such information into UBS's loan underwriting processes.

Non-financial risk

Non-financial risk is the risk of undue monetary loss and / or non-monetary adverse consequences resulting from inadequate or failed internal processes, people and / or systems, failure to comply with laws and regulations and internal policies and procedures, or external events (deliberate, accidental or natural) that have an impact, monetary or non-monetary, on UBS, its clients or its markets.

Key developments

We have identified eight non-financial risk themes as being currently key to us. These are:
– digital transformation and change delivery;
– data life cycle;
– operational resilience and cyber threat;
– investor protection and market interaction;
– strategic growth initiatives and partnerships;
– the evolving nature of AML / KYC and sanctions;
– virtual assets; and
– environmental, social and governance (ESG) risks.

We are continuing our efforts regarding innovation and digitalization to create value for our clients. As part of the resulting transformation, we focus on timely and properly controlled changes to frameworks, including consideration of new or revised controls, working practices and oversight, with the aim of mitigating any new risks introduced.

The increasing interest in data-driven advisory processes, and use of artificial intelligence and machine learning, is opening up new questions related to data ethics, data privacy and records management. In addition, given the interconnectivity between systems and data flows, it is important that data is properly managed and is complete, timely and correct. We are actively enhancing the required frameworks, which are designed to ensure proper controls are in place to meet regulatory and customer expectations.

Given rising geopolitical tensions, coupled with ongoing environmental and health threats, we believe that it is essential that UBS remains operationally resilient. We have developed a global operational resilience framework and are implementing it across all business divisions and jurisdictions. The framework will mature over time and is designed to drive enhancements in operational resilience. In addition, in regions with local COVID-19 restrictions, our response continues to rely upon our business continuity management and operational risk processes, with no material impact on our services.

The inherent risk of cyberattacks continues to be elevated, as the geopolitical situation increases the likelihood of external state-driven cyber activity, and attacks are becoming increasingly sophisticated, which may result in business disruption or the corruption or loss of data. It is therefore key that our cyber-defense capabilities continue to be strengthened and evolve in line with developments in the threat landscape. Our IT security controls, staff training and communications, and cyber-threat monitoring provided adequate cyber defenses to prevent our operations being materially impacted by cybersecurity incidents in 2022. We continue to enhance our cyber capabilities to stay abreast of evolving threats. Cyberattacks may also occur on the systems that are operated by external service providers. If a successful attack occurs at a service provider, as we have recently experienced, we may be dependent on the service provider's ability to detect, investigate and assess the attack, and successfully restore the relevant systems and data.

As we continue to move to a post-pandemic "new normal," changes to the work environment (including permanent hybrid working and the introduction of agile ways of working) have introduced new challenges for supervision and monitoring. Hybrid working can lead to increased conduct risk, inherent risk of fraudulent activities, potential increases in the number of suspicious transactions, and increased information security risks. We have implemented additional monitoring and supervision to mitigate these risks.

Competition to find new investment opportunities across the financial services sector, both for firms and for customers, is increasing. Thus, suitability risk, product selection, cross-divisional service offerings, quality of advice and price transparency also remain areas of heightened focus for UBS and for the industry as a whole.

With regard to consumer protection, sustainable investing, market volatility and major legislative change programs, such as the Swiss Financial Services Act (FIDLEG) in Switzerland, Regulation Best Interest (Reg BI) in the US and the Markets in Financial Instruments Directive II (MiFID II) in the EU, all significantly affect the industry and require adjustments to control processes on a geographically aligned basis.

Achieving fair outcomes for our clients, upholding market integrity and cultivating the highest standards of employee conduct are of critical importance to us. We maintain a conduct risk framework across our activities, which is designed to align our standards and conduct with these objectives and to retain momentum on fostering a strong culture.

Cross-border risk remains an area of regulatory attention for global financial institutions, with a strong focus on fiscal transparency, as well as market access, particularly third-country market access into the European Economic Area. There is also an ongoing high level of attention regarding the risk that tax authorities may, on the basis of new interpretations of existing law, seek to impose taxation based on the existence of a permanent establishment. We maintain a series of controls designed to address these risks. Remote communication and the use of digital solutions also require that these evolving client channels remain compliant.

In September 2022, the Securities and Exchange Commission (the SEC) and the Commodity Futures Trading Commission (the CFTC) issued settlement orders with UBS AG relating to communications recordkeeping requirements in our US broker-dealers and our registered swap dealer. In response, we have initiated a program to remediate the identified shortcomings.

Financial crime, including money laundering, terrorist financing, sanctions violations, fraud, bribery and corruption, continues to present a major risk, as technological innovation and geopolitical developments increase the complexity of doing business and heightened regulatory attention continues. An effective financial crime prevention program therefore remains essential for UBS. Money laundering and financial fraud techniques are becoming increasingly sophisticated, and geopolitical volatility makes the sanctions landscape more complex, as new or novel sanctions may be imposed that require complex implementation in a short time frame, such as the extensive and continuously evolving sanctions arising from the Russia–Ukraine war. As a regulated financial institution, UBS is subject to the requirements of, and to supervision by, the Swiss Financial Market Supervisory Authority (FINMA), the US Federal Reserve Board, the US Office of the Comptroller of the Currency (the OCC), the US Federal Deposit Insurance Corporation, the US SEC, the UK Prudential Regulation Authority, the UK Financial Conduct Authority, the German Federal Financial Supervisory Authority (BaFIN) and the European Central Bank (the ECB), as applicable. As such, we maintain policies and procedures that are reasonably designed to comply with the sanctions, anti-bribery and anti-corruption regimes in the jurisdictions in which we operate, including the Swiss, EU, US and UK regimes.

In the US, the OCC issued a Cease and Desist Order against UBS in May 2018 relating to our US branch anti-money-laundering (AML) and know-your-client (KYC) programs. In response, we initiated an extensive program for the purpose of ensuring sustainable remediation of US-relevant Bank Secrecy Act / AML issues across all our US legal entities. We introduced significant improvements to the framework between 2019 and 2022. We are continuing to implement these enhancements, as well as evolving them to respond to any new and emerging risks.

We continue to focus on strategic enhancements to our global AML / KYC and sanctions programs, including the exploration of new technologies and sophisticated monitoring and analytical capabilities, as well as the application of risk appetite statements for markets.

In line with our firm-wide purpose, ESG topics and the risks related to them are high on our agenda, particularly considering the increasing regulatory focus on ESG disclosure, climate-related stress testing, net-zero commitments, greenwashing risk and the strategic commercial pushing of sustainability topics, as well as the potential for new and diverse regulations being deployed across jurisdictions. Strong regulatory development tracking and impact assessment are key, as is integrating ESG factors into the financial and non-financial risk control frameworks as required.

› **Refer to "Sustainability and climate risk" in this section for more information about risks related to sustainability and climate risk**

New risks continue to emerge. For example, client demand for distributed ledger technology, blockchain-based assets and virtual currencies creates new risks, to which we currently have limited exposure and for which relevant control frameworks are being implemented.

Non-financial risk framework

Non-financial risk is an inherent part of our business. Losses can result from people and systems, inadequate or failed internal processes, or external causes. We follow a Group-wide non-financial risk framework that establishes requirements for identifying, managing, assessing and mitigating operational, compliance and conduct risks to achieve an agreed balance between risk and return. It is built on the following pillars:

- classifying inherent risks through 18 non-financial risk taxonomies, which define the universe of material non-financial risks that can arise as a consequence of our business activities and external factors;
- assessing the design and operating effectiveness of controls through our control assessment process;
- defining the non-financial risk appetite (including a financial risk appetite statement at the Group, UBS AG and business division levels for non-financial risk events) through quantitative metrics and thresholds and qualitative measures, and assessing risk exposure against appetite;
- assessing inherent and residual risk through risk assessment processes and determining whether additional remediation plans are required to address identified deficiencies; and
- proactively and sustainably remediating identified control deficiencies.

Divisional Presidents are accountable for the effectiveness of non-financial risk management and for the robustness of the front-to-back control environment within their business divisions, and legal-entity-responsible executives are in charge of non-financial risk management within their legal entities. Group function heads are accountable for supporting the divisional Presidents and legal-entity-responsible executives of our legal entities in the discharge of this responsibility, by confirming completeness and effectiveness of the control environment and non-financial risk management within their Group functions. Collectively, divisional Presidents, central Group function heads and legal-entity-responsible executives are in charge of implementing the non-financial risk framework.

Compliance & Operational Risk Control (C&ORC) is responsible for providing an independent and objective view of the adequacy of non-financial risk management across the Group, and ensuring that compliance risk, financial crime risk and operational risk are understood, owned and managed in accordance with our risk appetite. C&ORC business- or function-aligned teams sit within the Group Compliance, Regulatory & Governance (GCRG) function, reporting to the Group Chief Compliance and Governance Officer, who is a member of the Group Executive Board. The non-financial risk framework forms the common basis for managing and assessing compliance risk, financial crime risk and operational risk, and there are additional C&ORC activities intended to ensure we are able to demonstrate compliance with applicable laws, rules and regulations.

In 2022, we continued to review and enhance the non-financial risk framework, including delivery of the Group Functions Risk Control Self-Assessment for the first time and the rolling-out of the simplified risk taxonomy, which also facilitated the development of the firm-wide non-financial risk appetite statement and assessments across all 18 taxonomies.

All functions within UBS are required to assess the design and operating effectiveness of their internal controls periodically. The output of these reviews supports the assessment and testing scope of internal controls over financial reporting as required by the Sarbanes–Oxley Act, Section 404 (SOX 404).

Key control deficiencies identified during the internal control and risk assessment processes must be reported in the non-financial risk inventory, and sustainable remediation must be defined and executed. These control deficiencies are assigned to owners at senior management level and the remediation progress is reflected in the respective managers' annual performance measurement and objectives. To assist with prioritizing the most material control deficiencies and measuring aggregated risk exposure, irrespective of origin, a common rating methodology is applied across all three lines of defense, as well as by external audit.

Advanced measurement approach model

The non-financial risk framework outlined above underpins the calculation of regulatory capital for operational risk, which enables us to quantify operational risk and define effective risk-mitigating management incentives as part of the related operational risk capital allocation approach to the business divisions.

We measure Group operational risk exposure and calculate operational risk regulatory capital using the advanced measurement approach (AMA) in accordance with FINMA and international requirements.

An entity-specific AMA model has been applied for UBS Switzerland AG, while for other regulated entities the basic indicators or standardized approaches are adopted for regulatory capital in agreement with local regulators. Also, the methodology of the Group AMA is leveraged for entity-specific Internal Capital Adequacy Assessment Processes.

Currently, the model includes 16 AMA units of measure (UoM), which are aligned with our non-financial risk taxonomy as closely as possible. Full transition to the non-financial risk taxonomy is not yet implemented, but is planned by the end of December 2023 with expected FINMA approval for the Group's AMA model. Frequency and severity distributions are calibrated for each of the model's UoM. The modeled distribution functions for both frequency and severity are used to generate the annual loss distribution. The resulting 99.9% quantile of the overall annual operational risk loss distribution across all UoM determines the required regulatory capital. Currently, we do not reflect mitigation through insurance or any other risk transfer mechanism in our AMA model.

AMA model calibration and review

A key assumption when calibrating data-driven frequency and severity distributions is that historical losses form a reasonable proxy for future events. In line with regulatory expectations, the AMA methodology utilizes both historical internal losses and external losses suffered by the broader industry for model calibration purposes.

Initial model outputs driven by the loss history are reviewed and adjusted to reflect fast-changing external developments, such as new regulations, geopolitical change, volatile market and economic conditions, and internal factors (e.g., changes in business strategy and control framework enhancements). The resulting baseline data-driven frequency and severity distributions are reviewed by subject matter experts and where necessary adjusted based on a review of qualitative information about the business environment and internal control factors, as well as expert judgment, with the aim of forecasting losses.

Our model is reviewed regularly to maintain risk sensitivity and recalibrated at least annually. Any changes to regulatory capital as a result of a recalibration or methodology changes are presented to FINMA for approval prior to use for disclosure purposes.

AMA model governance

The Group- and entity-specific AMA models are subject to an independent validation performed by Model Risk Management & Control in line with the Group's model risk management framework.

Expected transition of capital regime under Basel III capital regulations

The AMA is expected to be replaced by the standardized measurement approach for regulatory capital determination purposes in line with the relevant Basel Committee for Banking Supervision Basel III capital regulations. UBS is interacting closely with the relevant Swiss authorities to discuss the implementation details and related implementation timeline.

› **Refer to "Capital planning and activities" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information about the development of risk-weighted assets**

› **Refer to "Risk measurement" in this section for more information about our approach to model confirmation procedures**

› **Refer to the "Risk factors" section of this report for more information**

Capital, liquidity and funding, and balance sheet

Table of contents

Capital management

Capital management objectives, planning and activities

Capital management objectives

Audited | An adequate level of common equity tier 1 (CET1) capital and total loss-absorbing capacity (TLAC) meeting both internal assessment and regulatory requirements is a prerequisite for conducting our business activities. ▲

We are therefore committed to maintaining a strong CET1 capital and TLAC position at all times, in order to meet regulatory capital requirements and our target capital ratios, and to support the growth of our businesses.

As of 31 December 2022, our CET1 capital ratio was 14.2% and our CET1 leverage ratio 4.42%, each above our capital guidance and also above the requirements for Swiss systemically relevant banks (SRBs) and the Basel Committee on Banking Supervision (the BCBS) requirements. We believe that our capital strength, consistent with our capital guidance, is a source of confidence for our stakeholders, contributes to our sound credit ratings and is one of the foundations of our success.

The BCBS announced the finalization of the Basel III framework in December 2017, and published the final rules on the minimum capital requirements for market risk from the Fundamental Review of the Trading Book (the FRTB) in January 2019. In response to COVID-19, the Group of Central Bank Governors and Heads of Supervision, which acts as the BCBS's oversight body, endorsed the deferral of the implementation date by one year, to 1 January 2023. The accompanying transitional arrangements for the output floor were also extended by one year, to 1 January 2028. We expect the Swiss regulations to come into force in 2025 and we continue to make progress on our infrastructure design and operational governance ahead of the upcoming adoption of these rules. We currently estimate that the revised Basel III framework would lead to a further net increase in risk-weighted assets (RWA) of around USD 12bn, before taking into account mitigating actions and not reflecting the impact of the output floor, which is phased in over time. Our estimate includes the finalization of the Basel III framework, as well as the FRTB, based on our current understanding of the relevant standards. It may change as a result of new or updated regulatory interpretations, appropriate conservatism in model calibration, the implementation of Basel III standards into national law, changes in business growth, market conditions and other factors. The final degree of alignment between the Swiss implementation and those in other jurisdictions, particularly those regarding the treatment of historical operational losses, remains uncertain at this stage.

› **Refer to the "Our strategy" and "Targets, aspirations and capital guidance" sections of this report for more information about our capital and resource guidelines**

› **Refer to "We may be unable to maintain our capital strength" in the "Risk factors" section of this report for more information about capital ratio-related risks**

Capital planning and activities

Audited | We manage our balance sheet, RWA, leverage ratio denominator (LRD) and TLAC ratio levels based on our regulatory requirements, within our internal limits and targets, and our externally provided guidance. Our strategic focus is on achieving an optimal attribution and use of financial resources between our business divisions and Group Functions, as well as between our legal entities, while remaining within the limits defined for the Group and allocated to the business divisions by the Board of Directors (the BoD). These resource allocations, in turn, affect business plans and earnings projections, which are reflected in our capital plans.

The annual strategic planning process includes a capital-planning component that is key in defining our capital targets. It is based on an attribution of Group RWA and LRD internal limits to the business divisions.

Limits and targets are established at the Group and business division levels, and are approved by the BoD at least annually. In the target-setting process, we take into account the current and potential future TLAC requirements, our aggregate risk exposure in terms of capital-at-risk, the assessment by rating agencies, comparisons with peers and the effect of expected accounting policy changes. ▲

Monitoring is based on these internal limits and targets and provides indications if any changes are required. Any breach of limits in place triggers a series of required remediating actions.

Group Treasury plans for and monitors consolidated TLAC information on an ongoing basis, reflecting business and legal entity requirements, as well as regulatory developments in capital regulations. In addition, capital planning and monitoring are performed at the legal entity level for our significant subsidiaries and sub-groups that are subject to prudential supervision and must meet capital and other supervisory requirements.

› **Refer to "Capital and capital ratios of our significant regulated subsidiaries" in this section for more information**

› **Refer to "Statistical measures" in the "Risk management and control" section of this report for more information about capital-at-risk**

Swiss SRB total loss-absorbing capacity framework

The disclosures in this section are provided for UBS Group AG on a consolidated basis and focus on key developments during the reporting period and information in accordance with the Basel III framework, as applicable to Swiss SRBs.

Additional regulatory disclosures for UBS Group AG on a consolidated basis are provided in our 31 December 2022 Pillar 3 Report. The Pillar 3 Report further includes information relating to our significant regulated subsidiaries and sub-groups (UBS AG standalone, UBS Switzerland AG standalone, UBS Europe SE consolidated and UBS Americas Holding LLC consolidated) as of 31 December 2022 and is available under "Pillar 3 disclosures" at *ubs.com/investors*.

Capital and other regulatory information for UBS AG consolidated in accordance with the Basel III framework, as applicable to Swiss SRBs, is provided in the combined UBS Group AG and UBS AG Annual Report 2022, available under "Annual reporting" at *ubs.com/investors*.

Regulatory framework

The Basel III framework came into effect in Switzerland on 1 January 2013 and is embedded in the Swiss Capital Adequacy Ordinance (the CAO). The CAO also includes the too-big-to-fail provisions applicable to Swiss SRBs, which have been fully phased-in since 1 January 2020.

Under the Swiss SRB framework, going and gone concern requirements represent the Group's TLAC requirement. TLAC encompasses regulatory capital, such as CET1, loss-absorbing additional tier 1 (AT1) and tier 2 capital instruments, and liabilities that can be written down or converted into equity in case of resolution or for the purpose of restructuring measures.

Capital and other instruments contributing to our total loss-absorbing capacity

In addition to CET1 capital, the following instruments contribute to our loss-absorbing capacity:
- loss-absorbing AT1 capital instruments (high- and low-trigger);
- loss-absorbing tier 2 capital instruments (high- and low-trigger);
- non-Basel III-compliant tier 2 capital instruments; and
- TLAC-eligible senior unsecured debt instruments.

Under the Swiss SRB rules, going concern capital includes CET1 and high-trigger loss-absorbing AT1 capital instruments. Our existing outstanding low-trigger loss-absorbing AT1 capital instruments are available to meet the going concern capital requirements until their first call date. As of their first call date, these instruments are eligible to meet the gone concern requirements.

Outstanding high- and low-trigger loss-absorbing tier 2 capital instruments, non-Basel III-compliant tier 2 capital instruments and TLAC-eligible senior unsecured debt instruments are eligible to meet gone concern requirements until one year before maturity. A maximum of 25% of the gone concern requirements can be met with instruments that have a remaining maturity of between one and two years (i.e., are in the last year of eligibility). However, once at least 75% of the gone concern requirement has been met with instruments that have a remaining maturity of greater than two years, all instruments that have a remaining maturity of between one and two years remain eligible to be included in the total gone concern capital.

› **Refer to "Bondholder information," available at *ubs.com/investors,* for more information about the eligibility of capital and senior unsecured debt instruments and key features and terms and conditions of capital instruments**

Total loss-absorbing capacity and leverage ratio requirements

Going concern capital requirements

Under the Swiss SRB requirements, total going concern minimum requirements for all Swiss SRBs are a capital ratio requirement of 12.86% of RWA and a leverage ratio requirement of 4.5%. In addition to these minimum requirements, an add-on reflecting the degree of systemic importance is applied, based on market share and LRD. The applicable market share add-on requirements for UBS were unchanged at 0.72% of RWA and 0.25% of LRD. The applicable LRD add-on requirements remained unchanged at 0.72% of RWA and 0.25% of LRD, as our Group LRD remained within the same add-on bucket.

On 30 September 2022, the Swiss countercyclical capital buffer was reactivated, at a maximum level of 2.5% on risk-weighted positions that are directly or indirectly backed by residential properties in Switzerland. This increased our minimum CET1 capital requirement by 27 basis points as of 31 December 2022. We also continued to apply countercyclical buffer requirements introduced in other BCBS member jurisdictions, which resulted in an additional buffer requirement of 7 basis points as of 31 December 2022. Overall, countercyclical capital buffers contributed 34 basis points to our minimum CET1 capital requirement as of 31 December 2022.

The total going concern capital requirements applicable are 14.64% of RWA (including countercyclical buffer requirements) and 5.00% of LRD. Furthermore, of the total going concern capital requirement of 14.64% of RWA, at least 10.34% must be met with CET1 capital, while a maximum of 4.3% can be met with high-trigger loss-absorbing AT1 capital instruments (including our existing outstanding low-trigger AT1 capital instruments, which qualify until their first call date as mentioned above).

Similarly, of the total going concern leverage ratio requirement of 5.00%, at least 3.5% must be met with CET1 capital, while a maximum of 1.5% can be met with high-trigger loss-absorbing AT1 capital instruments (including our existing outstanding low-trigger AT1 capital instruments, which qualify until their first call date as mentioned above).

Gone concern loss-absorbing capacity requirements

As an internationally active Swiss SRB, UBS is also subject to gone concern loss-absorbing capacity requirements. The gone concern requirements also include add-ons for market share and LRD.

Under the Swiss SRB framework, banks are eligible for a rebate on the gone concern requirement if they take actions that facilitate recovery and resolvability beyond the minimum requirements. The amount of the rebate for improved resolvability is assessed annually by the Swiss Financial Market Supervisory Authority (FINMA). Based on actions we had completed by December 2021 to improve resolvability, FINMA granted a rebate on the gone concern requirement of 65% of the aforementioned maximum rebate in the third quarter of 2022, with an effective maximum rebate of 3.56 percentage points for the RWA-based requirement and 1.25 percentage points for the LRD-based requirement as of 31 December 2022.

Our gone concern requirements are further reduced when higher quality capital instruments (CET1 capital, low-trigger loss-absorbing AT1 or certain low-trigger tier 2 capital instruments) are used to meet gone concern requirements. As of 31 December 2022, UBS used low-trigger tier 2 capital to fulfill gone concern requirements, resulting in a reduction of 0.38 percentage points for the RWA-based requirement.

From 1 January 2022 onward, the gone concern requirement after the application of the rebate for resolvability measures and the reduction for the use of higher quality capital instruments has been floored at 10.0% and 3.75% for the RWA- and LRD-based requirements, respectively.

In November 2022, the Swiss Federal Council adopted amendments to the Banking Act and the Banking Ordinance and both entered into force as of 1 January 2023. The amendments replace the resolvability discount on the gone concern capital requirements for systemically important banks (SIBs), including UBS, with a reduced base gone concern capital requirement. In addition, FINMA has the authority to impose a surcharge of up to 25% of the base gone concern capital requirement based on obstacles to a SIB's resolvability identified in future resolvability assessments. We currently expect that our total gone concern requirements will remain substantially unchanged in 2023 as a result of these changes.

In this report, we refer to the RWA-based gone concern requirements as gone concern loss-absorbing capacity requirements and the RWA-based gone concern ratio is referred to as the gone concern loss-absorbing capacity ratio.

The table below provides the RWA- and LRD-based requirements and information as of 31 December 2022.

Swiss SRB going and gone concern requirements and information

As of 31.12.22	RWA		LRD	
USD m, except where indicated	in %		in %	
Required going concern capital				
Total going concern capital	14.64[1]	46,802	5.00[1]	51,423
Common equity tier 1 capital	10.34	33,060	3.50[2]	35,996
of which: minimum capital	*4.50*	*14,381*	*1.50*	*15,427*
of which: buffer capital	*5.50*	*17,577*	*2.00*	*20,569*
of which: countercyclical buffer	*0.34*	*1,102*		
Maximum additional tier 1 capital	4.30	13,742	1.50	15,427
of which: additional tier 1 capital	*3.50*	*11,185*	*1.50*	*15,427*
of which: additional tier 1 buffer capital	*0.80*	*2,557*		
Eligible going concern capital				
Total going concern capital	18.25	58,321	5.67	58,321
Common equity tier 1 capital	14.22	45,457	4.42	45,457
Total loss-absorbing additional tier 1 capital[3]	4.03	12,864	1.25	12,864
of which: high-trigger loss-absorbing additional tier 1 capital	*3.65*	*11,675*	*1.14*	*11,675*
of which: low-trigger loss-absorbing additional tier 1 capital	*0.37*	*1,189*	*0.12*	*1,189*
Required gone concern capital				
Total gone concern loss-absorbing capacity[4]	10.36	33,105	3.75	38,567
of which: base requirement[5]	*12.86*	*41,099*	*4.50*	*46,281*
of which: additional requirement for market share and LRD	*1.44*	*4,602*	*0.50*	*5,142*
of which: applicable reduction on requirements	*(3.94)*	*(12,596)*	*(1.25)*	*(12,856)*
of which: rebate granted[6]	*(3.56)*	*(11,385)*	*(1.25)*	*(12,856)*
of which: reduction for usage of low-trigger tier 2 capital instruments	*(0.38)*	*(1,211)*	*0.00*	*0*
Eligible gone concern capital				
Total gone concern loss-absorbing capacity	14.70	46,991	4.57	46,991
Total tier 2 capital	0.93	2,958	0.29	2,958
of which: low-trigger loss-absorbing tier 2 capital	*0.76*	*2,422*	*0.24*	*2,422*
of which: non-Basel III-compliant tier 2 capital	*0.17*	*536*	*0.05*	*536*
TLAC-eligible senior unsecured debt	13.78	44,033	4.28	44,033
Total loss-absorbing capacity				
Required total loss-absorbing capacity	25.00	79,907	8.75	89,990
Eligible total loss-absorbing capacity	32.95	105,312	10.24	105,312
Risk-weighted assets / leverage ratio denominator				
Risk-weighted assets		319,585		
Leverage ratio denominator				1,028,461

1 Includes applicable add-ons of 1.44% for RWA and 0.50% for LRD. 2 Our minimum CET1 leverage ratio requirement of 3.5% consists of a 1.5% base requirement, a 1.5% base buffer capital requirement, a 0.25% LRD add-on requirement and a 0.25% market share add-on requirement based on our Swiss credit business. 3 Includes outstanding low-trigger loss-absorbing additional tier 1 capital instruments, which are available under the Swiss systemically relevant bank framework to meet the going concern requirements until their first call date. As of their first call date, these instruments are eligible to meet the gone concern requirements. 4 A maximum of 25% of the gone concern requirements can be met with instruments that have a remaining maturity of between one and two years. Once at least 75% of the minimum gone concern requirement has been met with instruments that have a remaining maturity of greater than two years, all instruments that have a remaining maturity of between one and two years remain eligible to be included in the total gone concern capital. 5 The gone concern requirement after the application of the rebate for resolvability measures and the reduction for the use of higher-quality capital instruments is floored at 10% and 3.75% for the RWA- and LRD-based requirements, respectively. This means that the combined reduction may not exceed 4.3 percentage points for the RWA-based requirement of 14.3% and 1.25 percentage points for the LRD-based requirement of 5.0%. 6 Based on the actions we completed up to December 2021 to improve resolvability, FINMA granted an increase in the rebate on the gone concern requirement from 55.0% to 65.0% of the maximum rebate, effective 1 July 2022, with an effective maximum rebate of 1.25 percentage points for the LRD-based requirements and – given the risk density of 35% underlying the regulatory requirements – an effective maximum rebate of 3.56 percentage points for the RWA-based requirements.

Total loss-absorbing capacity

Swiss SRB going and gone concern information

USD m, except where indicated	31.12.22	31.12.21
Eligible going concern capital		
Total going concern capital	58,321	60,488
Total tier 1 capital	58,321	60,488
Common equity tier 1 capital	45,457	45,281
Total loss-absorbing additional tier 1 capital	12,864	15,207
of which: high-trigger loss-absorbing additional tier 1 capital	*11,675*	*12,783*
of which: low-trigger loss-absorbing additional tier 1 capital	*1,189*	*2,425*
Eligible gone concern capital		
Total gone concern loss-absorbing capacity	46,991	44,264
Total tier 2 capital	2,958	3,144
of which: low-trigger loss-absorbing tier 2 capital	*2,422*	*2,596*
of which: non-Basel III-compliant tier 2 capital	*536*	*547*
TLAC-eligible senior unsecured debt	44,033	41,120
Total loss-absorbing capacity		
Total loss-absorbing capacity	105,312	104,752
Risk-weighted assets / leverage ratio denominator		
Risk-weighted assets	319,585	302,209
Leverage ratio denominator	1,028,461	1,068,862
Capital and loss-absorbing capacity ratios (%)		
Going concern capital ratio	18.2	20.0
of which: common equity tier 1 capital ratio	*14.2*	*15.0*
Gone concern loss-absorbing capacity ratio	14.7	14.6
Total loss-absorbing capacity ratio	33.0	34.7
Leverage ratios (%)		
Going concern leverage ratio	5.7	5.7
of which: common equity tier 1 leverage ratio	*4.42*	*4.24*
Gone concern leverage ratio	4.6	4.1
Total loss-absorbing capacity leverage ratio	10.2	9.8

Audited I

Reconciliation of IFRS equity to Swiss SRB common equity tier 1 capital

USD m	31.12.22	31.12.21
Total IFRS equity	57,218	**61,002**
Equity attributable to non-controlling interests	(342)	(340)
Defined benefit plans, net of tax	(311)	(270)
Deferred tax assets recognized for tax loss carry-forwards	(4,077)	(4,565)
Deferred tax assets on temporary differences, excess over threshold	(64)	(49)
Goodwill, net of tax[1]	(5,754)	(5,838)
Intangible assets, net of tax	(150)	(180)
Compensation-related components (not recognized in net profit)	(2,287)	(1,700)
Expected losses on advanced internal ratings-based portfolio less provisions	(471)	(482)
Unrealized (gains) / losses from cash flow hedges, net of tax	4,234	(628)
Own credit related to (gains) / losses on financial liabilities measured at fair value that existed at the balance sheet date, net of tax	(523)	315
Own credit related to (gains) / losses on derivative financial instruments that existed at the balance sheet date	(105)	(50)
Unrealized gains related to financial assets at fair value through OCI, net of tax	0	(68)
Prudential valuation adjustments	(201)	(167)
Accruals for dividends to shareholders	(1,683)	(1,700)
Other	(29)	1
Total common equity tier 1 capital	45,457	**45,281**

1 Includes goodwill related to significant investments in financial institutions of USD 20m as of 31 December 2022 (31 December 2021: USD 22m) presented on the balance sheet line Investments in associates.

Total loss-absorbing capacity and movement

Our total loss-absorbing capacity increased by USD 0.6bn to USD 105.3bn as of 31 December 2022.

Going concern capital and movement

Audited | Our CET1 capital mainly consists of: share capital; share premium, which primarily consists of additional paid-in capital related to shares issued; and retained earnings. A detailed reconciliation of International Financial Reporting Standards (IFRS) equity to CET1 capital is provided in the "Reconciliation of IFRS equity to Swiss SRB common equity tier 1 capital" table.

Our CET1 capital increased by USD 0.2bn to USD 45.5bn as of 31 December 2022, mainly as a result of operating profit before tax of USD 9.6bn with associated current tax expenses of USD 1.4bn, partly offset by share repurchases of USD 5.6bn under our share repurchase programs, dividend accruals of USD 1.7bn, negative foreign currency effects of USD 0.5bn and compensation- and own share-related capital components of USD 0.3bn.

› **Refer to "UBS shares" in this section for more information about our share repurchase programs**

Our loss-absorbing AT1 capital decreased by USD 2.3bn to USD 12.9bn, mainly driven by our announcement on 5 December 2022 that we intended to redeem an AT1 capital instrument on 31 January 2023, the first call date (ISIN CH0400441280, with a nominal amount of USD 2.0bn, issued on 31 January 2018; this instrument ceased to be eligible as AT1 capital when the call was announced in December 2022), a call of a USD 1.1bn equivalent AT1 capital instrument denominated in euro, and interest rate risk hedge, foreign currency translation and other effects. This was partly offset by two issuances of AT1 capital instruments denominated in US dollars and Swiss francs amounting to USD 1.8bn equivalent. ▲

Gone concern loss-absorbing capacity and movement

Audited | Our total gone concern loss-absorbing capacity increased by USD 2.7bn to USD 47.0bn as of 31 December 2022 and included USD 44.0bn of TLAC-eligible senior unsecured debt. ▲

The increase was mainly due to 21 issuances of TLAC-eligible senior unsecured debt instruments denominated in US dollars, euro, yen and Australian dollars amounting to USD 15.2bn, partly offset by four calls of TLAC-eligible senior unsecured debt instruments denominated in US dollars amounting to USD 6.3bn, as well as interest rate risk hedge, foreign currency translation and other effects.

Loss-absorbing capacity and leverage ratios

Our CET1 capital ratio decreased to 14.2% from 15.0%, mainly reflecting a USD 17.4bn increase in RWA.

Our CET1 leverage ratio increased to 4.42% from 4.24%, predominantly due to a USD 40.4bn decrease in the LRD.

Our gone concern loss-absorbing capacity ratio increased to 14.7% from 14.6%, due to an increase in gone concern loss-absorbing capacity of USD 2.7bn, partly offset by the aforementioned increase in RWA.

Our gone concern leverage ratio increased to 4.6% from 4.1%, driven by the aforementioned increase in gone concern loss-absorbing capacity and the aforementioned decrease in the LRD.

Swiss SRB total loss-absorbing capacity movement

USD m

Going concern capital	Swiss SRB
Common equity tier 1 capital as of 31.12.21	45,281
Operating profit before tax	9,604
Current tax (expense) / benefit	(1,448)
Share repurchase programs	(5,602)
Accruals for proposed dividends to shareholders	(1,683)
Foreign currency translation effects, before tax	(529)
Compensation- and own share-related capital components	(258)
Other	93
Common equity tier 1 capital as of 31.12.22	45,457
Loss-absorbing additional tier 1 capital as of 31.12.21	15,207
Issuance of high-trigger loss-absorbing additional tier 1 capital	1,789
Call of high-trigger loss-absorbing additional tier 1 capital[1]	(2,000)
Call of low-trigger loss-absorbing additional tier 1 capital	(1,121)
Interest rate risk hedge, foreign currency translation and other effects	(1,011)
Loss-absorbing additional tier 1 capital as of 31.12.22	12,864
Total going concern capital as of 31.12.21	60,488
Total going concern capital as of 31.12.22	58,321
Gone concern loss-absorbing capacity	
Tier 2 capital as of 31.12.21	3,144
Interest rate risk hedge, foreign currency translation and other effects	(185)
Tier 2 capital as of 31.12.22	2,958
TLAC-eligible senior unsecured debt as of 31.12.21	41,120
Issuance of TLAC-eligible senior unsecured debt	15,237
Call of TLAC-eligible senior unsecured debt	(6,250)
Interest rate risk hedge, foreign currency translation and other effects	(6,075)
TLAC-eligible senior unsecured debt as of 31.12.22	44,033
Total gone concern loss-absorbing capacity as of 31.12.21	44,264
Total gone concern loss-absorbing capacity as of 31.12.22	46,991
Total loss-absorbing capacity	
Total loss-absorbing capacity as of 31.12.21	104,752
Total loss-absorbing capacity as of 31.12.22	105,312

1 On 5 December 2022, we announced our intention to redeem an AT1 capital instrument on 31 January 2023, the first call date (ISIN CH0400441280). This instrument ceased to be eligible as AT1 capital when the call was announced.

Additional information

Active management of sensitivity to foreign exchange movements

Group Treasury is mandated to minimize adverse effects from changes in foreign currency rates on our CET1 capital and / or CET1 capital ratio. A significant portion of our CET1 capital and RWA is denominated in Swiss francs, euro, pounds sterling and other currencies. In order to hedge the CET1 capital ratio, CET1 capital needs to have foreign currency exposure, leading to foreign currency rates sensitivity of CET1 capital.

Consequently, it is not possible to simultaneously fully hedge CET1 capital and the CET1 capital ratio. As the proportion of RWA denominated in currencies other than the US dollar outweighs CET1 capital in such currencies, a significant appreciation of the US dollar against such currencies could benefit our capital ratios, while a significant depreciation of the US dollar against these currencies could adversely affect our capital ratios.

The Group Asset and Liability Committee, a committee of the Group Executive Board, has mandated Group Treasury to adjust the currency mix of CET1 capital, within limits set by the BoD, to balance the effect of foreign exchange movements on CET1 capital and the CET1 capital ratio. Limits are in place for the sensitivity of both CET1 capital and the CET1 capital ratio to an appreciation or depreciation of 10% in the value of the US dollar against other currencies.

Sensitivity to currency movements

Risk-weighted assets

We estimate that a 10% depreciation of the US dollar against other currencies would have increased our RWA by USD 13bn and our CET1 capital by USD 1.4bn as of 31 December 2022 (31 December 2021: USD 13bn and USD 1.4bn, respectively) and decreased our CET1 capital ratio 13 basis points (31 December 2021: 15 basis points).

Conversely, we estimate that a 10% appreciation of the US dollar against other currencies would have decreased our RWA by USD 12bn and our CET1 capital by USD 1.3bn as of 31 December 2022 (31 December 2021: USD 11bn and USD 1.3bn, respectively) and increased our CET1 capital ratio 13 basis points (31 December 2021: 14 basis points).

Leverage ratio denominator

Our leverage ratio is also sensitive to foreign exchange movements as a result of the currency mix of our capital and LRD. When adjusting the currency mix in capital, potential effects on the going concern leverage ratio are taken into account and the sensitivity of the going concern leverage ratio to an appreciation or depreciation of 10% in the value of the US dollar against other currencies is actively monitored.

We estimate that a 10% depreciation of the US dollar against other currencies would have increased our LRD by USD 63bn as of 31 December 2022 (31 December 2021: USD 63bn) and decreased our Swiss SRB going concern leverage ratio 17 basis points (31 December 2021: 15 basis points). Conversely, we estimate that a 10% appreciation of the US dollar against other currencies would have decreased our LRD by USD 57bn (31 December 2021: USD 57bn) and increased our Swiss SRB going concern leverage ratio 17 basis points (31 December 2021: 16 basis points).

The aforementioned sensitivities do not consider foreign currency translation effects related to defined benefit plans other than those related to the currency translation of the net equity of foreign operations.

Estimated effect on capital from litigation, regulatory and similar matters subject to provisions and contingent liabilities

We have estimated the loss in capital that we could incur as a result of the risks associated with the matters described in "Note 17 Provisions and contingent liabilities" in the "Consolidated financial statements" section of this report. We have employed for this purpose the advanced measurement approach (AMA) methodology that we use when determining the capital requirements associated with operational risks, based on a 99.9% confidence level over a 12-month horizon. The methodology takes into consideration UBS and industry experience for the AMA operational risk categories to which those matters correspond, as well as the external environment affecting risks of these types, in isolation from other areas. On this basis, we estimate the maximum loss in capital that we could incur over a 12-month period as a result of our risks associated with these operational risk categories at USD 4.4bn as of 31 December 2022, unchanged compared with the prior year-end. This estimate is not related to and does not take into account any provisions recognized for any of these matters and does not constitute a subjective assessment of our actual exposure in any of these matters.

› **Refer to "Non-financial risk" in the "Risk management and control" section of this report for more information**

› **Refer to "Note 17 Provisions and contingent liabilities" in the "Consolidated financial statements" section of this report for more information**

Capital and capital ratios of our significant regulated subsidiaries

UBS Group AG is a holding company conducting substantially all operations through UBS AG and subsidiaries thereof. UBS Group AG and UBS AG have contributed a significant portion of their respective capital to, and provided substantial liquidity to, subsidiaries. Many of these subsidiaries are subject to regulations requiring compliance with minimum capital, liquidity and similar requirements. Regulatory capital components and capital ratios of our significant regulated subsidiaries determined under the regulatory framework of each subsidiary's home jurisdiction are provided in the "Financial and regulatory key figures for our significant regulated subsidiaries and sub-groups" section of this report. Supervisory authorities generally have discretion to impose higher requirements, or to otherwise limit the activities of subsidiaries. Supervisory authorities also may require entities to measure capital and leverage ratios on a stressed basis, and may limit the ability of the entity to engage in new activities or take capital actions based on the results of those tests.

› **Refer to the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors,* for more capital and other regulatory information about our significant regulated subsidiaries and sub-groups**

Joint liability of UBS AG and UBS Switzerland AG

In June 2015, upon the transfer of the Personal & Corporate Banking and Global Wealth Management businesses booked in Switzerland from UBS AG to UBS Switzerland AG, UBS AG and UBS Switzerland AG assumed joint liability for obligations transferred to UBS Switzerland AG and existing at UBS AG, respectively. Under certain circumstances, the Swiss Banking Act and FINMA's Banking Insolvency Ordinance authorize FINMA to modify, extinguish or convert to common equity liabilities of a bank in connection with a resolution or insolvency of such bank.

The joint liability amounts have declined as obligations matured, terminated or were novated following the transfer date. As of 31 December 2022, the liability of UBS Switzerland AG amounted to CHF 4.0bn (USD 4.3bn), a decrease of CHF 1.2bn (USD 1.4bn) compared with 31 December 2021. The respective liability of UBS AG has been substantially extinguished.

Risk-weighted assets

RWA development in 2022

During 2022, RWA increased by USD 17.4bn to USD 319.6bn, primarily driven by increases of USD 10.4bn in credit and counterparty credit risk RWA, USD 4.7bn in operational risk RWA, and USD 2.4bn in market risk RWA.

› **Refer to the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors,* for more information about RWA movements and definitions of RWA movement key drivers**

Movement in risk-weighted assets by key driver

USD bn	RWA as of 31.12.21	Currency effects	Methodology and policy changes	Model updates / changes	Regulatory add-ons	Asset size and other[1]	RWA as of 31.12.22
Credit and counterparty credit risk[2]	190.1	(3.6)	0.1	6.7	0.3	6.9	200.5
Non-counterparty-related risk[3]	24.3	(0.2)				0.1	24.2
Market risk	11.1		1.2	(2.4)	2.3	1.3	13.5
Operational risk	76.7			4.6			81.4
Total	302.2	(3.8)	1.2	9.0	2.6	8.3	319.6

1 Includes the Pillar 3 categories "Asset size," "Credit quality of counterparties," "Acquisitions and disposals" and "Other." For more information, refer to the 31 December 2022 Pillar 3 report, available under "Pillar 3 disclosures" at ubs.com/investors. 2 Includes settlement risk, credit valuation adjustments, equity exposures in the banking book, investments in funds and securitization exposures in the banking book. 3 Non-counterparty-related risk includes deferred tax assets recognized for temporary differences, property, equipment, software and other items.

Credit and counterparty credit risk

Credit and counterparty credit risk RWA increased by USD 10.4bn to USD 200.5bn as of 31 December 2022. This increase was mainly driven by model updates of USD 6.7bn and asset size increases of USD 6.4bn, partly offset by currency effects of USD 3.6bn. Model updates resulted in an increase of USD 6.7bn, mainly relating to structured margin loans and similar products in Global Wealth Management, prime brokerage clients, private equity and hedge fund financing trades and structured margin loans in the Investment Bank, and mortgage loans in Personal & Corporate Banking.

Asset size increased by USD 6.4bn, mainly due to higher RWA from loans and loan commitments in Global Wealth Management and, to a lesser extent, in Personal & Corporate Banking, partly offset by lower RWA from loans and loan commitments in the Investment Bank.

Movement in credit and counterparty credit risk RWA by key driver[1]

USD bn	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	Group
Total credit and counterparty credit risk RWA as of 31.12.21	56.9	63.0	3.2	60.5	6.4	190.1
Asset size	8.2	2.9	(0.1)	(4.9)	0.3	6.4
Asset quality	0.3	(1.5)	0.0	0.0	0.4	(0.7)
Model updates	2.1	1.3	0.0	3.3	0.0	6.7
Methodology and policy changes	0.1	0.0	0.0	0.0	0.0	0.1
Regulatory add-ons	0.0	0.0	0.0	0.3	0.0	0.3
Acquisitions and disposals	1.2	0.0	0.0	0.0	0.0	1.2
Foreign exchange movements	(0.5)	(0.9)	(0.1)	(1.5)	(0.6)	(3.6)
Other	0.0	0.0	0.0	0.0	0.0	0.0
Total movement	11.5	1.9	(0.2)	(2.8)	0.1	10.4
Total credit and counterparty credit risk RWA as of 31.12.22	68.4	64.9	3.0	57.7	6.5	200.5

1 Refer to the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at ubs.com/investors, for the definitions of credit and counterparty credit risk RWA movement categories.

› **Refer to the "Risk management and control" section of this report and the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors*, for more information about credit and counterparty credit risk developments**

Market risk

Market risk RWA increased by USD 2.4bn to USD 13.5bn as of 31 December 2022, driven by an increase of USD 2.3bn in regulatory add-ons, reflecting updates from the monthly risks-not-in-VaR assessment and an increase of USD 1.3bn in asset size and other movements related to higher average regulatory and stressed value-at-risk levels in the Investment Bank's Global Markets business on the back of heightened market volatility in the first half of 2022. These increases were partly offset by decreases of USD 2.4bn from changes to the value-at-risk (VaR) model, and such decreases were partly offset by USD 1.2bn arising from the introduction of a FINMA-agreed temporary measure to offset a VaR-model-change-related RWA decrease that went live in the fourth quarter of 2022. We are in discussions with FINMA regarding material updates to the VaR model in 2023, which would replace the aforementioned temporary measure and the currently applied add-on related to time decay.

› **Refer to the "Risk management and control" section of this report and the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors,* for more information about market risk developments**

Operational risk

Operational risk RWA increased by USD 4.7bn to USD 81.4bn as of 31 December 2022. Following a review with FINMA regarding the French cross-border matter, we reflected additional operational risk RWA of USD 4.1bn in the first half of 2022. In the fourth quarter of 2022, we reflected an increase of USD 0.5bn driven by the annual recalibration of the advanced measurement approach (AMA) model used for the calculation of operational risk capital.

› **Refer to "Advanced measurement approach model" in the "Risk management and control" section of this report for more information about the AMA model**

Outlook

We expect that regulatory-driven updates to models will result in an RWA increase of around USD 4bn in 2023. The extent and timing of RWA changes may vary as model updates are completed and receive regulatory approval, along with changes in the composition of the relevant portfolios. In addition, business growth and changes in market factors are expected to increase RWA at the beginning of 2023, following a period of lower levels of client activity and market volatility toward the end of the fourth quarter of 2022.

› **Refer to the "Regulatory and legal developments" section of this report for more information**

Risk-weighted assets by business division and Group Functions

USD bn	Global Wealth Management	Personal & Corporate Banking	Asset Manage-ment	Investment Bank	Group Functions	Total RWA
			31.12.22			
Credit and counterparty credit risk[1]	68.4	64.9	3.0	57.7	6.5	200.5
Non-counterparty-related risk[2]	5.9	1.9	0.6	3.7	12.1	24.2
Market risk	1.6	0.0		10.1	1.8	13.5
Operational risk	37.6	9.1	3.2	21.3	10.1	81.4
Total	113.5	75.9	6.7	92.8	30.6	319.6
			31.12.21			
Credit and counterparty credit risk[1]	56.9	63.0	3.2	60.5	6.4	190.1
Non-counterparty-related risk[2]	6.2	2.0	0.6	3.5	12.0	24.3
Market risk	1.6	0.0		8.1	1.5	11.1
Operational risk	35.2	8.1	3.0	20.2	10.3	76.7
Total	**99.8**	**73.2**	**6.9**	**92.2**	**30.1**	**302.2**
			31.12.22 vs 31.12.21			
Credit and counterparty credit risk[1]	11.5	1.9	(0.2)	(2.8)	0.1	10.4
Non-counterparty-related risk[2]	(0.3)	(0.1)	0.0	0.2	0.2	0.0
Market risk	0.0	0.0		2.1	0.3	2.4
Operational risk	2.5	1.1	0.1	1.1	(0.2)	4.6
Total	**13.6**	**2.8**	**(0.1)**	**0.6**	**0.4**	**17.4**

1 Includes settlement risk, credit valuation adjustments, equity exposures in the banking book, investments in funds and securitization exposures in the banking book. 2 Non-counterparty-related risk includes deferred tax assets recognized for temporary differences (31 December 2022: USD 11.4bn; 31 December 2021: USD 11.4bn), as well as property, equipment, software and other items (31 December 2022: USD 12.9bn; 31 December 2021: USD 12.9bn).

Leverage ratio denominator

The LRD decreased by USD 40.4bn to USD 1,028.5bn as of 31 December 2022, driven by currency effects of USD 24.5bn and a USD 15.9bn decrease due to asset size and other movements.

Movement in leverage ratio denominator by key driver

USD bn	LRD as of 31.12.21	Currency effects	Asset size and other	LRD as of 31.12.22
On-balance sheet exposures (excluding derivatives and securities financing transactions)[1]	847.4	(17.3)	(14.1)	816.0
Derivatives	90.9	(3.5)	2.9	90.3
Securities financing transactions	109.2	(3.1)	(7.4)	98.6
Off-balance sheet items	32.8	(0.5)	2.2	34.4
Deduction items	(11.5)	0.1	0.6	(10.8)
Total	**1,068.9**	**(24.5)**	**(15.9)**	1,028.5

1 The exposures exclude derivative financial instruments, cash collateral receivables on derivative instruments, receivables from securities financing transactions, and margin loans, as well as prime brokerage receivables and financial assets at fair value not held for trading, both related to securities financing transactions. These exposures are presented separately under Derivatives and Securities financing transactions in this table.

The LRD movements described below exclude currency effects.

On-balance sheet exposures (excluding derivatives and securities financing transactions) decreased by USD 14.1bn, mainly driven by lower trading portfolio assets in the Investment Bank, lower central bank balances, and a decrease in lending assets, mainly in Global Wealth Management, partly offset by purchases of high-quality liquid asset securities.

Derivatives increased by USD 2.9bn, primarily reflecting market-driven movements, partly offset by lower client volumes, in the Investment Bank.

Securities financing transactions decreased by USD 7.4bn, mainly due to lower client activity levels and lower brokerage receivables in the Investment Bank, as well as trade roll-offs in Group Treasury.

Off-balance sheet items increased by USD 2.2bn, mainly driven by higher unutilized credit lines in Global Wealth Management, and an increase in forward starting reverse repurchase agreements in Group Treasury.

› **Refer to "Balance sheet and off-balance sheet" in this section for more information about balance sheet movements**

Leverage ratio denominator by business division and Group Functions

USD bn	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	Total
			31.12.22			
Total IFRS assets	388.5	235.2	17.3	391.3	71.9	1,104.4
Difference in scope of consolidation[1]	0.0	0.0	(13.2)	(0.1)	0.0	(13.3)
Less: derivatives and securities financing transactions[2]	(23.7)	(11.9)	(0.1)	(201.7)	(37.7)	(275.0)
On-balance sheet exposures	364.8	223.4	4.0	189.5	34.2	816.0
Derivatives	5.4	1.5	0.0	80.0	3.3	90.3
Securities financing transactions	20.5	10.8	0.1	40.4	26.8	98.6
Off-balance sheet items	8.8	16.6		6.9	2.1	34.4
Items deducted from Swiss SRB tier 1 capital	(5.2)	(0.2)	(1.2)	(0.4)	(3.9)	(10.8)
Total	394.4	252.1	2.9	316.6	62.6	1,028.5
			31.12.21			
Total IFRS assets	395.2	225.4	25.6	346.4	124.5	1,117.2
Difference in scope of consolidation[1]	0.0	0.0	(21.5)	(0.1)	0.0	(21.6)
Less: derivatives and securities financing transactions[2]	(25.9)	(11.8)	(0.1)	(159.2)	(51.2)	(248.2)
On-balance sheet exposures	**369.3**	**213.6**	**4.1**	**187.1**	**73.3**	**847.4**
Derivatives	5.8	1.4	0.0	79.0	4.7	90.9
Securities financing transactions	22.6	10.9	0.0	45.7	29.9	109.2
Off-balance sheet items	7.2	17.5	0.0	7.6	0.5	32.8
Items deducted from Swiss SRB tier 1 capital	(5.3)	(0.2)	(1.2)	(0.3)	(4.4)	(11.5)
Total	**399.6**	**243.2**	**2.9**	**319.2**	**104.0**	**1,068.9**
			31.12.22 vs 31.12.21			
Total IFRS assets	(6.7)	9.9	(8.3)	44.9	(52.6)	(12.8)
Difference in scope of consolidation[1]	0.0	0.0	8.3	0.0	0.0	8.3
Less: derivatives and securities financing transactions[2]	2.2	(0.1)	0.0	(42.5)	13.5	(26.9)
On-balance sheet exposures	**(4.5)**	**9.8**	**(0.1)**	**2.4**	**(39.1)**	**(31.4)**
Derivatives	(0.4)	0.1	0.0	1.0	(1.3)	(0.7)
Securities financing transactions	(2.1)	(0.1)	0.0	(5.3)	(3.1)	(10.6)
Off-balance sheet items	1.6	(0.9)	0.0	(0.7)	1.5	1.6
Items deducted from Swiss SRB tier 1 capital	0.1	0.0	0.0	(0.1)	0.6	0.6
Total	**(5.2)**	**8.8**	**0.0**	**(2.6)**	**(41.4)**	**(40.4)**

1 Represents the difference between the IFRS and the regulatory scope of consolidation, which is the applicable scope for the LRD calculation. 2 The exposures consist of derivative financial instruments, cash collateral receivables on derivative instruments, receivables from securities financing transactions, and margin loans, as well as prime brokerage receivables and financial assets at fair value not held for trading, both related to securities financing transactions, all of which are in accordance with the regulatory scope of consolidation. These exposures are presented separately under Derivatives and Securities financing transactions in this table.

UBS AG consolidated total loss-absorbing capacity and leverage ratio information

Going and gone concern requirements and information

UBS is considered an SRB under Swiss banking law and, on a consolidated basis, both UBS Group AG and UBS AG are required to comply with regulations based on the Basel III framework as applicable for Swiss SRBs.

The Swiss SRB framework and requirements applicable to UBS AG consolidated are consistent with those applicable to UBS Group AG consolidated and are described in the "Capital, liquidity and funding, and balance sheet" section of this report.

› **Refer to "Regulatory framework" in this section for more information about total loss-absorbing capacity, leverage ratio requirements and gone concern rebate**

UBS AG is subject to going and gone concern requirements on a standalone basis. Capital and other regulatory information for UBS AG standalone is provided under "Holding company and significant regulated subsidiaries and sub-groups" at *ubs.com/investors* and in the 31 December 2022 Pillar 3 Report available under "Pillar 3 disclosures" at *ubs.com/investors*.

The table below provides the RWA- and LRD-based requirements and information as of 31 December 2022 for UBS AG consolidated.

Swiss SRB going and gone concern requirements and information

As of 31.12.22	RWA		LRD	
USD m, except where indicated	in %		in %	
Required going concern capital				
Total going concern capital	14.64[1]	46,545	5.00[1]	51,478
Common equity tier 1 capital	10.34	32,878	3.50[2]	36,035
of which: minimum capital	*4.50*	*14,302*	*1.50*	*15,443*
of which: buffer capital	*5.50*	*17,480*	*2.00*	*20,591*
of which: countercyclical buffer	*0.34*	*1,096*		
Maximum additional tier 1 capital	4.30	13,666	1.50	15,443
of which: additional tier 1 capital	*3.50*	*11,124*	*1.50*	*15,443*
of which: additional tier 1 buffer capital	*0.80*	*2,543*		
Eligible going concern capital				
Total going concern capital	17.23	54,770	5.32	54,770
Common equity tier 1 capital	13.51	42,929	4.17	42,929
Total loss-absorbing additional tier 1 capital	3.73	11,841	1.15	11,841
of which: high-trigger loss-absorbing additional tier 1 capital	*3.35*	*10,654*	*1.03*	*10,654*
of which: low-trigger loss-absorbing additional tier 1 capital[3]	*0.37*	*1,187*	*0.12*	*1,187*
Required gone concern capital				
Total gone concern loss-absorbing capacity[4]	10.36	32,922	3.75	38,609
of which: base requirement[5]	*12.86*	*40,872*	*4.50*	*46,330*
of which: additional requirement for market share and LRD	*1.44*	*4,577*	*0.50*	*5,148*
of which: applicable reduction on requirements	*(3.94)*	*(12,527)*	*(1.25)*	*(12,870)*
of which: rebate granted[6]	*(3.56)*	*(11,322)*	*(1.25)*	*(12,870)*
of which: reduction for usage of low-trigger tier 2 capital instruments	*(0.38)*	*(1,204)*	*0.00*	*0*
Eligible gone concern capital				
Total gone concern loss-absorbing capacity	14.79	46,991	4.56	46,991
Total tier 2 capital	0.93	2,958	0.29	2,958
of which: low-trigger loss-absorbing tier 2 capital	*0.76*	*2,422*	*0.24*	*2,422*
of which: non-Basel III-compliant tier 2 capital	*0.17*	*536*	*0.05*	*536*
TLAC-eligible senior unsecured debt	13.85	44,033	4.28	44,033
Total loss-absorbing capacity				
Required total loss-absorbing capacity	25.00	79,467	8.75	90,087
Eligible total loss-absorbing capacity	32.02	101,761	9.88	101,761
Risk-weighted assets / leverage ratio denominator				
Risk-weighted assets		317,823		
Leverage ratio denominator				1,029,561

1 Includes applicable add-ons of 1.44% for RWA and 0.50% for leverage ratio denominator LRD. 2 Our minimum CET1 leverage ratio requirement of 3.5% consists of a 1.5% base requirement, a 1.5% base buffer capital requirement, a 0.25% LRD add-on requirement and a 0.25% market share add-on requirement based on our Swiss credit business. 3 Existing outstanding low-trigger AT1 capital instruments qualify as going concern capital at the UBS AG consolidated level, as agreed with FINMA, until their first call date. As of their first call date, these instruments are eligible to meet the gone concern requirements. 4 A maximum of 25% of the gone concern requirements can be met with instruments that have a remaining maturity of between one and two years. Once at least 75% of the minimum gone concern requirement has been met with instruments that have a remaining maturity of greater than two years, all instruments that have a remaining maturity of between one and two years remain eligible to be included in the total gone concern capital. 5 The gone concern requirement after the application of the rebate for resolvability measures and the reduction for the use of higher-quality capital instruments is floored at 10% and 3.75% for the RWA- and LRD-based requirements, respectively. This means that the combined reduction may not exceed 4.3 percentage points for the RWA-based requirement of 14.3% and 1.25 percentage points for the LRD-based requirement of 5.0%. 6 Based on the actions we completed up to December 2021 to improve resolvability, FINMA granted an increase in the rebate on the gone concern requirement from 55.0% to 65.0% of the maximum rebate, effective from 1 July 2022, with an effective maximum rebate of 1.25 percentage points for the LRD-based requirements and – given the risk density of 35% underlying the regulatory requirements – an effective maximum rebate of 3.56 percentage points for the RWA-based requirements.

Swiss SRB going and gone concern information

USD m, except where indicated	31.12.22	31.12.21
Eligible going concern capital		
Total going concern capital	54,770	55,434
Total tier 1 capital	54,770	55,434
Common equity tier 1 capital	42,929	41,594
Total loss-absorbing additional tier 1 capital	11,841	13,840
of which: high-trigger loss-absorbing additional tier 1 capital	*10,654*	*11,414*
of which: low-trigger loss-absorbing additional tier 1 capital	*1,187*	*2,426*
Eligible gone concern capital		
Total gone concern loss-absorbing capacity	46,991	44,264
Total tier 2 capital	2,958	3,144
of which: low-trigger loss-absorbing tier 2 capital	*2,422*	*2,596*
of which: non-Basel III-compliant tier 2 capital	*536*	*547*
TLAC-eligible senior unsecured debt	44,033	41,120
Total loss-absorbing capacity		
Total loss-absorbing capacity	101,761	99,698
Risk-weighted assets / leverage ratio denominator		
Risk-weighted assets	317,823	299,005
Leverage ratio denominator	1,029,561	1,067,679
Capital and loss-absorbing capacity ratios (%)		
Going concern capital ratio	17.2	18.5
of which: common equity tier 1 capital ratio	*13.5*	*13.9*
Gone concern loss-absorbing capacity ratio	14.8	14.8
Total loss-absorbing capacity ratio	32.0	33.3
Leverage ratios (%)		
Going concern leverage ratio	5.3	5.2
of which: common equity tier 1 leverage ratio	*4.17*	*3.90*
Gone concern leverage ratio	4.6	4.1
Total loss-absorbing capacity leverage ratio	9.9	9.3

UBS Group AG consolidated vs UBS AG consolidated loss-absorbing capacity and leverage ratio information

The going concern capital of UBS AG consolidated was USD 3.6bn lower than the going concern capital of UBS Group AG consolidated as of 31 December 2022, reflecting lower CET1 capital of USD 2.5bn and lower going concern loss-absorbing additional tier 1 (AT1) capital of USD 1.0bn.

The aforementioned difference in CET1 capital was primarily due to higher UBS AG consolidated accruals for dividends and USD 0.3bn lower UBS AG consolidated International Financial Reporting Standards equity, as well as a higher capital deduction at the UBS AG consolidated level related to deferred tax assets on temporary differences. The aforementioned factors were partly offset by compensation-related regulatory capital accruals at the UBS Group AG consolidated level.

The going concern loss-absorbing AT1 capital of UBS AG consolidated was USD 1.0bn lower than that of UBS Group AG consolidated as of 31 December 2022, mainly reflecting deferred contingent capital plan awards granted at Group level to eligible employees for the performance years 2017 to 2021, partly offset by four loss-absorbing AT1 capital instruments on lent by UBS Group AG to UBS AG.

Differences in capital between UBS Group AG consolidated and UBS AG consolidated related to employee compensation plans will reverse to the extent underlying services are performed by employees of, and are consequently charged to, UBS AG and its subsidiaries. Such reversal generally occurs over the service period of the employee compensation plans.

The leverage ratio framework for UBS AG consolidated is consistent with that of UBS Group AG consolidated. As of 31 December 2022, the going concern leverage ratio of UBS AG consolidated was 0.4 percentage points lower than that of UBS Group AG consolidated, mainly because the going concern capital of UBS AG consolidated was USD 3.6bn lower.

Audited |

Reconciliation of IFRS equity to Swiss SRB common equity tier 1 capital (UBS Group AG vs UBS AG consolidated)

As of 31.12.22			
USD m	UBS Group AG (consolidated)	UBS AG (consolidated)	Difference
Total IFRS equity	57,218	56,940	278
Equity attributable to non-controlling interests	(342)	(342)	
Defined benefit plans, net of tax	(311)	(311)	
Deferred tax assets recognized for tax loss carry-forwards	(4,077)	(4,077)	
Deferred tax assets on temporary differences, excess over threshold	(64)	(262)	198
Goodwill, net of tax	(5,754)	(5,754)	
Intangible assets, net of tax	(150)	(150)	
Compensation-related components (not recognized in net profit)	(2,287)		(2,287)
Expected losses on advanced internal ratings-based portfolio less provisions	(471)	(471)	
Unrealized (gains) / losses from cash flow hedges, net of tax	4,234	4,234	
Own credit related to (gains) / losses on financial liabilities measured at fair value that existed at the balance sheet date, net of tax	(523)	(523)	
Own credit related to (gains) / losses on derivative financial instruments that existed at the balance sheet date	(105)	(105)	
Unrealized gains related to financial assets at fair value through OCI, net of tax	0	0	
Prudential valuation adjustments	(201)	(201)	
Accruals for dividends to shareholders	(1,683)	(6,000)	4,317
Other	(29)	(51)	22
Total common equity tier 1 capital	45,457	42,929	2,528

▲

Swiss SRB going and gone concern information (UBS Group AG vs UBS AG consolidated)

As of 31.12.22			
USD m, except where indicated	UBS Group AG (consolidated)	UBS AG (consolidated)	Difference
Eligible going concern capital			
Total going concern capital	58,321	54,770	3,551
Total tier 1 capital	58,321	54,770	3,551
Common equity tier 1 capital	45,457	42,929	2,528
Total loss-absorbing additional tier 1 capital	12,864	11,841	1,023
of which: high-trigger loss-absorbing additional tier 1 capital	*11,675*	*10,654*	*1,021*
of which: low-trigger loss-absorbing additional tier 1 capital	*1,189*	*1,187*	*2*
Eligible gone concern capital			
Total gone concern loss-absorbing capacity	46,991	46,991	0
Total tier 2 capital	2,958	2,958	0
of which: low-trigger loss-absorbing tier 2 capital	*2,422*	*2,422*	*0*
of which: non-Basel III-compliant tier 2 capital	*536*	*536*	*0*
TLAC-eligible senior unsecured debt	44,033	44,033	0
Total loss-absorbing capacity			
Total loss-absorbing capacity	105,312	101,761	3,551
Risk-weighted assets / leverage ratio denominator			
Risk-weighted assets	319,585	317,823	1,762
Leverage ratio denominator	1,028,461	1,029,561	(1,100)
Capital and loss-absorbing capacity ratios (%)			
Going concern capital ratio	18.2	17.2	1.0
of which: common equity tier 1 capital ratio	*14.2*	*13.5*	*0.7*
Gone concern loss-absorbing capacity ratio	14.7	14.8	(0.1)
Total loss-absorbing capacity ratio	33.0	32.0	0.9
Leverage ratios (%)			
Going concern leverage ratio	5.7	5.3	0.4
of which: common equity tier 1 leverage ratio	*4.42*	*4.17*	*0.25*
Gone concern leverage ratio	4.6	4.6	0.0
Total loss-absorbing capacity leverage ratio	10.2	9.9	0.4

Equity attribution and return on attributed equity

Under our equity attribution framework, tangible equity is attributed based on a weighting of 50% each for average risk-weighted assets (RWA) and average leverage ratio denominator (LRD), which both include resource allocations from Group Functions to the business divisions (the BDs). Average RWA and LRD are converted to common equity tier 1 (CET1) capital equivalents using capital ratios of 12.5% and 3.75%, respectively. If the attributed tangible equity calculated under the weighted-driver approach is less than the CET1 capital equivalent of risk-based capital (RBC) for any BD, the CET1 capital equivalent of RBC is used as a floor for that BD.

In addition to tangible equity, we allocate equity to the BDs to support goodwill and intangible assets.

Furthermore, we allocate to the BDs attributed equity related to certain CET1 deduction items, such as compensation-related components and expected losses on the advanced internal ratings-based portfolio less provisions.

We attribute all remaining Basel III capital deduction items to Group Functions. These items include deferred tax assets (DTAs) recognized for tax loss carry-forwards, DTAs on temporary differences in excess of the threshold, accruals for shareholder returns, and unrealized gains / losses from cash flow hedges.

› **Refer to "Balance sheet and off-balance sheet" in this section for more information about movements in equity attributable to shareholders**

Average attributed equity

	For the year ended		
USD bn	31.12.22	31.12.21	31.12.20
Global Wealth Management	20.0	18.8	17.1
Personal & Corporate Banking	9.3	9.2	8.9
Asset Management	1.7	2.0	2.0
Investment Bank	13.0	13.0	12.6
Group Functions	13.5	16.3	17.4
of which: deferred tax assets[1]	*5.2*	*5.9*	*6.7*
of which: related to retained RWA and LRD[2]	*3.0*	*3.2*	*3.4*
of which: accruals for shareholder returns and others[3]	*5.4*	*7.2*	*7.2*
Average equity attributed to business divisions and Group Functions	**57.6**	59.3	57.8

1 Includes average attributed equity related to the Basel III capital deduction items for deferred tax assets (deferred tax assets recognized for tax loss carry-forwards and deferred tax assets on temporary differences, excess over threshold), as well as retained risk-weighted assets (RWA) and leverage ratio denominator (LRD) related to deferred tax assets. 2 Excludes average attributed equity related to retained RWA and LRD related to deferred tax assets. 3 Includes attributed equity related to dividend accruals, unrealized gains / losses from cash flow hedges, and a balancing item for capital held in excess of the 12.5%-capital and 3.75%-leverage-ratio calibration thresholds for equity attribution.

Return on attributed equity[1, 2]

	For the year ended		
in %	31.12.22	31.12.21	31.12.20
Global Wealth Management	24.9	25.4	23.6
Personal & Corporate Banking	19.5	18.9	14.2
Asset Management	81.2	51.8	74.2
Investment Bank	14.6	20.3	19.7

1 Return on attributed equity for Group Functions is not shown, as it is not meaningful. 2 Refer to "Alternative performance measures" in the appendix to this report for the definition and calculation method.

Liquidity and funding management

We manage the structural risks of our balance sheet, including interest rate risk, structural foreign exchange risk and collateral risk, as well as liquidity and funding risk. This section provides information about liquidity and funding regulatory requirements, governance, management (including sources of liquidity and funding), contingency planning, and stress testing. The balances disclosed in this section represent year-end positions, unless indicated otherwise. Intra-period balances fluctuate in the ordinary course of business and may differ from year-end positions.

Strategy, objectives and governance

Audited | Our management of liquidity and funding has the overall objective of protecting our business franchises and prudently managing our internal and regulatory liquidity and funding requirements. We measure liquidity and funding risk using internal and regulatory models and metrics. We define and implement internal stress testing across different time horizons, scenarios and currencies to ensure we have sufficient liquidity and funding, while remaining compliant with regulatory requirements, primarily expressed through the liquidity coverage ratio (the LCR) and the net stable funding ratio (the NSFR). Our liquidity and funding strategy is proposed by Group Treasury and approved by the Group Asset and Liability Committee (the Group ALCO), which is a committee of the Group Executive Board (the GEB) that is overseen by the Risk Committee of the Board of Directors (the BoD).

Liquidity and funding limits and other indicators (including early-warning indicators) are set at Group and, where appropriate, at legal entity and business division levels, and are reviewed and reconfirmed at least once a year by the BoD, the GEB, the Group ALCO, the Group Chief Financial Officer, the Group Chief Risk Officer and the Group Treasurer, taking into consideration the Group's business strategy and risk appetite. Treasury Risk Control provides independent oversight over liquidity and funding risk. ▲

› **Refer to the "Corporate governance" and "Risk management and control" sections of this report for more information**

Group Treasury monitors and oversees the implementation and execution of our liquidity and funding strategy and manages liquidity and funding risk within the limits and other relevant indicators, thereby adhering to the internal risk appetite and regulatory requirements. This includes close control of both our cash and collateral, including our high-quality liquid assets (HQLA), and centralizes the Group's access to wholesale cash markets in Group Treasury. To complement our business-as-usual management, Group Treasury maintains a Contingency Funding Plan and contributes to plans for recovery and resolution to define procedures throughout the crisis continuum. Group Treasury reports on the Group's liquidity and funding status and position, including concentration risk, at least monthly, to the Group ALCO and the Risk Committee of the BoD.

In July 2022, the revision of the Swiss Liquidity Ordinance became effective. Further supervisory guidance from FINMA is expected to be communicated in the autumn of 2023.

Liquidity and funding stress testing

Audited | Our liquidity and funding risk management aims to ensure that the firm has sufficient liquidity and funding to survive a severe idiosyncratic and market-wide liquidity and funding stress event without government support, allowing for discrete management actions.

Group Treasury maintains a diversified, high-quality pool of unencumbered liquid assets under Treasury control. The liquid asset portfolio is managed dynamically, so as to operate at all times within the internal risk appetite and other relevant Group and subsidiary liquidity and funding requirements. ▲

Our liquidity and funding stress testing covers two main stress scenarios: a combined (market and idiosyncratic) scenario and a structural market-wide scenario. We continuously refine stress-testing assumptions.

› **Refer to "Risk measurement" in the "Risk management and control" section of this report for more information about stress testing**

Combined (market and idiosyncratic) scenario

In this scenario, UBS faces the consequences of both a severely deteriorated macroeconomic and financial market environment and a UBS-specific event, resulting in an acute loss of liquidity over a relatively short period of time. This scenario represents severe yet plausible events encompassing both market-wide and idiosyncratic elements, in which, however, franchise client relationships are materially maintained.

The objective of this stress test is to ensure that UBS keeps a cumulative liquidity surplus on each day in the three-month stress horizon. The liquidity gap is assessed by modeling the stressed liquidity value of the liquidity buffer and stressed liquidity inflows and outflows under the scenario.

Structural market-wide scenario

In this scenario, UBS is subject to a significant deterioration of macroeconomic and financial market conditions globally, resulting in a requirement for long-term funding to survive the liquidity drain and support the franchise of the business. Macroeconomic shocks result in deteriorated financial market conditions over the scenario horizon of one year. UBS is assumed to be affected equally relative to other global financial institutions.

The objective of this stress test is to ensure that UBS maintains a positive cumulative behavioral liquidity gap across the 3-month, 6-month, 9-month and 12-month tenors. The liquidity gap is assessed by modeling the stressed liquidity value of the liquidity buffer, and stressed liquidity inflows and outflows under the scenario. In addition, the liquidity stress-testing metric above 12 months aims to ensure that UBS has sufficient long-term (contractual and behavioral) funding supply to support its long-term funding consumption.

Funding management

Audited | Group Treasury monitors our funding position, including concentration risk, aiming to ensure that we maintain a well-balanced and diversified liability structure. Our funding management team looks to create the optimal liability structure to finance our businesses in a reliable and cost-efficient manner. Our funding activities are planned by analyzing the overall liquidity and funding requirements, taking into account the amount of stable funding that would be needed to support ongoing business activities through periods of difficult market conditions. ▲

The funding strategy of UBS Group AG is set annually in the Funding Plan and is reviewed on an ongoing basis. The Funding Plan is developed by Group Treasury and approved by the Group ALCO.

› **Refer to "Balance sheet and off-balance sheet" in this section for more information about the development of our short- and long-term debt during 2022**

Global Wealth Management and Personal & Corporate Banking provide significant, cost-efficient and stable sources of funding. These include deposits and debt issued through the Swiss central mortgage institutions, which use a portion of our portfolio of Swiss residential mortgages as collateral to generate long-term funding. In addition, we have several short-, medium- and long-term funding programs under which we issue senior unsecured debt and structured notes, as well as short-term debt. These programs enable UBS to source funding from institutional and private investors who are active in Europe, the US and Asia Pacific. Collectively, these broad product offerings and funding sources, together with the global scope of our business activities, support our funding stability.

Internal funding and funds transfer pricing

We use our global liquidity and funding framework to govern the liquidity management of all our branches and subsidiaries. Group Treasury meets internal demands for funding by channeling funds from entities generating surplus cash to those in need of financing, except in circumstances where transfer restrictions exist.

Funding costs and benefits are allocated to our business divisions according to our liquidity and funding risk management framework. Our internal funds transfer pricing system is designed to ensure we have the right mix of assets and liabilities in currencies and tenors.

Credit ratings

Credit ratings can affect the cost and availability of funding, especially from wholesale unsecured sources. Our credit ratings can also influence the performance of some of our businesses and the levels of client and counterparty confidence. Rating agencies take into account a range of factors when assessing creditworthiness and setting credit ratings. These include the company's strategy, its business position and franchise value, stability and quality of earnings, capital adequacy, risk profile and management, liquidity management, diversification of funding sources, asset quality, and corporate governance. Credit ratings reflect the opinions of the rating agencies and can change at any time.

In evaluating our liquidity and funding requirements, we consider the potential effect of a reduction in our long-term credit ratings and a corresponding reduction in short-term ratings. If our credit ratings were to be downgraded, rating trigger clauses could result in an immediate cash settlement or the need to deliver additional collateral to counterparties from contractual obligations related to over-the-counter (OTC) derivative positions and other obligations. Based on our credit ratings as of 31 December 2022, in the event of a one-notch reduction in our long-term credit ratings, we would have been required to provide USD 0.1bn in cash or other collateral. In the event of a two-notch reduction, it would have been USD 0.3bn and for a three-notch downgrade USD 1.0bn. In the two- and three-notch scenarios the collateral requirements predominantly relate to OTC derivative positions.

There were no rating actions with regard to UBS Group AG's or UBS AG's solicited credit ratings in 2022.

› **Refer to "Liquidity and funding management are critical to UBS's ongoing performance" in the "Risk factors" section of this report for more information**

Contingency Funding Plan

Audited | We maintain our Contingency Funding Plan as a preparation and action plan, aiming to ensure we hold sufficient liquidity to meet our payment obligations and raise funding during periods of liquidity stress. The plan specifies the processes, tools and responsibilities that we have available to effectively manage liquidity and funding through these periods. Our funding diversification and global scope help to protect our liquidity position in the event of a crisis. Our contingent funding sources include our HQLA portfolios, available and unutilized liquidity facilities at several major central banks, contingent reductions of trading portfolio assets, and other actions available to the management. ▲

Liquidity coverage ratio

The LCR measures the short-term resilience of a bank's liquidity profile by assessing whether sufficient HQLA are available to meet expected net cash outflows from a significant liquidity stress scenario, as defined by the relevant regulator.

For UBS, HQLA are low-risk unencumbered assets under the control of Group Treasury that are easily and immediately convertible into cash at little or no loss of value, in order to meet liquidity needs. Our HQLA predominantly consist of assets that qualify as Level 1 in the LCR framework, including cash, central bank reserves and government bonds. Group HQLA are held by UBS AG and its subsidiaries and may include amounts that are available to meet funding and collateral needs in certain jurisdictions but are not readily available for use by the Group as a whole. These limitations are typically the result of local regulatory requirements, including local LCR and large exposure requirements. Funds that are effectively restricted are excluded from the calculation of Group HQLA to the extent they exceed the outflow assumptions for the subsidiary that holds the relevant HQLA. On this basis, USD 34bn of assets were excluded from our daily average Group HQLA for the fourth quarter of 2022. Amounts held in excess of local liquidity requirements that are not subject to other restrictions are generally available for transfer within the Group.

Basel Committee on Banking Supervision (BCBS) standards require an LCR of at least 100%. In a period of financial stress, the Swiss Financial Market Supervisory Authority (FINMA) may allow banks to use their HQLA and let their LCR temporarily fall below the minimum threshold. We monitor the LCR in all significant currencies in order to manage any currency mismatches between HQLA and the net expected cash outflows in times of stress.

Our daily average LCR for the fourth quarter of 2022 was 163.7%, compared with 155.5% in the fourth quarter of 2021, remaining above the prudential requirement communicated by FINMA.

Average HQLA increased by USD 10.7bn to USD 238.6bn, mainly driven by lower funding consumption from the business divisions, partly offset by a reduction of short-term debt. Average net cash outflows decreased slightly, by USD 0.8bn, to USD 146.0bn. Lower average outflows from customer deposits were almost entirely offset by lower average inflows from loans and securities financing transactions, as well as higher average net cash outflows from derivatives.

› **Refer to the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors,* for more information about the LCR**

› **Refer to the "Significant regulated subsidiary and sub-group information" section of this report for more information about the LCR of UBS AG and UBS Switzerland AG**

Liquidity coverage ratio

USD bn, except where indicated	Average 4Q22[1]	Average 4Q21[1]
High-quality liquid assets (HQLA)	238.6	227.9
Total net cash outflows[2]	146.0	146.8
Liquidity coverage ratio (%)[3]	163.7	155.5

1 Calculated based on an average of 63 data points in the fourth quarter of 2022 and 66 data points in the fourth quarter of 2021. 2 Represents the net cash outflows expected over a stress period of 30 calendar days. 3 Calculated after the application of haircuts and inflow and outflow rates, as well as, where applicable, caps on Level 2 assets and cash inflows.

Net stable funding ratio

The NSFR framework is intended to limit overreliance on short-term wholesale funding, to encourage a better assessment of funding risk across all on- and off-balance sheet items and to promote funding stability. The NSFR has two components: available stable funding (ASF), as numerator, and required stable funding (RSF), as denominator. ASF is the portion of capital and liabilities expected to be available over the period of one year. RSF is a measure of the stable funding requirement of assets based on their maturity, encumbrance and other characteristics, as well as the potential for contingent calls on funding liquidity from off-balance sheet exposures. The BCBS NSFR regulatory framework requires a ratio of at least 100%.

As of 31 December 2022, the NSFR increased 1.3 percentage points to 119.8%, remaining above the prudential requirement communicated by FINMA. RSF decreased by USD 19.6bn to USD 468.5bn, mainly due to lower trading assets and receivables from securities financing transactions, partly offset by higher derivative balances. ASF decreased by USD 17.0bn to USD 561.4bn, mainly driven by lower debt securities issued and customer deposits.

› **Refer to the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors,* for more information about the NSFR**

› **Refer to the "Significant regulated subsidiary and sub-group information" section of this report for more information about the NSFR of UBS AG and UBS Switzerland AG**

Net stable funding ratio

USD bn, except where indicated	31.12.22	31.12.21
Available stable funding (ASF)	561.4	578.4
Required stable funding (RSF)	468.5	488.1
Net stable funding ratio (%)	119.8	118.5

Balance sheet and off-balance sheet

Balance sheet

The balances disclosed in this section represent year-end positions, unless indicated otherwise. Intra-period balances fluctuate in the ordinary course of business and may differ from year-end positions. Refer to the "Consolidated financial statements" section of this report for more information about the development of our financial position.

Balance sheet assets

As of 31 December 2022, balance sheet assets totaled USD 1,104.4bn, a decrease of USD 12.8bn compared with 31 December 2021, which included a decrease of approximately USD 22.7bn from currency effects.

Cash and balances at central banks decreased by USD 23.4bn, including currency effects of approximately USD 5.9bn. The net cash outflow was mainly due to shifts within the high-quality liquid asset (HQLA) portfolio from cash into securities, a reduction in short-term debt, decreases in customer deposits and outflows related to the share repurchase programs. These outflows were partly offset by inflows from roll-offs of securities financing transactions, decreases in trading assets, as well as lower lending.

Trading portfolio assets decreased by USD 22.9bn, mainly in our Financing and Derivatives & Solutions businesses in the Investment Bank, reflecting lower inventory held to hedge client positions and market-driven movements. Lending assets decreased by USD 11.2bn, mainly driven by currency effects of USD 6.4bn. The movement not related to currency effects was mainly in Global Wealth Management, reflecting decreases in Lombard loans in Asia Pacific, partly offset by higher mortgage loans in the Americas. Non-financial assets and financial assets for unit-linked investment contracts decreased by USD 8.7bn, predominantly in Asset Management, mainly due to market-driven decreases on investments related to unit-linked contracts, and in Global Wealth Management, due to the completion of the sale of our domestic wealth management business in Spain and the sale of UBS Swiss Financial Advisers AG in 2022. Securities financing transactions at amortized cost decreased by USD 7.2bn, mostly due to lower client activity levels in the Investment Bank as interest rates rose, as well as trade roll-offs in Group Treasury. Brokerage receivables decreased by USD 4.2bn in our Financing business, as increases in client lending were more than offset by netting effects against Brokerage payables.

These decreases were partly offset by a USD 36.4bn increase in Derivatives and cash collateral receivables on derivative instruments. The increases were mainly in our Derivatives & Solutions and Financing businesses, predominantly reflecting increases in foreign exchange contracts, where the contracts in place at the end of 2022 had higher fair values compared with the contracts in place at the end of 2021, as well as increases in interest rate contracts, mainly due to higher trading volumes and market-driven movements as interest rates increased during the year. These increases were partly offset by market-driven decreases in Non-core and Legacy Portfolio on long-dated interest rate contracts due to the aforementioned increases in interest rates.

Other financial assets measured at amortized cost and fair value increased by USD 28.4bn, largely reflecting shifts within the HQLA portfolio from cash into securities within Group Treasury due to the widening of spreads. Included within Other financial assets measured at amortized cost and fair value is a portfolio of financial assets reclassified effective from 1 April 2022 from Financial assets measured at fair value through other comprehensive income to Other financial assets measured at amortized cost, in line with the principles in IFRS 9, *Financial Instruments*.

› **Refer to "Note 1 Summary of material accounting policies" in the "Consolidated financial statements" section of this report for more information about the reclassification of a portfolio of financial assets**

Assets

	As of		% change from
USD bn	31.12.22	31.12.21	31.12.21
Cash and balances at central banks	169.4	192.8	(12)
Lending[1]	402.0	413.2	(3)
Securities financing transactions at amortized cost	67.8	75.0	(10)
Trading portfolio[2]	107.9	130.8	(18)
Derivatives and cash collateral receivables on derivative instruments	185.1	148.7	25
Brokerage receivables	17.6	21.8	(20)
Other financial assets measured at amortized cost and fair value[3]	102.2	73.8	38
Non-financial assets and financial assets for unit-linked investment contracts	52.3	61.0	(14)
Total assets	1,104.4	1,117.2	(1)

1 Consists of loans and advances to customers and banks. 2 Consists of financial assets at fair value held for trading. 3 Consists of financial assets at fair value not held for trading, financial assets measured at fair value through other comprehensive income and other financial assets measured at amortized cost, but excludes financial assets for unit-linked investment contracts.

Asset encumbrance

The table below provides a breakdown of on- and off-balance sheet assets between encumbered assets, unencumbered assets and assets that cannot be pledged as collateral.

Assets are presented as Encumbered if they have been pledged as collateral against an existing liability or are otherwise not available for securing additional funding. Included within the latter category are assets protected under client asset segregation rules, financial assets for unit-linked investment contracts, and assets held in certain jurisdictions to comply with explicit minimum local asset maintenance requirements.

› **Refer to "Note 22 Restricted and transferred financial assets" in the "Consolidated financial statements" section of this report for more information**

Assets that cannot be pledged as collateral represents assets that are not encumbered but by their nature are not considered available to secure funding or meet collateral needs.

All other assets are presented as Unencumbered. Assets that are considered to be readily available to secure funding on a Group and / or legal entity level are shown separately and consist of cash and securities readily realizable in the normal course of business. These include our HQLA and unencumbered positions in our trading portfolio. Unencumbered assets that are considered to be available to secure funding on a legal entity level may be subject to restrictions that limit the total amount of assets available to the Group as a whole. Other unencumbered assets, which are not considered to be readily available to secure funding on a Group and / or legal entity level, primarily consist of loans and advances to banks and customers.

Asset encumbrance as of 31 December 2022

	Encumbered		Unencumbered			
USD bn	Assets pledged as collateral	Assets otherwise restricted and not available to secure funding	Cash and securities available to secure funding on a Group and / or legal entity level	Other realizable assets	Assets that cannot be pledged as collateral	Total Group
Balance sheet						
Cash and balances at central banks		0.0	169.4			169.4
Loans and advances to banks		3.7		11.1		14.8
Receivables from securities financing transactions					67.8	67.8
Cash collateral receivables on derivative instruments		5.2			29.9	35.0
Loans and advances to customers	15.2	1.1		370.2	0.7	387.2
Other financial assets measured at amortized cost	3.4	0.8	40.4	1.3	7.3	53.3
Total financial assets measured at amortized cost	**18.6**	**10.8**	**209.8**	**382.6**	**105.7**	**727.6**
Financial assets at fair value held for trading	57.4[1]	0.2	48.5	1.8		107.9
Derivative financial instruments	0.0				150.1	150.1
Brokerage receivables					17.6	17.6
Financial assets at fair value not held for trading	1.5[1]	14.5	30.1	6.0	7.7	59.8
Total financial assets measured at fair value through profit or loss	**58.9**	**14.6**	**78.7**	**7.8**	**175.4**	**335.3**
Financial assets measured at fair value through other comprehensive income		**1.8**	**0.4**			**2.2**
Non-financial assets		**0.0**	**4.5**	**13.4**	**21.4**	**39.2**
Total balance sheet assets as of 31 December 2022	77.5	27.3	293.4	403.7	302.5	1,104.4
Total balance sheet assets as of 31 December 2021	85.1	33.5	307.5	415.4	275.7	1,117.2
Off-balance sheet						
Fair value of securities accepted as collateral as of 31 December 2022	331.8	5.6	93.8	2.8		434.0
Fair value of securities accepted as collateral as of 31 December 2021	367.4	16.3	106.5	7.6		497.8
Total balance sheet assets and off-balance sheet securities accepted as collateral as of 31 December 2022	409.3	33.0	387.1	406.5	302.5	1,538.4
of which: high-quality liquid assets			*238.6*			
Total balance sheet assets and off-balance sheet securities accepted as collateral as of 31 December 2021	452.5	49.8	414.0	423.0	275.7	1,615.0
of which: high-quality liquid assets			*232.8*			

1 Includes assets pledged as collateral that may be sold or repledged by counterparties. The respective amounts are disclosed in "Note 22 Restricted financial assets" in the "Consolidated financial statements" section of this report.

Assets available to secure funding on a Group and / or legal entity level by currency

USD bn	31.12.22	31.12.21
Swiss franc	120.0	111.4
US dollar	156.2	174.7
Euro	40.3	46.6
Other	70.6	81.2
Total	387.1	414.0

Balance sheet liabilities

Total liabilities as of 31 December 2022 were USD 1,047.1bn, a decrease of USD 9.1bn compared with 31 December 2021, which included a decrease of approximately USD 20.4bn from currency effects.

Customer deposits decreased by USD 16.9bn, including an USD 8.3bn decrease from currency effects. The decrease not related to currency effects was USD 14.4bn in Global Wealth Management, mostly in the Americas, partly offset by a USD 5.8bn increase in Personal & Corporate Banking. In addition, increases in interest rates during the year resulted in significant shifts from demand deposits to time deposits. As of 31 December 2022, our ratio of customer deposits to outstanding loans and advances to customers was unchanged at 136%. Short-term borrowings decreased by USD 14.9bn, mainly due to maturities of commercial paper and certificates of deposit in Group Treasury.

Debt issued designated at fair value and long-term debt issued measured at amortized cost decreased by USD 11.3bn. Long-term debt issued measured at amortized cost decreased by USD 11.1bn, driven by hedge accounting and foreign currency effects, as well as net redemptions. Debt issued designated at fair value remained broadly unchanged, while net new issuances mainly of fixed-rate and equity-linked contracts were offset by market-driven movements on equity-linked contracts.

During 2022, the redemption of a covered bond of USD 1.4bn and net redemptions of subordinated debt instruments of USD 1.3bn were partly offset by USD 0.8bn of net new issuances of senior unsecured debt, including TLAC-eligible benchmark instruments. In December 2022, we announced our intention to call one loss-absorbing tier 1 capital instrument of USD 2.0bn, which was redeemed in January 2023. As of 31 December 2022, UBS is already compliant with its 2023 going and gone concern capital requirements and expects to act rationally and strategically with respect to the refinancing of any callable capital instruments and any potential incremental issuances.

› **Refer to "UBS Group AG consolidated capital instruments and TLAC-eligible senior unsecured debt," available under "Bondholder information" at *ubs.com/investors,* for more information**

Non-financial liabilities and financial liabilities related to unit-linked investment contracts decreased by USD 10.6bn, mainly reflecting market-driven decreases in unit-linked investment contracts in line with the asset side and in Global Wealth Management due to the completion of the sale of our domestic wealth management business in Spain and the sale of UBS Swiss Financial Advisers AG in 2022.

› **Refer to "Note 29 Changes in organization and acquisitions and disposals of subsidiaries and businesses" in the "Consolidated financial statements" section of this report for more information about the sales of these businesses**

These decreases were partly offset by a USD 38.2bn increase in Derivatives and cash collateral payables on derivative instruments, in line with the movement on the asset side. Other financial liabilities measured at amortized cost and fair value increased by USD 9.0bn, mainly in Group Treasury, due to lower netting effects on securities financing transactions measured at fair value.

Equity

Equity attributable to shareholders decreased by USD 3,786m to USD 56,876m as of 31 December 2022.

This decrease was mainly driven by net treasury share activity that decreased equity by USD 5,999m. This was mainly due to share repurchases with an acquisition cost of USD 3,966m under our 2022 share repurchase program, repurchases of USD 1,637m under our 2021 program and purchases of USD 207m from the market to hedge our share delivery obligations related to employee share-based compensation awards. In addition, distributions to shareholders reduced equity by USD 1,668m, reflecting a dividend payment of USD 0.50 per share.

These decreases were partly offset by total comprehensive income attributable to shareholders of positive USD 3,149m, reflecting net profit of USD 7,630m and negative other comprehensive income (OCI) of USD 4,481m. OCI mainly included negative cash flow hedge OCI of USD 4,793m, negative OCI related to foreign currency translation of USD 525m and positive OCI related to own credit on financial liabilities designated at fair value of USD 796m. In addition, deferred share-based compensation awards of USD 716m were expensed in the income statement, increasing share premium.

In the second quarter of 2022, we canceled 177,787,273 shares purchased under our 2021 share repurchase program from its inception in 2021 until 18 February 2022, as approved by shareholders at the 2022 Annual General Meeting. The cancellation of shares resulted in reclassifications within equity but had no net effect on our total equity attributable to shareholders.

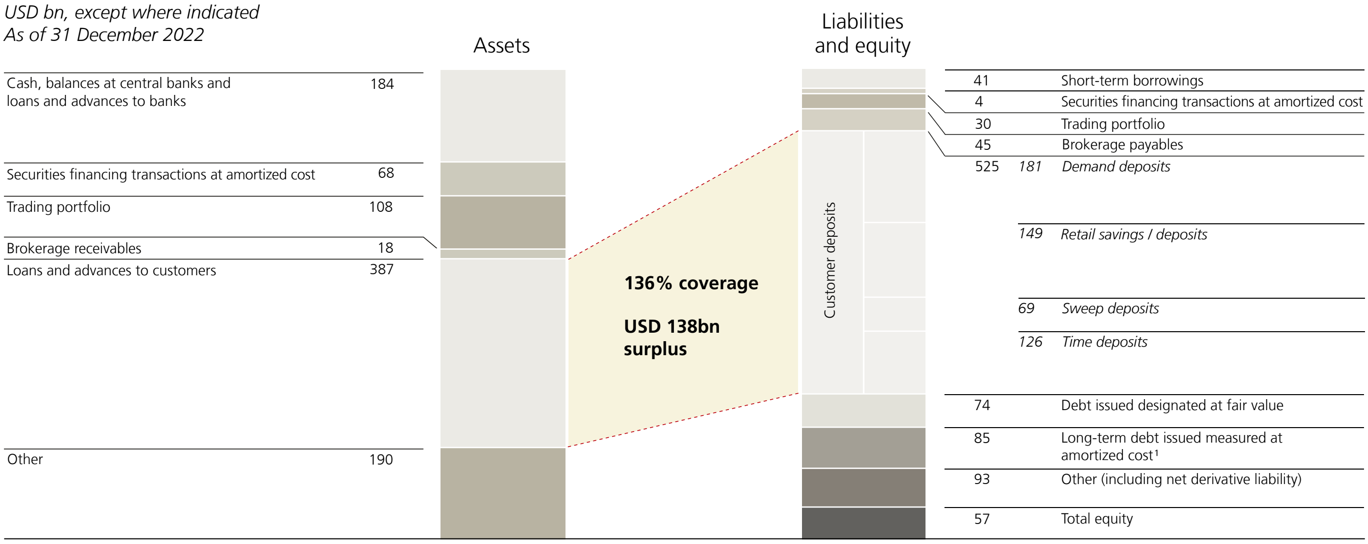
› **Refer to the "Group performance" and "Consolidated financial statements" sections of this report for more information about OCI**
› **Refer to the "Reconciliation of IFRS equity to Swiss SRB common equity tier 1 capital" table in this section for more information about the effects of OCI on common equity tier 1 capital**
› **Refer to "UBS shares" in this section for more information about our share repurchase programs**

Liabilities and equity

	As of		% change from
USD bn	31.12.22	31.12.21	31.12.21
Short-term borrowings[1]	41.3	56.2	(27)
Securities financing transactions at amortized cost	4.2	5.5	(24)
Customer deposits	525.1	542.0	(3)
Debt issued designated at fair value and long-term debt issued measured at amortized cost[2]	158.6	169.9	(7)
Trading portfolio[3]	29.5	31.7	(7)
Derivatives and cash collateral payables on derivative instruments	191.3	153.1	25
Brokerage payables	45.1	44.0	2
Other financial liabilities measured at amortized cost and fair value[4]	26.6	17.6	51
Non-financial liabilities and financial liabilities related to unit-linked investment contracts	25.5	36.1	(29)
Total liabilities	1,047.1	1,056.2	(1)
Share capital	0.3	0.3	(6)
Share premium	13.5	15.9	(15)
Treasury shares	(6.9)	(4.7)	47
Retained earnings	50.0	43.9	14
Other comprehensive income[5]	(0.1)	5.2	(102)
Total equity attributable to shareholders	56.9	60.7	(6)
Equity attributable to non-controlling interests	0.3	0.3	1
Total equity	57.2	61.0	(6)
Total liabilities and equity	1,104.4	1,117.2	(1)

1 Consists of short-term debt issued measured at amortized cost and amounts due to banks. 2 The classification of debt issued measured at amortized cost into short-term and long-term is based on original contractual maturity and therefore long-term debt also includes debt with a remaining time to maturity of less than one year. This classification does not consider any early redemption features. 3 Consists of financial liabilities at fair value held for trading. 4 Consists of other financial liabilities measured at amortized cost and other financial liabilities designated at fair value, but excludes financial liabilities related to unit-linked investment contracts. 5 Excludes other comprehensive income related to defined benefit plans and own credit, which is recorded directly in Retained earnings.

Asset funding



1 The classification of debt issued measured at amortized cost into short- and long-term is based on original contractual maturity and therefore long-term debt also includes debt with a remaining time to maturity of less than one year. This classification does not consider any early redemption features.

Liabilities by product and currency

	USD equivalent							
	All currencies		*of which: USD*		*of which: CHF*		*of which: EUR*	
USD bn	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Short-term borrowings	41.3	56.2	*23.3*	*32.2*	*3.8*	*4.3*	*4.4*	*6.2*
of which: amounts due to banks	*11.6*	*13.1*	*4.2*	*3.4*	*3.7*	*4.2*	*1.1*	*0.8*
of which: short-term debt issued[1]	*29.7*	*43.1*	*19.0*	*28.8*	*0.1*	*0.2*	*3.3*	*5.3*
Securities financing transactions at amortized cost	4.2	5.5	*3.6*	*5.2*	*0.0*	*0.0*	*0.2*	*0.2*
Customer deposits	525.1	542.0	*226.6*	*252.1*	*198.5*	*189.7*	*53.6*	*54.8*
of which: demand deposits	*180.8*	*246.4*	*47.1*	*92.3*	*71.4*	*70.9*	*37.3*	*46.3*
of which: retail savings / deposits	*149.3*	*133.3*	*24.6*	*11.7*	*119.0*	*116.0*	*5.6*	*5.5*
of which: sweep deposits	*69.2*	*113.9*	*69.2*	*113.9*	*0.0*	*0.0*	*0.0*	*0.0*
of which: time deposits	*125.7*	*48.4*	*85.7*	*34.2*	*8.1*	*2.8*	*10.6*	*3.0*
Debt issued designated at fair value and long-term debt issued measured at amortized cost[2]	158.6	169.9	*98.4*	*100.3*	*16.9*	*18.4*	*29.6*	*35.1*
Trading portfolio[3]	29.5	31.7	*12.1*	*13.7*	*0.8*	*0.9*	*8.1*	*6.3*
Derivatives and cash collateral payables on derivative instruments	191.3	153.1	*160.4*	*126.3*	*3.8*	*2.1*	*15.8*	*15.2*
Brokerage payables	45.1	44.0	*32.3*	*32.8*	*0.4*	*0.4*	*3.2*	*2.8*
Other financial liabilities measured at amortized cost and fair value[4]	26.6	17.6	*16.3*	*9.3*	*1.7*	*1.5*	*4.8*	*3.7*
Non-financial liabilities and financial liabilities related to unit-linked investment contracts	25.5	36.1	*4.7*	*6.0*	*1.5*	*2.4*	*2.9*	*3.4*
Total liabilities	1,047.1	1,056.2	*577.7*	*577.8*	*227.6*	*219.7*	*122.6*	*127.8*

1 Short-term debt issued consists of certificates of deposit, commercial paper, acceptances and promissory notes, and other money market paper. 2 The classification of debt issued measured at amortized cost into short-term and long-term is based on original contractual maturity and therefore long-term debt also includes debt with a remaining time to maturity of less than one year. This classification does not consider any early redemption features. 3 Consists of financial liabilities at fair value held for trading. 4 Consists of other financial liabilities measured at amortized cost and other financial liabilities designated at fair value, but excludes financial liabilities related to unit-linked investment contracts.

Off-balance sheet

In the normal course of business, we enter into transactions where, pursuant to IFRS, the maximum contractual exposure may not be recognized in whole or in part on our balance sheet. These transactions include derivative instruments, guarantees, loan commitments and similar arrangements.

When we incur an obligation or become entitled to an asset through these arrangements, we recognize them on the balance sheet. It should be noted that in certain instances the amount recognized on the balance sheet does not represent the full gain or loss potential inherent in such arrangements.

The following paragraphs provide more information about certain off-balance sheet arrangements. Additional off-balance sheet information is primarily provided in Notes 9, 10, 17, 19, 20h, 22 and 28 in the "Consolidated financial statements" section of this report, and in the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors.*

Guarantees, loan commitments and similar arrangements

In the normal course of business, we issue various forms of guarantees, commitments to extend credit, standby and other letters of credit to support our clients, forward starting transactions, note issuance facilities, and revolving underwriting facilities. With the exception of related premiums, generally these guarantees and similar obligations are kept as off-balance sheet items, unless a provision to cover probable losses or expected credit losses is required.

Guarantees represent irrevocable assurances that, subject to the satisfying of certain conditions, we will make payments if our clients fail to fulfill their obligations to third parties. As of 31 December 2022, the net exposure (i.e., gross values less sub-participations) from guarantees and similar instruments was USD 20.6bn, compared with USD 18.9bn as of 31 December 2021. The increase of USD 1.7bn reflected higher guarantees issued to corporate clients in Group Treasury. Fee income from issuing guarantees compared with total net fee and commission income is insignificant for both 2022 and 2021.

We also enter into commitments to extend credit in the form of credit lines available to secure the liquidity needs of clients. The majority of loan commitments range in maturity from one month to two years. Committed unconditionally revocable credit lines are generally open-ended. During 2022, loan commitments and committed unconditionally revocable credit lines remained broadly stable. Forward starting reverse repurchase agreements increased by USD 2.4bn and forward starting repurchase agreements increased by USD 0.9bn, both predominantly in Group Treasury.

Off-balance sheet

	As of		% change from
USD bn	31.12.22	31.12.21	31.12.21
Guarantees[1]	20.6	18.9	9
Loan commitments[1,2]	40.0	39.5	1
Committed unconditionally revocable credit lines	41.4	40.8	1
Forward starting reverse repurchase agreements[2]	3.8	1.4	163
Forward starting repurchase agreements[2]	1.9	1.0	80

1 Guarantees and Loan commitments are shown net of sub-participations. 2 The exposures related to loan commitments, forward starting repurchase and reverse repurchase agreements measured at fair value through profit or loss are not included in this table but are reflected as notional amounts in "Note 10 Derivative instruments" in the "Consolidated financial statements" section of this report.

If customers fail to meet their obligations, our maximum exposure to credit risk is generally the contractual amount of these instruments. The risk is similar to the risk involved in extending loan facilities and is subject to the same risk management and control framework. In 2022, we recognized net credit loss releases of USD 3m related to loan commitments, guarantees and other credit facilities in the scope of expected credit loss measurement, compared with net credit loss releases of USD 46m in 2021. Provisions recognized for guarantees, loan commitments and other credit facilities in the scope of expected credit loss measurement were USD 201m as of 31 December 2022, compared with USD 196m as of 31 December 2021.

› **Refer to "Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement" and "Note 19 Expected credit loss measurement" in the "Consolidated financial statements" section of this report for more information about provisions for expected credit losses**

For certain obligations, we enter into partial sub-participations to mitigate various risks from guarantees and loan commitments. A sub-participation is an agreement by another party to take a share of the loss in the event that the obligation is not fulfilled by the obligor and, where applicable, to fund a part of the credit facility. We retain the contractual relationship with the obligor, and the sub-participant has only an indirect relationship. Generally, we only enter into sub-participation agreements with banks to which we ascribe a credit rating equal to or better than that of the obligor.

We also provide representations, warranties and indemnifications to third parties in the normal course of business.

Support provided to non-consolidated investment funds

In 2022, the Group did not provide material support, financial or otherwise, to unconsolidated investment funds when the Group was not contractually obligated to do so, nor does it have an intention to do so.

Clearing house and exchange memberships

We are a member of numerous securities and derivative exchanges and clearing houses. In connection with some of these memberships, we may be required to pay a share of the financial obligations of another member who defaults, or we may be otherwise exposed to additional financial obligations. While the membership rules vary, obligations generally would arise only if the exchange or clearing house had exhausted its resources. We consider the probability of a material loss due to such obligations to be remote.

Deposit insurance

Swiss banking law and the deposit insurance system require Swiss banks and securities dealers to jointly guarantee an amount of up to CHF 6bn for privileged client deposits in the event that a Swiss bank or securities dealer becomes insolvent. As of 31 December 2022, FINMA estimates our share in the deposit insurance system to be CHF 0.9bn. This represents a contingent payment obligation and exposes us to additional risk. As of 31 December 2022, we considered the probability of a material loss from our obligations to be remote.

UBS is also subject to, or is a member of, other deposit protection schemes in other countries. However, no contingent payment obligation existed as of 31 December 2022 from any other material scheme.

Material cash requirements

The Group's material cash requirements as of 31 December 2022 are represented by the residual contractual maturities for non-derivative and non-trading financial liabilities included in the table presented in "Note 23b Maturity analysis of financial liabilities on an undiscounted basis" in the "Consolidated financial statements" section of this report. Included in the table are debt issued designated at fair value (USD 83.4bn) and long-term debt issued measured at amortized cost (USD 103.7bn). The amounts represent estimated future interest and principal payments on an undiscounted basis.

In the normal course of business, we also issue or enter into various forms of guarantees, loan commitments and other similar arrangements that may result in an outflow of cash in the future. The maturity profile of these obligations, which are presented off-balance sheet, are included in "Note 23b Maturity analysis of financial liabilities on an undiscounted basis" in the "Consolidated financial statements" section of this report.

› **Refer to "Guarantees, loan commitments and similar arrangements" in this section for more information**

Cash flows

As a global financial institution, our cash flows are complex and often may bear little relation to our net earnings and net assets. Consequently, we believe that a traditional cash flow analysis is less meaningful when evaluating our liquidity position than the liquidity, funding and capital management frameworks and measures described elsewhere in this section.

› **Refer to the "Liquidity and funding management" section of this report for more information**

Cash and cash equivalents

As of 31 December 2022, cash and cash equivalents totaled USD 195.3bn, a decrease of USD 12.6bn compared with 31 December 2021, driven by net cash outflows from investing and financing activities, as well as negative foreign exchange effects, largely reflecting appreciation of the US dollar against the yen, euro and Swiss franc in 2022. These effects were partly offset by net cash inflows from operating activities.

Operating activities

Net cash inflows from operating activities were USD 14.6bn in 2022, compared with USD 31.4bn in 2021. The net operating cash flow, before changes in operating assets and liabilities and income taxes paid, was an outflow of USD 2.0bn. Changes in operating assets and liabilities resulted in net cash inflows of USD 16.6bn, mainly driven by net inflows of USD 8.0bn from financial assets and liabilities at fair value held for trading and derivative financial instruments, USD 6.0bn from brokerage receivables and payables, USD 5.7bn from financial assets and liabilities at fair value not held for trading and other financial assets and liabilities, as well as USD 4.4bn from securities financing transactions at amortized cost. These inflows were partly offset by a net outflow from loans and advances to customers and customer deposits of USD 5.2bn and income tax paid of USD 1.6bn.

Investing activities

Investing activities resulted in a net cash outflow of USD 12.4bn in 2022, compared with USD 2.1bn in 2021, primarily related to a cash outflow of USD 12.0bn from net purchases of debt securities measured at amortized cost.

Financing activities

Financing activities resulted in a net cash outflow of USD 9.1bn in 2022, compared with an inflow of USD 10.3bn in 2021, mainly due to net repayment of short-term debt of USD 12.2bn, net cash used to repurchase treasury shares of USD 6.0bn and a dividend distribution to shareholders of USD 1.7bn. This outflow was partly offset by net issuance proceeds of USD 11.4bn from debt designated at fair value and long-term debt measured at amortized cost.

› **Refer to "Primary financial statements and share information" in the "Consolidated financial statements" section of this report for more information about cash flows**

Statement of cash flows (condensed)

	For the year ended	
USD bn	31.12.22	31.12.21
Net cash flow from / (used in) operating activities	14.6	31.4
Net cash flow from / (used in) investing activities	(12.4)	(2.1)
Net cash flow from / (used in) financing activities	(9.1)	10.3
Effects of exchange rate differences on cash and cash equivalents	(5.7)	(5.3)
Net increase / (decrease) in cash and cash equivalents	(12.6)	34.3
Cash and cash equivalents at the end of the year	195.3	207.9

Currency management

Strategy, objectives and governance

Group Treasury focuses on three main areas of currency risk management: (i) currency-matched funding and investment of non-US-dollar assets and liabilities; (ii) sell-down of foreign currency International Financial Reporting Standards profits and losses; and (iii) selective hedging of anticipated non-US-dollar profits and losses to further mitigate the effect of structural imbalances in the balance sheet. Group Treasury also manages structural currency composition at the consolidated Group level.

Currency-matched funding and investment of non-US-dollar assets and liabilities

For monetary balance sheet items and other investments, as far as is practical and efficient, we follow the principle of matching the currencies of our assets and liabilities for funding purposes. This avoids profits and losses arising from the translation of non-US-dollar assets and liabilities.

Net investment hedge accounting is applied to non-US-dollar core investments to balance the effect of foreign exchange movements on both common equity tier 1 (CET1) capital and the CET1 capital ratio.

› **Refer to "Note 1a Material accounting policies" and "Note 25 Hedge accounting" in the "Consolidated financial statements" section of this report for more information**

› **Refer to "Capital management" in this section for more information about our active management of sensitivity to currency movements and the effect thereof on our key ratios**

Sell-down of non-US-dollar reported profits and losses

Income statement items of foreign subsidiaries and branches of UBS AG with a functional currency other than the US dollar are translated into US dollars at average exchange rates. To reduce earnings volatility on the translation of previously recognized earnings in foreign currencies, Group Treasury centralizes the profits and losses (under IFRS) arising in UBS AG and its branches and sells or buys the profit or loss for US dollars on a monthly basis. Our foreign subsidiaries follow a similar monthly sell-down process into their own functional currencies. Retained earnings in foreign subsidiaries with a functional currency other than the US dollar are integrated and managed as part of our net investment hedge accounting program.

Hedging of anticipated non-US-dollar profits and losses

The Group Asset and Liability Committee may at any time instruct Group Treasury to execute hedges to protect anticipated future profits and losses in foreign currencies against possible adverse trends of foreign exchange rates. Although intended to hedge future earnings, these transactions are accounted for as open currency positions and subject to internal market risk limits for value-at-risk and stress loss limits.

Dividend distribution

UBS Group AG declares dividends in US dollars. Shareholders holding shares through the SIX Swiss Exchange (ISIN: CH0244767585) will receive dividends in Swiss francs, based on a published exchange rate calculated up to five decimal places, on the day prior to the ex-dividend date. Shareholders holding shares through DTC (ISIN: CH0244767585; CUSIP: H42097107) will be paid dividends in US dollars.

› **Refer to the "Standalone financial statements" section of this report for more information about the proposed dividend distribution of UBS Group AG**

UBS shares

UBS Group AG shares

Audited | As of 31 December 2022, IFRS equity attributable to shareholders amounted to USD 56,876m, represented by 3,524,635,722 shares issued. Shares issued decreased by 177,787,273 shares in 2022 as the shares acquired under the 2021 share repurchase program from its inception in 2021 until 18 February 2022 were canceled by means of a capital reduction, as approved by shareholders at the 2022 Annual General Meeting (the AGM).

Each share has a nominal value of CHF 0.10, carries one vote if entered into the share register as having the right to vote, and also entitles the holder to a proportionate share of distributed dividends. All shares are fully paid up. As the Articles of Association of UBS Group AG indicate, there are no other classes of shares and no preferential rights for shareholders. ▲

› **Refer to "Share information and earnings per share" in the "Consolidated financial statements" section of this report for more information about the planned conversion of our share capital nominal currency in 2023**

› **Refer to the "Corporate governance" section of this report for more information about UBS shares**

UBS Group share information

	As of or for the year ended		% change from
	31.12.22	31.12.21	31.12.21
Shares issued	3,524,635,722	3,702,422,995	(5)
Treasury shares[1]	416,909,010	302,815,328	38
of which: related to share repurchase program 2021	*62,548,000*	*152,596,273*	*(59)*
of which: related to share repurchase program 2022	*233,901,950*		
Shares outstanding	3,107,726,712	3,399,607,667	(9)
Basic earnings per share (USD)[2]	2.34	2.14	9
Basic earnings per share (CHF)[3]	2.23	1.96	14
Diluted earnings per share (USD)[2]	2.25	2.06	9
Diluted earnings per share (CHF)[3]	2.14	1.88	14
Equity attributable to shareholders (USD m)	56,876	60,662	(6)
Less: goodwill and intangible assets (USD m)	6,267	6,378	(2)
Tangible equity attributable to shareholders (USD m)	50,609	54,283	(7)
Ordinary cash dividends per share (USD)[4,5]	0.55	0.50	10
Total book value per share (USD)	18.30	17.84	3
Tangible book value per share (USD)	16.28	15.97	2
Share price (USD)[6]	18.61	18.01	3
Market capitalization (USD m)	57,848	61,230	(6)

1 Based on a settlement date view. 2 Refer to "Share information and earnings per share" in the "Consolidated financial statements" section of this report for more information. 3 Basic and diluted earnings per share in Swiss francs are calculated based on a translation of net profit / (loss) under our US dollar presentation currency. 4 Dividends and / or distributions out of the capital contribution reserve are normally approved and paid in the year subsequent to the reporting period. 5 Refer to "Statement of proposed appropriation of total profit and dividend distribution out of total profit and capital contribution reserve" in the "Standalone financial statements" section of this report for more information. 6 Represents the share price as listed on the SIX Swiss Exchange, translated to US dollars using the closing exchange rate as of the respective date.

Holding of UBS Group AG shares

Group Treasury holds UBS Group AG shares to hedge future share delivery obligations related to employee share-based compensation awards, and also holds shares purchased under share repurchase programs. As of 31 December 2022, we held a total of 416,909,010 treasury shares (31 December 2021: 302,815,328).

Our 2021 share repurchase program was concluded on 29 March 2022 with the purchase of an additional 87.7m shares in 2022 for an acquisition cost of USD 1,637m (CHF 1,516m). The 177.8m shares repurchased under this program from its inception until 18 February 2022 for a total acquisition cost of USD 3,022m (CHF 2,775m) were canceled by means of a capital reduction, as approved by shareholders at the 2022 AGM. We also intend to cancel the remaining shares purchased under the 2021 program, subject to shareholder approval at the 2023 AGM.

On 31 March 2022, we commenced a new, 2022 share repurchase program of up to USD 6bn. Shares acquired under this program totaled 233.9m as of 31 December 2022 for a total acquisition cost of USD 3,944m (CHF 3,808m) and are intended to be canceled by means of a capital reduction, pending approval by shareholders at a future AGM.

Looking ahead, we intend to commence a new, 2023 repurchase program of up to USD 6bn over two years and expect to execute more than USD 5bn of share repurchases under both the existing, 2022 repurchase program and the new program in 2023.

Treasury shares held to hedge our share delivery obligations related to employee share-based compensation awards totaled 119m shares as of 31 December 2022 (31 December 2021: 149m). Share delivery obligations related to employee share-based compensation awards totaled 178m shares as of 31 December 2022 (31 December 2021: 175m) and are calculated on the basis of undistributed notional share awards, taking applicable performance conditions into account. Treasury shares held are delivered to employees at exercise or vesting. As of 31 December 2022, up to 122m UBS Group AG shares (31 December 2021: 122m) could have been issued out of conditional capital to satisfy share delivery obligations of any future employee share option programs or similar awards.

The Investment Bank also holds a limited number of UBS Group AG shares, primarily in its capacity as a market-maker with regard to UBS Group AG shares and related derivatives, and to hedge certain issued structured debt instruments.

The table below outlines the market purchases of UBS Group AG shares by Group Treasury. It does not include the activities of the Investment Bank.

Treasury share purchases

	Share repurchase programs[1]					Other treasury shares purchased[2]	
Month of purchase[3]	Number of shares	Average price in USD	Remaining volume of 2021 share repurchase program in CHF m at month-end	Remaining volume of 2021 share repurchase program in USD m at month-end[4]	Remaining volume of 2022 share repurchase program in USD m at month-end	Number of shares	Average price in USD
January 2022			1,706	1,843			
February 2022	38,231,000	20.05	999	1,089			
March 2022	51,928,000	17.68	190[5]	205[5]	5,952		
April 2022	29,420,000	18.14			5,418		
May 2022	31,670,000	17.65			4,859		
June 2022	32,124,500	16.78			4,320		
July 2022	32,152,000	15.83			3,811		
August 2022	18,284,450	16.41			3,511		
September 2022	14,114,500	15.23			3,296	12,510,000	16.52
October 2022	30,526,500	15.15			2,833		
November 2022	23,769,000	17.70			2,413		
December 2022	20,571,000	18.40			2,034		

1 In February 2021, UBS initiated a share repurchase program of up to CHF 4bn and this program was concluded on 29 March 2022. UBS has an active share repurchase program to buy back up to USD 6bn of its own shares over the two-year period started in March 2022. The share buybacks were transacted in Swiss francs on a separate trading line on the SIX Swiss Exchange. 2 This table excludes purchases for the purpose of hedging derivatives linked to UBS Group AG shares and for market-making in UBS Group AG shares. The table also excludes UBS Group AG shares purchased by post-employment benefit funds for UBS employees, which are managed by a board of UBS management and employee representatives in accordance with Swiss law. UBS's post-employment benefit funds purchased 1,243,164 UBS Group AG shares during the year and held 14,213,559 UBS Group AG shares as of 31 December 2022. 3 Based on the transaction date of the respective treasury share purchases. 4 The remaining volume of the 2021 share repurchase program in US dollars was calculated based on the remaining volume in Swiss francs and the respective month-end closing exchange rate. 5 The 2021 share repurchase program was concluded on 29 March 2022.

Trading volumes

	For the year ended		
1,000 shares	31.12.22	31.12.21	31.12.20
SIX Swiss Exchange total	2,433,051	2,514,259	5,095,908
SIX Swiss Exchange daily average	9,579	9,899	20,222
New York Stock Exchange total	186,468	137,366	260,681
New York Stock Exchange daily average	743	545	1,030

Source: Reuters

Listing of UBS Group AG shares

UBS Group AG shares are listed on the SIX Swiss Exchange (SIX). They are also listed on the New York Stock Exchange (the NYSE) as global registered shares. As such, they can be traded and transferred across applicable borders, without the need for conversion, with identical shares traded on different stock exchanges in different currencies.

During 2022, the average daily trading volume of UBS Group AG shares was 9.6m shares on SIX and 0.7m shares on the NYSE. SIX is expected to remain the main venue for determining the movement in our share price, because of the high volume traded on this exchange.

During the hours in which both SIX and the NYSE are simultaneously open for trading, price differences between these exchanges are likely to be arbitraged away by professional market-makers. Accordingly, the share price will typically be similar between the two exchanges when considering the prevailing US dollar / Swiss franc exchange rate. When SIX is closed for trading, globally traded volumes will typically be lower. However, the specialist firm making a market in UBS Group AG shares on the NYSE is required to facilitate sufficient liquidity and maintain an orderly market in UBS Group AG shares throughout normal NYSE trading hours.

Ticker symbols UBS Group AG

Trading exchange	SIX / NYSE	Bloomberg	Reuters
SIX Swiss Exchange	UBSG	UBSG SW	UBSG.S
New York Stock Exchange	UBS	UBS UN	UBS.N

Security identification codes

ISIN	CH0244767585
Valoren	24 476 758
CUSIP	CINS H42097 10 7

Corporate governance and compensation

Management report

Audited information according to the Swiss law and applicable regulatory requirements and guidance

Disclosures provided are in line with the requirements of the Swiss Code of Obligations (tables containing such information are marked as "Audited" throughout this section), as well as other applicable regulations and guidance.

Corporate governance

Table of contents

Corporate governance

UBS Group AG is subject to, and complies with, all relevant Swiss legal and regulatory requirements regarding corporate governance, including the SIX Swiss Exchange's Directive on Information relating to Corporate Governance (the SIX Swiss Exchange Corporate Governance Directive) and the standards established in the Swiss Code of Best Practice for Corporate Governance.

The revised Swiss Code of Obligations entered into force on 1 January 2023. The correspondingly amended Articles of Association of UBS Group AG (the AoA) will be submitted to the Annual General Meeting (the AGM) on 5 April 2023 for approval. The implementation of resulting amendments based on the revised Swiss Code of Obligations will be reflected in the Annual Report 2023.

As a foreign company with shares listed on the New York Stock Exchange (the NYSE), UBS Group AG also complies with all relevant corporate governance standards applicable to foreign private issuers.

The Organization Regulations of UBS Group AG, adopted by the Board of Directors (the BoD) based on Art. 716b of the Swiss Code of Obligations and Art. 25 and 27 of the AoA, constitute our primary corporate governance guidelines.

To the extent practicable, the governance structures of UBS Group AG and UBS AG are aligned. UBS AG complies with all relevant Swiss legal and regulatory corporate governance requirements. As a foreign private issuer with debt securities listed on the NYSE, UBS AG also complies with the relevant NYSE corporate governance standards. The discussion in this section refers to both UBS Group AG and UBS AG, unless specifically noted otherwise or unless the information discussed is relevant only to listed companies and therefore only applicable to UBS Group AG. This approach is in line with US Securities and Exchange Commission (SEC) regulations and NYSE standards.

› **Refer to the Articles of Association of UBS Group AG and of UBS AG, and to the Organization Regulations of UBS Group AG, available at *ubs.com/governance* and *ubs.com/ubs-ag-governance,* for more information**

› **The SIX Swiss Exchange Corporate Governance Directive is available at *ser-ag.com/content/dam/serag/downloads/regulation/listing/directives/dcg-en.pdf,* the Swiss Code of Best Practice for Corporate Governance at *economiesuisse.ch/en/publications/swiss-code-best-practice-corporate-governance* and the NYSE rules at *nyseguide.srorules.com/listed-company-manual***

Differences from corporate governance standards relevant to US-listed companies

The NYSE standards on corporate governance require foreign private issuers to disclose any significant ways in which their corporate governance practices differ from those that have to be followed by domestic companies. The key differences are discussed below.

Responsibility of the Audit Committee regarding independent auditors

Our Audit Committee is responsible for the compensation, retention and oversight of independent auditors. It assesses the performance and qualifications of external auditors and submits proposals for appointment, reappointment or removal of independent auditors to the BoD. As required by the Swiss Code of Obligations, the BoD submits its proposals for a shareholder vote at the AGM. Under NYSE standards audit committees are responsible for appointing independent auditors.

Discussion of risk assessment and risk management policies by the Risk Committee

As per the Organization Regulations of UBS Group AG and UBS AG, the Risk Committee, instead of the Audit Committee, as per NYSE standards, oversees our risk principles and risk capacity on behalf of the BoD. The Risk Committee is responsible for monitoring our adherence to those risk principles and monitoring whether business divisions and control units maintain appropriate systems of risk management and control.

Supervision of the internal audit function

Although under NYSE standards only audit committees supervise internal audit functions, the Chairman of the BoD (the Chairman) and the Audit Committee share the supervisory responsibility and authority with respect to the internal audit function.

Responsibility of the Compensation Committee for performance evaluations of senior management of UBS Group AG

In line with Swiss law, our Compensation Committee, together with the BoD, proposes for shareholder approval at the AGM the maximum aggregate amount of compensation for the BoD, the maximum aggregate amount of fixed compensation for the Group Executive Board (the GEB) and the aggregate amount of variable compensation for the GEB. The members of the Compensation Committee are elected by the AGM. Under NYSE standards it is the responsibility of compensation committees to evaluate senior management's performance and to determine and approve, as a committee or together with the other independent directors, the compensation thereof.

Proxy statement reports of the Audit Committee and the Compensation Committee

NYSE standards require the aforementioned committees to submit their reports directly to shareholders. However, under Swiss law all reports to shareholders, including those from the aforementioned committees, are provided to and approved by the BoD, which has ultimate responsibility to the shareholders.

Shareholder votes on equity compensation plans

NYSE standards require shareholder approval for the establishing of and material revisions to all equity compensation plans. However, as per Swiss law, the BoD approves compensation plans. Shareholder approval is only mandatory if equity-based compensation plans require an increase in capital. No shareholder approval is required if shares for such plans are purchased in the market.

› **Refer to "Board of Directors" in this section for more information about the BoD's committees**

› **Refer to "Share capital structure" in this section for more information about UBS Group AG's capital**

Group structure and shareholders

Operational Group structure

As of 31 December 2022, the operational structure of the Group is composed of the Global Wealth Management, Personal & Corporate Banking, Asset Management and Investment Bank business divisions, as well as Group Functions.

› **Refer to the "Our businesses" section of this report for more information about our business divisions and Group Functions**

› **Refer to "Financial and operating performance" and to "Note 2a Segment reporting" in the "Consolidated financial statements" section of this report for more information**

› **Refer to the "Our evolution" section of this report for more information**

Listed and non-listed companies belonging to the Group

The Group includes a number of consolidated entities, of which only UBS Group AG shares are listed.

UBS Group AG's registered office is at Bahnhofstrasse 45, CH-8001 Zurich, Switzerland. UBS Group AG shares are listed on the SIX Swiss Exchange (ISIN: CH0244767585) and on the NYSE (CUSIP: H42097107).

› **Refer to "UBS shares" in the "Capital, liquidity and funding, and balance sheet" section of this report for information about UBS Group AG's market capitalization and shares held by Group entities**

› **Refer to "Note 28 Interests in subsidiaries and other entities" in the "Consolidated financial statements" section of this report for more information about the significant subsidiaries of the Group**

Significant shareholders

General rules

Under the Swiss Federal Act on Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading of 19 June 2015 (the FMIA), anyone directly, indirectly or acting in concert with third parties holding shares in a company listed in Switzerland or holding derivative rights related to shares in such a company directly, indirectly or in concert with third parties must notify the company and the SIX Swiss Exchange (SIX) if the holding reaches, falls below or exceeds one of the following percentage thresholds: 3, 5, 10, 15, 20, 25, 33⅓, 50 or 66⅔% of voting rights, regardless of whether or not such rights may be exercised. Nominee companies that cannot autonomously decide how voting rights are exercised are not required to notify the company and SIX if they reach, exceed or fall below the aforementioned thresholds.

Pursuant to the Swiss Code of Obligations, we disclose in "Note 24 Significant shareholders" to the UBS Group AG standalone financial statements the identity of any shareholder with a holding of more than 5% of the total share capital of UBS Group AG.

Shareholders subject to FMIA disclosure notifications

According to the mandatory FMIA disclosure notifications filed with UBS Group AG and SIX, as of 31 December 2022, the following entities held more than 3% of the total share capital of UBS Group AG: BlackRock Inc., New York, which disclosed a holding of 5.23% on 29 June 2022; Dodge & Cox International Stock Fund, San Francisco, which disclosed a holding of 3.02% on 28 January 2022; Massachusetts Financial Services Company, Boston, which disclosed a holding of 3.01% on 25 June 2021; Artisan Partners Limited Partnership, Milwaukee, which disclosed a holding of 3.15% on 18 November 2020; and Norges Bank, Oslo, which disclosed a holding of 3.01% on 25 July 2019.

As registration in the UBS share register is optional, the aforementioned shareholders that crossed the indicated percentage thresholds and were required to notify their holding to UBS and SIX do not necessarily appear in the table below, as such table only discloses registered shareholders.

In accordance with the FMIA, the aforementioned holdings are calculated in relation to the total share capital of UBS Group AG reflected in the AoA at the time of the respective disclosure notification.

Information on disclosures under the FMIA is available at *ser-ag.com/en/resources/notifications-market-participants/significant-shareholders.html.*

Shareholders registered in the UBS share register with 3% or more of the share capital of UBS Group AG

As a supplement to the mandatory disclosure requirements according to the SIX Swiss Exchange Corporate Governance Directive, we disclose in the table below the shareholders (acting in their own name or in their capacity as nominees for other investors or beneficial owners) that were registered in the UBS share register with 3% or more of the total share capital of UBS Group AG as of 31 December 2022.

› **Refer to "Shareholders' participation rights" in this section for more information about voting rights, restrictions and representation**

Audited |

Shareholders registered in the UBS share register with 3% or more of the total share capital[1]

% of share capital	31.12.22	31.12.21	31.12.20
Chase Nominees Ltd., London[2]	8.60	8.89	10.39
DTC (Cede & Co.), New York[2,3]	7.12	5.78	4.99
Nortrust Nominees Ltd., London[2]	4.33	4.80	5.15

1 As registration in the UBS share register is optional, shareholders crossing the threshold percentages requiring SIX notification under the FMIA do not necessarily appear in this table. 2 Nominee companies and securities clearing organizations cannot autonomously decide how voting rights are exercised and are therefore not obligated to notify UBS and SIX if they reach, exceed or fall below the threshold percentages requiring disclosure notification under the FMIA. Consequently, they do not appear in the "Shareholders subject to FMIA disclosure notifications" section above. 3 DTC (Cede & Co.), New York, "The Depository Trust Company," is a US securities clearing organization.

Cross-shareholdings

UBS Group AG has no cross-shareholdings where reciprocal ownership would be in excess of 5% of capital or voting rights with any other company.

Share capital structure

Ordinary share capital

At year-end 2022, UBS Group AG had 3,524,635,722 issued shares with a nominal value of CHF 0.10 each, equating to a share capital of CHF 352,463,572.20.

Under Swiss company law, shareholders must approve, in a general meeting of shareholders, any increase or reduction in the ordinary share capital or the creation of conditional or authorized share capital.

In 2022, our shareholders were asked to approve a reduction of share capital by way of canceling 177,787,273 registered shares repurchased under the 2021 share buyback program.

In 2022, our shareholders were not asked to approve the creation of conditional or authorized share capital.

No shares were issued out of existing conditional capital, as there were no employee options and stock appreciation rights outstanding.

Following revisions to Swiss Corporate Law that are effective from 1 January 2023, the BoD will propose at the 2023 AGM that the shareholders approve the conversion of the share capital currency of UBS Group AG from the Swiss franc to the US dollar.

› **Refer to "Share information and earnings per share" in the "Consolidated financial statements" section of this report for information about the conversion of the share capital currency**

Distribution of UBS shares

As of 31 December 2022	Shareholders registered		Shares registered	
Number of shares registered	Number	%	Number	% of shares issued
1–100	21 641	11.6	1 189 373	0.0
101–1,000	95 818	51.4	45 447 811	1.3
1,001–10,000	62 369	33.4	182 418 473	5.2
10,001–100,000	6 086	3.3	144 786 290	4.1
100,001–1,000,000	512	0.3	149 728 515	4.2
1,000,001–5,000,000	83	0.0	178 206 417	5.1
5,000,001–35,246,357 (1%)	24	0.0	253 068 282	7.2
1–2%	3	0.0	134 680 829	3.8
2–3%	0	0.0	0	0.0
3–4%	0	0.0	0	0.0
4–5%	1	0.0	152 567 310	4.3
Over 5%	2[1]	0.0	553 962 520	15.7
Total shares registered	186 539	100.0	1 796 055 820[2]	51.0
Shares not registered[3]			1 728 579 902	49.0
Total	186 539	100.0	3 524 635 722	100.0

1 On 31 December 2022, Chase Nominees Ltd., London, entered as a nominee, was registered with 8.60% of all UBS shares issued. However, according to the provisions of UBS Group AG, voting rights of nominees are limited to a maximum of 5% of all UBS shares issued. The US securities clearing organization DTC (Cede & Co.), New York, was registered with 7.12% of all UBS shares issued and is not subject to this 5% voting limit as a securities clearing organization. 2 Of the total shares registered, 264,874,790 shares did not carry voting rights. 3 Shares not entered in the UBS share register as of 31 December 2022.

Conditional share capital

At year-end 2022, the following conditional share capital was available to UBS Group AG's BoD.

– A maximum of CHF 38,000,000 represented by up to 380,000,000 fully paid registered shares with a nominal value of CHF 0.10 each, to be issued through the voluntary or mandatory exercise of conversion rights and / or warrants granted in connection with the issuance of bonds or similar financial instruments on national or international capital markets. This conditional capital allowance was approved at the Extraordinary General Meeting (the EGM) held on 26 November 2014, having originally been approved at the AGM of UBS AG on 14 April 2010. The BoD has not made use of such allowance.
– A maximum of CHF 12,170,583 represented by 121,705,830 fully paid registered shares with a nominal value of CHF 0.10 each, to be issued upon exercise of employee options and stock appreciation rights issued to employees and members of the management and of the BoD of UBS Group AG and its subsidiaries. This conditional capital allowance was approved by the shareholders at the same EGM in 2014.

› **Refer to article 4a of the AoA for more information about the terms and conditions of the issue of shares out of existing conditional capital. The AoA are available at *ubs.com/governance***

› **Refer to the "Our evolution" section of this report for more information**

Conditional capital of UBS Group AG

As of 31 December 2022	Maximum number of shares to be issued	Year approved by Extraordinary General Meeting	% of shares issued
Employee equity participation plans	121,705,830	2014	3.45
Conversion rights / warrants granted in connection with bonds	380,000,000	2014	10.78
Total	501,705,830		14.23

Authorized share capital

UBS Group AG had no authorized capital available to issue on 31 December 2022.

Changes in capital

In accordance with International Financial Reporting Standards (IFRS), Group equity attributable to shareholders was USD 56.9bn as of 31 December 2022 (2021: USD 60.7bn; 2020: USD 59.4bn). The equity of UBS Group AG shareholders was represented by 3,524,635,722 issued shares as of 31 December 2022 (31 December 2021: 3,702,422,995 shares; 31 December 2020: 3,859,055,395 shares).

› **Refer to "Statement of changes in equity" in the "Consolidated financial statements" section of this report for more information about changes in shareholders' equity over the last three years**

Ownership

Ownership of UBS Group AG shares is widely spread. The tables in this section provide information about the distribution of UBS Group AG shareholders by category and geographic location. This information relates only to shareholders registered in the UBS share register and cannot be assumed to be representative of UBS Group AG's entire investor base or the actual beneficial ownership. Only shareholders registered in the share register as "shareholders with voting rights" are entitled to exercise voting rights.

› **Refer to "Shareholders' participation rights" in this section for more information**

As of 31 December 2022, 1,531,181,030 UBS Group AG shares were registered in the share register and carried voting rights, 264,874,790 shares were registered in the share register without voting rights, and 1,728,579,902 shares were not registered in the UBS share register. All shares were fully paid up and eligible for dividends. There are no preferential rights for shareholders, and no other classes of shares have been issued by UBS Group AG.

Shareholders, legal entities and nominees: type and geographical distribution

As of 31 December 2022	Shareholders registered Number	%
Individual shareholders	182 738	98.0
Legal entities	3 646	1.9
Nominees, fiduciaries	155	0.1
Total shares registered	186 539	100.0
Shares not registered		
Total	186 539	100.0

	Individual shareholders		Legal entities		Nominees		Total	
	Number	%	Number	%	Number	%	Number	%
Americas	**1 710**	**0.9**	**93**	**0.1**	**78**	**0.0**	**1 881**	**1.0**
of which: USA	*1 235*	*0.7*	*52*	*0.0*	*75*	*0.0*	*1 362*	*0.7*
Asia Pacific	**5 008**	**2.7**	**93**	**0.0**	**9**	**0.0**	**5 110**	**2.7**
Europe, Middle East and Africa	**12 068**	**6.5**	**243**	**0.1**	**40**	**0.0**	**12 351**	**6.6**
of which: Germany	*3 821*	*2.0*	*30*	*0.0*	*3*	*0.0*	*3 854*	*2.1*
of which: UK	*4 563*	*2.4*	*8*	*0.0*	*7*	*0.0*	*4 578*	*2.5*
of which: rest of Europe	*3 415*	*1.8*	*201*	*0.0*	*29*	*0.0*	*3 645*	*2.0*
of which: Middle East and Africa	*269*	*0.1*	*4*	*0.0*	*1*	*0.0*	*274*	*0.1*
Switzerland	**163 952**	**87.9**	**3 217**	**1.7**	**28**	**0.0**	**167 197**	**89.6**
Total shares registered								
Shares not registered								
Total	182 738	98.0	3 646	1.9	155	0.1	186 539	100.0

At year-end 2022, UBS owned 416,909,010 UBS Group AG registered shares, which corresponded to 11.83% of the total share capital of UBS Group AG. At the same time, UBS had acquisition positions relating to 440,347,367 voting rights of UBS Group AG and disposal positions relating to 182,025,794 such rights, corresponding to 12.49% and 5.16% of the total voting rights of UBS Group AG, respectively. Of the disposal positions, 177,610,490 related to voting rights on shares deliverable in respect of employee awards. The calculation methodology for the acquisition and disposal positions is based on the Ordinance of the Swiss Financial Market Supervisory Authority on Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading, which states that all future potential share delivery obligations, irrespective of the contingent nature of the delivery, must be considered.

Employee share ownership

Employee share ownership is encouraged and made possible in a variety of ways. Our Equity Plus Plan is a voluntary plan that provides eligible employees with the opportunity to purchase UBS Group AG shares at market value and receive, at no additional cost, one notional UBS Group AG share for every three shares purchased. Additional shares vest after a maximum of three years, provided the employee remains employed by UBS and has retained the purchased shares throughout the holding period. The Equity Ownership Plan (the EOP) is a mandatory deferral plan for all employees (except GEB members) with regulatory-driven deferral requirements or total compensation greater than USD / CHF 300,000. EOP recipients receive a portion of their deferred performance award in notional shares (or notional funds for employees in Investment Areas within Asset Management). GEB members receive the equity-based Long-Term Incentive Plan (the LTIP) instead of the EOP. Both the EOP and LTIP include employment conditions and malus conditions that allow the firm to reduce or fully forfeit unvested deferred awards under certain circumstances, pursuant to performance and harmful acts provisions. In addition, forfeiture is triggered in cases where employment has been terminated for cause. Underlining our emphasis on sustainable performance and risk management, and our focus on achieving growth ambitions, LTIP awards will only vest if predetermined performance conditions are met.

On 31 December 2022, UBS employees held at least 7.9% of UBS shares outstanding (including approximately 5.05% in unvested deferred notional shares from our compensation programs). These figures are based on known shareholding information from employee participation plans, personal holdings with UBS and selected individual retirement plans. At the end of 2022, at least 25.5% of all employees held UBS shares through the firm's employee share participation plans.

› **Refer to the "Compensation" section of this report for more information**

Trading restrictions in UBS shares

UBS employees with regular access to unpublished price-sensitive information about the firm are subject to specific restrictions in respect to UBS financial instruments, including, but not limited to, pre-clearance requirements and regular blackout periods. Such UBS employees are not permitted to trade UBS financial instruments in the period starting from the close of business in New York on the seventh business day of the final month of the financial quarter of UBS Group AG and ending on the day of the publication of the quarterly financial results.

Shares and participation certificates

UBS Group AG has a single class of shares, which are registered shares in the form of uncertificated securities (in the sense of the Swiss Code of Obligations) and intermediary-held securities (in the sense of the Swiss Federal Act on Intermediated Securities). Each registered share has a nominal value of CHF 0.10 and carries one vote, subject to the restrictions set out under "Transferability, voting rights and nominee registration" below.

We have no participation certificates outstanding.

Shareholders, legal entities and nominees: type and geographical distribution (continued)

	Shares registered	
As of 31 December 2022	Number	%
Individual shareholders	384 263 314	10.9
Legal entities	490 864 772	13.9
Nominees, fiduciaries	920 927 734	26.1
Total shares registered	1 796 055 820	51.0
Shares not registered	1 728 579 902	49.0
Total	3 524 635 722	100.0

	Individual shareholders		Legal entities		Nominees		Total	
	Number of shares	%	Number of shares	%	Number of shares	%	Number of shares	%
Americas	**2 427 163**	**0.1**	**29 166 035**	**0.8**	**342 441 815**	**9.7**	**374 035 013**	**10.6**
of which: USA	*935 175*	*0.0*	*21 746 373*	*0.6*	*342 247 810*	*9.7*	*364 929 358*	*10.4*
Asia Pacific	**19 829 362**	**0.6**	**12 908 549**	**0.4**	**7 244 419**	**0.2**	**39 982 330**	**1.1**
Europe, Middle East and Africa	**42 154 279**	**1.2**	**72 455 397**	**2.1**	**557 324 269**	**15.8**	**671 933 945**	**19.1**
of which: Germany	*11 365 680*	*0.3*	*1 841 712*	*0.1*	*11 597 965*	*0.4*	*24 805 357*	*0.7*
of which: UK	*19 125 762*	*0.5*	*280 984*	*0.0*	*517 282 579*	*14.7*	*536 689 325*	*15.2*
of which: rest of Europe	*10 608 646*	*0.3*	*31 497 076*	*0.9*	*28 310 742*	*0.8*	*70 416 464*	*2.0*
of which: Middle East and Africa	*1 054 191*	*0.0*	*38 835 625*	*1.1*	*132 983*	*0.0*	*40 022 799*	*1.1*
Switzerland	**319 852 510**	**9.1**	**376 334 791**	**10.7**	**13 917 231**	**0.4**	**710 104 532**	**20.1**
Total shares registered	384 263 314	10.9	490 864 772	13.9	920 927 734	26.1	1 796 055 820	51.0
Shares not registered	0		0		0		1 728 579 902	49.0
Total	384 263 314	10.9	490 864 772	13.9	920 927 734	26.1	3 524 635 722	100.0

Our shares are listed on the NYSE as global registered shares. As such, they can be traded and transferred across applicable borders, without the need for conversion, with identical shares traded on different stock exchanges in different currencies.

› **Refer to "UBS shares" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information**

Distributions to shareholders

The decision to pay a dividend and the amount of any dividend depend on a variety of factors, including our profits, cash flow generation and capital ratios.

At the 2023 AGM, the BoD is proposing to shareholders for approval a dividend of USD 0.55 per share for the 2022 financial year. Shareholders whose shares are held through SIX SIS AG will receive dividends in Swiss francs, based on a public exchange rate on the day prior to the ex-dividend date. Shareholders holding shares through The Depository Trust Company in New York and Computershare will be paid dividends in US dollars.

In compliance with Swiss tax law, 50% of the dividend will be paid out of retained earnings and the balance will be paid out of the capital contribution reserve. Dividends paid out of capital contribution reserves are not subject to Swiss withholding tax. The portion of the dividend paid out of retained earnings will be subject to a 35% Swiss withholding tax. For US federal income tax purposes, we expect that the dividend will be paid out of current or accumulated earnings and profits.

Provided that the proposed dividend distribution out of retained earnings and out of the capital contribution reserve will be approved at the AGM on 5 April 2023, the payment of USD 0.55 per share will be made on 14 April 2023 to holders of shares on the record date 13 April 2023. The shares will be traded ex-dividend as of 12 April 2023 and, accordingly, the last day on which the shares may be traded with entitlement to receive the dividend will be 11 April 2023.

In February 2022, the BoD announced a new two-year share buyback program. At the 2022 AGM, the shareholders authorized the BoD to buy back shares for cancellation purposes in an aggregate value of up to USD 6bn until the 2024 AGM. Any shares bought back under the program are intended to be canceled by way of capital reduction, which will be subject to shareholder approval at one or several subsequent AGMs, and the acquisition and holding of such shares are not subject to the 10% threshold for UBS Group AG's own shares within the meaning of Art. 659 para. 1 of the Swiss Code of Obligations. The 2021 share repurchase program was concluded on 29 March 2022 with a total of 240,335,273 shares repurchased, at an overall purchase price of CHF 3.81bn. A total of 177,787,273 shares purchased up to 18 February 2022 were canceled in June 2022 upon approval at the 2022 AGM of UBS Group AG. The remaining 62,548,000 shares, repurchased between 21 February 2022 and 29 March 2022, are expected to be canceled by means of a capital reduction, to be proposed for shareholder approval at the 2023 AGM.

Looking ahead, we intend to commence a new, 2023 share repurchase program of up to USD 6bn over two years and expect to execute more than USD 5bn of share repurchases under both the existing, 2022 repurchase program and the new program in 2023.

› **Refer to "UBS shares" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information about the share repurchase programs**

Transferability, voting rights and nominee registration

We do not apply any restrictions or limitations on the transferability of shares. Voting rights may be exercised without any restrictions by shareholders entered into the share register if they expressly render a declaration of beneficial ownership according to the provisions of the AoA.

We have special provisions for the registration of nominees. Nominees are entered in the share register with voting rights up to a total of 5% of all issued UBS Group AG shares if they agree to disclose, upon our request, beneficial owners holding 0.3% or more of all issued UBS Group AG shares. An exception to the 5% voting limit rule is in place for securities clearing organizations, such as The Depository Trust Company in New York.

› **Refer to "Shareholders' participation rights" in this section for more information**

Convertible bonds and options

As of 31 December 2022, there were no contingent capital securities or convertible bonds outstanding requiring the issuance of new shares.

› **Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information about our outstanding capital instruments**

As of 31 December 2022, there were no employee options and stock appreciation rights outstanding. Option-based compensation plans are sourced by issuing new shares out of conditional capital. As of 31 December 2022, 121,705,830 unissued UBS Group AG shares in conditional share capital were available for the issuance of new shares for this purpose.

› **Refer to "Conditional share capital" in this section for more information**

› **Refer to "Note 27 Employee benefits: variable compensation" in the "Consolidated financial statements" section of this report for more information about outstanding options and stock appreciation rights**

Shareholders' participation rights

We are committed to shareholder participation in decision-making processes. Our online voting platform offers registered shareholders a convenient log-in and online voting process. Registered shareholders are sent personal invitations to the general meetings. Together with the invitation materials, they receive a personal one-time password and a QR code to easily log in to the online voting platform, where they can enter their voting instructions or order an admission card for the general meeting.

Shareholders who choose not to receive the comprehensive invitation materials are informed of upcoming general meetings by a short letter containing a personal one-time password, a QR code for online voting and a reference to *ubs.com/agm*, where all information for the upcoming meeting is available.

General meetings offer shareholders the opportunity to raise questions for the BoD, GEB and internal and external auditors. During the pandemic, when the general meetings 2020–2022 had to be held without the physical attendance of shareholders, we also offered all shareholders the opportunity to contact us with questions, which were answered in writing or during the general meeting.

Voting rights, restrictions and representation

We place no restrictions on share ownership and voting rights. However, pursuant to general principles formulated by the BoD, nominee companies, which normally represent a large number of individual shareholders and may hold an unlimited number of shares, have voting rights limited to a maximum of 5% of all issued UBS Group AG shares. This is to avoid large shareholders being entered in UBS's share register via nominee companies so as to exercise influence without directly registering their shares with UBS. Securities clearing organizations, such as The Depository Trust Company in New York, are not subject to this 5% voting limit.

Shareholders can exercise voting rights conferred by shares only if they are registered in our share register with voting rights. To register, shareholders must confirm that they have acquired UBS Group AG shares in their own name and for their own account. Nominee companies are required to sign an agreement confirming their willingness to disclose, upon our request, individual beneficial owners holding more than 0.3% of all issued UBS Group AG shares.

All shareholders registered with voting rights are entitled to participate in general meetings. If they do not wish to attend in person, they may issue instructions to support, reject or abstain for each individual item on the meeting agenda, either by giving instructions to an independent proxy in accordance with article 14 of the AoA or by appointing another registered shareholder of their choice to vote on their behalf. Alternatively, registered shareholders may issue their voting instructions to the independent proxy electronically through our online voting platform. Nominee companies normally submit the proxy material to the beneficial owners and forward the collected votes to the independent proxy.

› **Refer to article 14 of the AoA, available at *ubs.com/governance*, for more information about the issuing of instructions to independent voting right representatives**

Statutory quorums

Motions are decided at a general meeting by an absolute majority of the votes cast, excluding blank and invalid ballots. For the approval of certain specific issues, the Swiss Code of Obligations requires a positive vote from a two-thirds majority of the votes represented at the given general meeting and from a majority of the nominal value of shares represented thereat. Such issues include creating shares with privileged voting rights, introducing restrictions on the transferability of registered shares, authorizing contingent capital or a capital band and restricting or excluding shareholders' preemptive rights.

The AoA also require a two-thirds majority of votes represented for approval of any change to their provisions regarding the number of BoD members, any decision to remove one-quarter or more of the BoD members and any modification to the provision establishing this qualified quorum.

Votes and elections are generally conducted electronically to ascertain the exact number of votes cast. Voting by a show of hands is possible if a clear majority is predictable. Shareholders representing at least 3% of the votes represented may request that a vote or election be carried out electronically or by written ballot. To allow shareholders to clearly express their views on all individual topics, each agenda item is separately put to a vote and BoD members are elected on a person-by-person basis.

Convocation of general meetings of shareholders

The AGM must be held within six months of the close of the financial year (i.e., 31 December). In 2023, the AGM will take place on 5 April.

Extraordinary general meetings (EGMs) may be convened whenever the BoD or the auditors consider it necessary. Shareholders individually or jointly representing at least 10% of the share capital may at any time, including during an AGM, require, by way of a written statement, that an EGM be convened to address a specific issue they put forward.

A personal invitation, including a detailed agenda, is made available to every registered shareholder at least 20 days ahead of each scheduled general meeting. The items on the agenda are also published in the Swiss Official Gazette of Commerce, as well as at *ubs.com/agm.*

Placing of items on the agenda

Pursuant to our AoA, shareholders individually or jointly representing shares with an aggregate minimum nominal value of CHF 62,500 may submit proposals for matters to be placed on the agenda for consideration at the next general meeting of shareholders.

At the beginning of January, the invitation to submit such proposals is published in the Swiss Official Gazette of Commerce and at *ubs.com/agm.* Requests for items to be placed on the agenda must include the actual motions to be put forward, together with a short explanation. Such requests must be submitted to the BoD at least 50 days prior to the general meeting of shareholders, including a statement from the depository bank confirming the number of shares held by the requesting shareholder(s) and that these shares are blocked from sale until the end of the general meeting of shareholders. The BoD formulates opinions on the proposals, which are published together with the motions.

Registrations in the share register

The share register of UBS Group AG, where around 185,000 shareholders are directly registered, is an internal, non-public register subject to statutory confidentiality, secrecy, privacy and data protection regulations protecting registered shareholders. In general, third parties and shareholders have no inspection rights with regard to data related to other shareholders. Disclosure of such data is permitted only in specific and limited instances. In line with the Swiss Federal Act on Data Protection, the disclosure of personal data as defined thereunder is only allowed with the consent of the registered shareholder and in cases where there is an overriding private or public interest or if explicitly provided for by Swiss law. The Swiss Federal Act on Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading contains specific reporting duties, such as in relation to significant shareholders (refer to "Significant shareholders" in this section for more information). Disclosure may also be required or requested by a court of a competent jurisdiction, by any regulatory body that regulates the conduct of UBS Group AG or by other statutory provisions.

The general rules for entry into our Swiss share register with voting rights are described in article 5 of our AoA. The same rules apply to our US transfer agent that operates the US share register for all UBS Group AG shares in a custodian account in the US, where some 255,000 US shareholders are indirectly registered via nominee companies. In order to determine the voting rights of each shareholder, our share register generally closes two business days prior to a general meeting. Our independent proxy agent processes voting instructions from shareholders as long as technically possible, generally also until two business days before a general meeting. Such technical closure of our share register facilitates the determination of the actual voting rights of every shareholder that issued a voting instruction. Irrespective of this technical closure, shares that are registered in our share register are never immobilized and are freely tradable at any time, irrespective of any issued voting instructions.

› **Refer to article 5 of our AoA, available at *ubs.com/governance*, for more information about the general rules for entry into our Swiss share register**

Board of Directors

The BoD of UBS Group AG, led by the Chairman, consists of between 6 and 12 members, as per our AoA.

The BoD decides on the strategy of the Group, upon recommendation by the Group Chief Executive Officer (the Group CEO), and is responsible for the overall direction, supervision and control of the Group and its management. It is also responsible for supervising compliance with applicable laws, rules and regulations. The BoD exercises oversight over UBS Group AG and its subsidiaries, and is responsible for establishing a clear Group governance framework to provide effective steering and supervision of the Group, taking into account the material risks to which UBS Group AG and its subsidiaries are exposed. The BoD has ultimate responsibility for the success of the Group and for delivering sustainable shareholder value within a framework of prudent and effective controls. It approves all financial statements and appoints and removes all GEB members.

The BoD of UBS AG, led by the Chairman, decides on the strategy of UBS AG upon recommendation by the President of its Executive Board and exercises the ultimate supervision of management. Its ultimate responsibility for the success of UBS AG is exercised subject to the parameters set by the Group.

Members of the Board of Directors

At the AGM on 6 April 2022, Jeremy Anderson, Claudia Böckstiegel, William C. Dudley, Patrick Firmenich, Fred Hu, Mark Hughes, Nathalie Rachou, Julie G. Richardson, Dieter Wemmer and Jeanette Wong were re-elected as members of the BoD. The Chairman, Axel A. Weber, and Reto Francioni did not stand for re-election; the biographies of Mr. Weber and Mr. Francioni can be found on pages 194 and 197 of the UBS Group AG Annual Report 2021, available under "Annual reporting" at *ubs.com/investors*. Colm Kelleher and Lukas Gähwiler were elected for their first terms, as the new Chairman and a new Board member, respectively. At that same AGM, Julie G. Richardson, Dieter Wemmer and Jeanette Wong were re-elected as members of the Compensation Committee. ADB Altorfer Duss & Beilstein AG was re-elected as independent proxy agent. Following their election, the BoD appointed Lukas Gähwiler as Vice Chairman and Jeremy Anderson as Senior Independent Director of UBS Group AG.

Article 31 of our AoA limits the number of mandates that members of the BoD may hold outside UBS Group to four mandates in listed companies and five additional mandates in non-listed companies. Mandates in companies that are controlled by us or that control us are not subject to this limitation. In addition, members of the BoD may hold no more than 10 mandates at UBS's request and 10 mandates in associations, charitable organizations, foundations, trusts, and employee welfare foundations. As of 31 December 2022, no member of the BoD reached the thresholds described in article 31 of our AoA.

The following biographies provide information about the BoD members who were in office after the 2022 AGM and the Group Company Secretary. In addition to information on mandates, the biographies include information on memberships or other activities or functions, as required by the SIX Swiss Exchange Corporate Governance Directive.

No member of the BoD currently carries out or has carried out over the past three years operational management tasks within the Group; therefore, all members of the Board are non-executive members.

All members of UBS Group AG's BoD are also members of UBS AG's BoD, and committee membership is the same for both entities. The Senior Independent Director function relates only to UBS Group AG.

In 2022, UBS AG's BoD had three permanent committees: the Audit Committee, the Compensation Committee and the Risk Committee. In addition to these, UBS Group AG also had the Corporate Culture and Responsibility Committee and the Governance and Nominating Committee as permanent committees.

Colm Kelleher

Chairman of the Board of Directors and non-executive member of the Board since 2022
- Chairperson of the Corporate Culture and Responsibility Committee since 2022
- Chairperson of the Governance and Nominating Committee since 2022

Nationality: Irish I **Year of birth:** 1957

Colm Kelleher was elected Chairman of UBS in April 2022. He served as President of Morgan Stanley until retiring from that firm in 2019, overseeing both the Institutional Securities Business and Wealth Management. Before that, he was Co-President and then President of Morgan Stanley Institutional Securities. During the global financial crisis, he held the position of CFO and Co-Head Corporate Strategy from 2007 to 2009. Mr. Kelleher is a well-respected leader in the financial services sector. His 30-year career with Morgan Stanley attests to his solid leadership experience in banking and excellent relationships around the world. He has a deep understanding of the global banking landscape and broad banking experience across all the geographic regions and major business areas in which UBS operates.

Professional experience

2016 – 2019	President, Morgan Stanley, responsible for Institutional Securities and Wealth Management
2011 – 2016	CEO of Morgan Stanley International, Morgan Stanley
2013 – 2015	President, Institutional Securities, Morgan Stanley
2010 – 2012	Co-President, Institutional Securities, Morgan Stanley
2007 – 2009	CFO and Co-Head Corporate Strategy, Morgan Stanley
2006 – 2007	Head Global Capital Markets, Morgan Stanley
2004 – 2006	Co-Head Fixed Income, Europe, Morgan Stanley
1989 – 2004	Various roles, Morgan Stanley

Education
- Master's degree, modern history, University of Oxford
- Fellow of the Institute of Chartered Accountants in England and Wales

Listed company boards
- Member of the Board of Norfolk Southern Corporation (chair of the risk and finance committee)

Other activities and functions
- Member of the Board of Directors of the Bretton Woods Committee
- Member of the Board of the Swiss Finance Council
- Member of the Board of Americans for Oxford
- Member of the Oxford Chancellor's Court of Benefactors
- Member of the Advisory Council of the British Museum
- Member of the International Advisory Council of the China Securities Regulatory Commission
- Member of the European Financial Services Round Table
- Member of the European Banking Group
- Member of the International Monetary Conference

Key competencies
- Banking (wealth management, asset management, personal and corporate banking) and insurance
- Investment banking, capital markets
- Finance, audit, accounting
- Risk management, compliance and legal

Leadership experience
- CEO, Chairman

Lukas Gähwiler

Vice Chairman and non-executive member of the Board since 2022

Nationality: Swiss | **Year of birth:** 1965

Lukas Gähwiler brings a wealth of industry experience and an in-depth understanding of UBS to the Board. He served as Chairman of the Board of UBS Switzerland AG for five years and was a member of the Group Executive Board of UBS and President UBS Switzerland from 2010 to 2016, responsible for the private clients, wealth management, corporate and institutional clients, investment banking, and asset management businesses in UBS's home market. Before joining UBS, Mr. Gähwiler worked for Credit Suisse for over twenty years, his last role being Chief Credit Officer, Global Private and Corporate Banking. In addition to his leadership and industry experience across all parts of the banking business, his strong connections and network, particularly in Switzerland, are instrumental for the firm.

Professional experience

2017 – 2022	Chairman of the Board of Directors of UBS Switzerland AG
2010 – 2016	Member of the Group Executive Board, UBS and President UBS Switzerland
2003 – 2010	Chief Credit Officer, Global Private and Corporate Banking, Credit Suisse
2002 – 2003	Head Credit Risk Management, Corporate Clients Switzerland, Credit Suisse
1998 – 2001	Chief of Staff to CEO, Private and Corporate Clients, Credit Suisse
1990 – 1998	Various senior front office roles in Corporate Clients in Switzerland and North America, Credit Suisse
1981 – 1986	Client Advisor Retail and Wealth Management, St.Galler Kantonalbank

Education

- Advanced Management Program, Harvard Business School
- MBA program, International Bankers School, New York
- Bachelor's degree, business administration, University of Applied Sciences, St. Gallen

Non-listed company boards

- Vice Chairman of the Board of Directors of Pilatus Aircraft Ltd
- Member of the Board of Directors of Ringier AG

Other activities and functions

- Vice Chairman of the Swiss Bankers Association
- Chairman of the Employers Association of Banks in Switzerland
- Member of the Board of Directors of the Swiss Employers Association
- Member of the Board of economiesuisse
- Chairman of the Foundation Board of the UBS Pension Fund
- Member of the Board of the Swiss Finance Council
- Member of the Board of Trustees of Avenir Suisse

Key competencies

- Banking (wealth management, asset management, personal and corporate banking) and insurance
- Finance, audit, accounting
- Risk management, compliance and legal
- Human resources management, including compensation

Leadership experience

- CEO, Chairman

Jeremy Anderson

Senior Independent Director since 2020 and non-executive member of the Board since 2018

- Member of the Governance and Nominating Committee since 2019
- Chairperson of the Audit Committee since 2018

Nationality: British | **Year of birth:** 1958

Jeremy Anderson is a financial services veteran, with more than 30 years' experience working in the banking and insurance sector in an advisory capacity, covering a broad range of topics, including strategy, audit and risk management, technology-enabled transformation, mergers, and bank restructuring. Before retiring from KPMG in 2017, he was its Chairman of Global Financial Services. Mr. Anderson is also an IT expert, having started out as a software developer in the early 1980s, before working in IT consulting and developing a broad knowledge of systems integration and IT outsourcing services, as well as software development. He cemented his reputation as a tech specialist by becoming a founding sponsor of KPMG's Global Fintech Network in 2014.

Professional experience

2010 – 2017	Chairman of Global Financial Services, KPMG International
2008 – 2011	Head of Clients and Markets KPMG Europe, KPMG International
2006 – 2011	Head of Financial Services KPMG Europe, KPMG International
2004 – 2006	Head of Financial Services KPMG UK, KPMG International
2002 – 2004	Member of the Group Management Board and Head of UK operations, Atos Origin SA
1985 – 2002	KPMG consulting UK, KPMG
1980 – 1985	Software developer, Triad Computing Systems

Education

- Bachelor's degree, economics, University College London

Listed company boards

- Member of the Board of Prudential plc

Other activities and functions

- Trustee of the UK's Productivity Leadership Group
- Trustee of The Kingham Hill Trust
- Trustee of St. Helen's Bishopsgate

Key competencies

- Banking (wealth management, asset management, personal and corporate banking) and insurance
- Finance, audit, accounting
- Risk management, compliance and legal
- Technology, cybersecurity

Leadership experience

- Executive board leadership

Claudia Böckstiegel

Non-executive member of the Board since 2021
- Member of the Corporate Culture and Responsibility Committee since 2022

Nationality: Swiss and German | **Year of birth:** 1964

Claudia Böckstiegel has been General Counsel and a member of the Enlarged Executive Committee of Roche Holding AG since 2020. She started her professional career as an attorney in private practice in Germany, then joined the Swiss pharmaceutical company Roche in Germany in 2001 and subsequently held various global management positions in the legal sector in Switzerland. Ms. Böckstiegel brings a wealth of know-how in a highly regulated sector. Her responsibilities at Roche Holding AG include a broad range of additional topics, such as safety, health and environment, patents, audit and risk advisory, compliance, and sustainability.

Professional experience

2020 – date	General Counsel and member of the Enlarged Executive Committee, Roche Holding AG
2016 – 2020	Head of Legal Diagnostics, F. Hoffmann-La Roche Ltd., Basel, Switzerland, Roche Group
2010 – 2016	Head Legal Business, Roche Diagnostics International Ltd, Rotkreuz, Switzerland, Roche Group
2005 – 2010	Head Legal Business, Roche Diagnostics GmbH, Mannheim, Germany, Roche Group
2001 – 2005	Legal Counsel, Roche Diagnostics GmbH, Mannheim, Germany, Roche Group
1995 – 2001	Attorney (Partner), Philipp & Littig, Mannheim, Germany
1992 – 1995	Attorney (Associate), Dr. Hermann Büttner, Karlsruhe, Germany

Education
- Master's degree, law, Universities of Mannheim and Heidelberg
- Master of Laws (LL.M.), Georgetown University, Washington, DC

Other activities and functions
- None

Key competencies
- Finance, audit, accounting
- Risk management, compliance and legal
- Regulatory authority, central bank
- ESG (environmental, social and governance)

Leadership experience
- Executive board leadership

William C. Dudley

Non-executive member of the Board since 2019
- Member of the Corporate Culture and Responsibility Committee since 2019
- Member of the Risk Committee since 2019

Nationality: American (US) | **Year of birth:** 1953

William C. Dudley served as the President and CEO of the Federal Reserve Bank of New York for nine years. He demonstrated exceptional leadership in monetary policy and as a top regulator, including during the years of the global financial crisis. During that period, his additional area of focus included cultural behavior and social and governance topics in the financial services industry. He also served as the Vice Chairman and a permanent member of the Federal Open Market Committee. Mr. Dudley brings a wealth of experience in banking and research thanks to his former management positions at Goldman Sachs Group and Morgan Guaranty Trust.

Professional experience

2009 – 2018	President and CEO, Federal Reserve Bank of New York
2007 – 2009	Executive Vice President and Head Markets Group, Federal Reserve Bank of New York
2006	Senior advisor (part-time), Goldman Sachs Group
2002 – 2005	Partner and Director US Economic Research Group, Goldman Sachs Group
1996 – 2002	Managing Director and Director US Economic Research Group, Goldman Sachs Group
1983 – 1996	Economist at Goldman Sachs Group, Morgan Guaranty Trust Company, and Board of Governors of the Federal Reserve System

Education
- Bachelor of Arts, New College of Florida
- Doctorate, economics, University of California, Berkeley

Non-listed company boards
- Member of the Board of Treliant LLC

Other activities and functions
- Senior Advisor to the Griswold Center for Economic Policy Studies, Princeton University
- Member of the Group of Thirty
- Member of the Council on Foreign Relations
- Chairman of the Bretton Woods Committee Board of Directors
- Member of the Board of the Council for Economic Education
- Opinion writer and consultant to Bloomberg Economics, Bloomberg

Key competencies
- Investment banking, capital markets
- Risk management, compliance and legal
- Regulatory authority, central bank
- ESG (environmental, social and governance)

Leadership experience
- CEO, Chairman

Patrick Firmenich

Non-executive member of the Board since 2021
- Member of the Audit Committee since 2021
- Member of the Corporate Culture and Responsibility Committee since 2021

Nationality: Swiss I **Year of birth:** 1962

Patrick Firmenich has been Chairman of the Board of Firmenich International SA, the world's largest privately owned fragrances and flavorings company, since 2016, after leading the company as CEO during a 12-year tenure. He demonstrated his entrepreneurial leadership by significantly advancing the Firmenich group's global position through organic and in-organic growth and succeeded in transforming the organization to continuously respond to client needs and the market environment. He developed an ambitious sustainability strategy for the group to lead the industry in health, safety and environmental performance. Before joining Firmenich, he held several positions in the legal and banking sectors, including working as an international investment banking analyst.

Professional experience

2014 – 2016	Vice Chairman of the Board, Firmenich International SA
2002 – 2014	CEO, Firmenich SA, Geneva
2001 – 2002	Corporate Vice President, Special Operations, Firmenich SA, Geneva
1997 – 2001	Vice President Fine Fragrance worldwide and Président Directeur Général, Firmenich & Cie, Paris, and Firmenich Inc, New York
1993 – 1997	Vice President Fine Fragrance North America, Firmenich Inc, New York
1990 – 1993	Account Manager, Firmenich & Cie, Paris
1988 – 1989	Analyst, International Investment Banking, Credit Suisse First Boston
1988	Production administrator, Firmenich SA de CV, Mexico
1984 – 1986	Attorney, Business Law, Patry, Junet, Simon & Le Fort, Geneva

Education
- Master's degree, law, University of Geneva, admitted to the bar in Geneva
- MBA, INSEAD Fontainebleau

Non-listed company boards
- Chairman of Firmenich International SA
- Member of the Board of Jacobs Holding AG

Other activities and functions
- Member of the Board of INSEAD and INSEAD World Foundation
- Member of the Advisory Council of the Swiss Board Institute

Key competencies
- Finance, audit, accounting
- Risk management, compliance and legal
- Human resources management, including compensation
- ESG (environmental, social and governance)

Leadership experience
- CEO, Chairman

Fred Hu

Non-executive member of the Board since 2018
- Member of the Governance and Nominating Committee since 2020

Nationality: Chinese I **Year of birth:** 1963

Fred Hu has been the Chairman and CEO of Primavera Capital Group, an Asia-based private investment firm focused on emerging technology and innovative industries, since founding it in 2010. Prior to that, he was a partner and Chairman for Greater China at Goldman Sachs. Mr. Hu has a profound understanding of China's economy and rapidly developing financial system, and a vast amount of experience advising and investing in leading firms in the tech, consumer and health-care sectors in China and globally. He has worked at the IMF and advised the Chinese government on economic policy.

Professional experience

2010 – date	Founder, Chairman and CEO, Primavera Capital Group, China
2008 – 2010	Partner and Chairman of Greater China, Goldman Sachs
2004 – 2008	Partner and Co-Head, Investment Banking, China, Goldman Sachs
2003 – 2004	Managing Director and Co-Head, Investment Banking, China, Goldman Sachs
2000 – 2003	Managing Director and Chief Economist and Strategist, Greater China, Goldman Sachs
1996 – date	Co-Director, the National Center for Economic Research
1996 – date	Adjunct Professor, Economics, Tsinghua University

Education
- Master's degree, engineering science, Tsinghua University
- Master's degree and doctorate, economics, Harvard University

Listed company boards
- Non-executive Chairman of the Board of Yum China Holdings (chair of the nomination and governance committee)
- Member of the Board of ICBC

Non-listed company boards
- Chairman of Primavera Capital Ltd

Other activities and functions
- Trustee of the China Medical Board
- Governor of the Chinese International School in Hong Kong SAR
- Co-Chairman of the Nature Conservancy Asia Pacific Council
- Member of the Board of Trustees, the Institute for Advanced Study
- Director and member of the Executive Committee of China Venture Capital and Private Equity Association Ltd.

Key competencies
- Investment banking, capital markets
- Risk management, compliance and legal
- Technology, cybersecurity
- Regulatory authority, central bank

Leadership experience
- CEO, Chairman

Mark Hughes

Non-executive member of the Board since 2020
- Chairperson of the Risk Committee since 2020
- Member of the Corporate Culture and Responsibility Committee since 2020

Nationality: Canadian, British and American (US) I **Year of birth:** 1958

Mark Hughes is a highly experienced professional in the financial services sector, having spent more than 35 years working for RBC (the Royal Bank of Canada) in Canada, the US and the UK. In his final role as Group Chief Risk Officer of RBC, he was responsible for the strategic management of risk on an enterprise-wide basis and oversaw all risk functions. During his career, Mr. Hughes has also held senior management positions in the front office and key operational roles. Currently, he is a visiting lecturer at Leeds University and is chair of the Global Risk Institute, bringing an enormous amount of experience as a risk specialist to the Board of Directors of UBS.

Professional experience

2014 – 2018	Group Chief Risk Officer and member Group Executive Committee, RBC
2013	Deputy Chief Risk Officer, RBC
2008 – 2013	COO, RBC Capital Markets, RBC
2001 – 2008	Head of Global Credit, RBC
1999 – 2001	Head of Debt Products, RBC
1998 – 1999	Senior Vice President and General Manager USA, RBC
1997 – 1998	Senior Vice President Financial Services, RBC
1982 – 1996	Various positions, RBC

Education
- Bachelor of Laws (LL.B.), University of Leeds
- MBA, finance, University of Manchester

Other activities and functions
- Chair of the Board of Directors of the Global Risk Institute
- Visiting lecturer at the University of Leeds
- Senior advisor to McKinsey & Company

Key competencies
- Banking (wealth management, asset management, personal and corporate banking) and insurance
- Investment banking, capital markets
- Risk management, compliance and legal
- Technology, cybersecurity

Leadership experience
- Executive board leadership

Nathalie Rachou

Non-executive member of the Board since 2020
- Member of the Governance and Nominating Committee since 2022
- Member of the Risk Committee since 2020

Nationality: French I **Year of birth:** 1957

Nathalie Rachou is a seasoned expert in financial services, having held a number of banking positions, such as CEO of Prime Brokerage and head of a business line in Capital Markets at Crédit Agricole Indosuez in the UK and in France. In 1999, she founded a London-based asset management company that merged with a French asset manager and continued as a senior adviser until 2020. Alongside these roles, Ms. Rachou brings extensive experience from serving as a board member of Société Générale for 12 years and is currently on the boards of two other listed companies, including the pan-European bourse, Euronext N.V.

Professional experience

2015 – 2020	Senior Advisor, Clartan Associés (formerly Rouvier Associés), France
1999 – 2014	Founding partner and CEO, Topiary Finance Ltd., UK
1996 – 1999	Head of Global Foreign Exchange and Currency Options, Crédit Agricole Indosuez (formerly Banque Indosuez), UK
1991 – 1996	Corporate Secretary and Secretary to the Board of Directors, Crédit Agricole Indosuez, France
1986 – 1991	COO, Carr Futures, France (owned by Banque Indosuez), Crédit Agricole Indosuez, France
1983 – 1986	Head of Asset and Liability Management & Market Risks, Crédit Agricole Indosuez, France
1978 – 1982	Position in Forex Exchange Sales, Crédit Agricole Indosuez, France and UK

Education
- Master's degree, management, HEC Paris
- MBA, INSEAD Fontainebleau

Listed company boards
- Member of the Board of Euronext N.V. (chair of the remuneration committee)
- Member of the Board of Veolia Environnement SA (chair of the audit committee)

Non-listed company boards
- Member of the Board of the African Financial Institutions Investment Platform

Key competencies
- Banking (wealth management, asset management, personal and corporate banking) and insurance
- Investment banking, capital markets
- Finance, audit, accounting
- Risk management, compliance and legal

Julie G. Richardson

Non-executive member of the Board since 2017
– Chairperson of the Compensation Committee since 2019
– Member of the Risk Committee since 2017

Nationality: American (US) I **Year of birth:** 1963

Julie G. Richardson spent more than 25 years on Wall Street as a senior investment banker with a focus on telecom, media and technology. She began her career at Merrill Lynch, before moving to JPMorgan Chase, where she headed the telecommunications, media and technology investment banking group. Later, she moved into private equity, as head of the New York office of Providence Equity Partners. Throughout her career, Ms. Richardson has spent significant time with both incumbent and new technology companies, including being a board member of a digital knowledge management company and a leading cloud monitoring firm.

Professional experience

2012 – 2014	Senior advisor, Providence Equity Partners, New York
2003 – 2012	Partner and Head of the New York office, Providence Equity Partners, New York
1998 – 2003	Vice Chairman of the Investment Banking division of JPMorgan Chase & Co. and Head of its Global Telecommunications, Media and Technology group
1986 – 1998	Various positions at Merrill Lynch, final position: Managing Director Media and Communications Investment Banking

Education
– Bachelor's degree, business administration, University of Wisconsin–Madison

Listed company boards
– Member of the Board of Yext (chair of the audit committee)
– Member of the Board of Datadog (chair of the audit committee)

Non-listed company boards
– Member of the Board of Fivetran
– Member of the Board of Coalition, Inc.

Key competencies
– Investment banking, capital markets
– Risk management, compliance and legal
– Human resources management, including compensation
– Technology, cybersecurity

Dieter Wemmer

Non-executive member of the Board since 2016
– Member of the Audit Committee since 2019
– Member of the Compensation Committee since 2018

Nationality: Swiss and German I **Year of birth:** 1957

Dieter Wemmer began his highly successful career in the insurance sector with the Zurich Group in 1986, retiring in 2017 as CFO of Allianz. As a long-serving CFO of two large multi-national companies in the financial services sector, he has deep experience across a broad range of highly relevant topics. Mr. Wemmer brings to the BoD knowledge covering accounting, finance and audit, including capital markets, investments and risk management, as well as asset management. His know-how includes hands-on experience in mergers and acquisitions, and management of large organizations with a focus on strategy.

Professional experience

2013 – 2017	CFO, Allianz SE
2012 – 2013	Member of the Board of Management, responsible for the insurance business in France, Benelux, Italy, Greece and Turkey and for the "Global Property & Casualty" Center of Competence, Allianz SE
2007 – 2011	CFO, Zurich Insurance Group
2010 – 2011	Regional Chairman of Europe, Zurich Insurance Group
2004 – 2007	CEO of the Europe General Insurance business and member of Zurich's Group Executive Committee, Zurich Insurance Group
2003 – 2004	COO of Europe General Insurance, Zurich Insurance Group
1999 – 2003	Head of Mergers and Acquisitions, Zurich Insurance Group
1997 – 1999	Head of Financial Controlling, Zurich Insurance Group

Education
– Master's degree and doctorate, mathematics, University of Cologne

Listed company boards
– Member of the Board of Ørsted A/S (chair of the audit and risk committee)

Non-listed company boards
– Chairman of Marco Capital Holdings Limited, Malta and subsidiaries

Other activities and functions
– Member of the Berlin Center of Corporate Governance

Key competencies
– Banking (wealth management, asset management, personal and corporate banking) and insurance
– Investment banking, capital markets
– Finance, audit, accounting
– Risk management, compliance and legal

Leadership experience
– Executive board leadership

Jeanette Wong

Non-executive member of the Board since 2019
- Member of the Compensation Committee since 2020
- Member of the Audit Committee since 2019

Nationality: Singaporean | **Year of birth:** 1960

Jeanette Wong has spent more than 30 years working in the financial sector in Singapore. She retired from DBS Group in 2019, where she was Group Executive responsible for the institutional banking business, a post that encompassed corporate banking, global transaction services, strategic advisory, and mergers and acquisitions. Prior to that, she held the position of CFO at DBS Bank. During a 16-year career with JPMorgan Chase, Ms. Wong helped build up its Asia and emerging markets business. She brings extensive experience from serving as a member of the board of directors of two high-value listed companies.

Professional experience

2008 – 2019	Group Executive institutional banking business, DBS Bank, Singapore
2003 – 2008	CFO, DBS Bank, Singapore
2003	Chief Administration Officer, DBS Bank, Singapore
1997 – 2002	Country Manager Singapore, JPMorgan Chase, Singapore
1986 – 1997	Various roles in Global Markets and Emerging Markets Sales and Trading business, Asia, JPMorgan Chase, Singapore
1984 – 1986	Manager, Private Banking, Citibank, Singapore
1982 – 1984	Manager, Corporate Banking, Paribas, Singapore

Education
- Bachelor's degree, business administration, the National University of Singapore
- MBA, University of Chicago

Listed company boards
- Member of the Board of Prudential plc
- Member of the Board of Singapore Airlines Limited

Non-listed company boards
- Member of the Board Risk Committee of GIC Pte Ltd
- Member of the Board of Jurong Town Corporation
- Member of the Board of PSA International

Other activities and functions
- Chairman of the CareShield Life Council
- Member of the Securities Industry Council
- Member of the Board of Trustees of the National University of Singapore

Key competencies
- Banking (wealth management, asset management, personal and corporate banking) and insurance
- Investment banking, capital markets
- Finance, audit, accounting
- ESG (environmental, social and governance)

Leadership experience
- Executive board leadership

Markus Baumann

Group Company Secretary since 2017

Nationality: Swiss | **Year of birth:** 1963

Markus Baumann joined UBS in 1979 as a banking apprentice and has now been with the firm for more than 40 years. Earlier in his career, he worked in Japan for four years, as Corporate Planning Officer and assistant to the CEO. He then worked as COO EMEA for UBS Asset Management and has since held a broad range of leadership roles across the Group in Switzerland, the US and Japan, including COO of Group Internal Audit from 2006 to 2015.

Professional experience

2017 – date	Group Company Secretary of UBS Group AG and Company Secretary of UBS AG
2015 – 2016	Chief of Staff to the Chairman of the Board of Directors, UBS
2006 – 2015	COO, Group Internal Audit, UBS
2005 – 2006	Head Global Reporting & Controlling, Global Asset Management, UBS
2002 – 2004	Head Management Support CEO EMEA, Global Asset Management, UBS
1998 – 2002	COO EMEA, Global Asset Management, UBS
1979 – 1997	Various positions, Union Bank of Switzerland

Education
- Swiss Federal Diploma as a Business Analyst
- MBA, INSEAD Fontainebleau

Elections and terms of office

Shareholders annually elect each member of the BoD individually, as well as the Chairman and the members of the Compensation Committee, based on proposals from the BoD.

As set out in the Organization Regulations, BoD members are normally expected to serve for at least three years. BoD members are limited to serving for a maximum of 10 consecutive terms of office; in exceptional circumstances, the BoD may extend that limit.

› **Refer to "Skills, expertise and training of the Board of Directors" in this section for more information**

Organizational principles and structure

Following each AGM, the BoD meets to appoint one or more Vice Chairmen, a Senior Independent Director, the BoD committee members (other than the Compensation Committee members, who are elected by the shareholders) and the respective committee Chairpersons. At the same meeting, the BoD appoints the Group Company Secretary, who, pursuant to the Organization Regulations, acts as secretary to the BoD and its committees.

Pursuant to the AoA and the Organization Regulations, the BoD meets as often as business requires, but it must meet at least six times a year. During the height of the COVID-19 pandemic, BoD meetings were mainly organized as video calls, with few exceptions. Based on the experiences during the pandemic, the BoD decided to adopt a split approach for 2022 and going forward. In 2022, half of the meetings were held in person. During 2022, a total of 31 BoD meetings were held, 15 of which were attended by GEB members. Average participation in the BoD meetings was 98%. In addition to the BoD meetings attended by GEB members, the Group CEO regularly attended some of the meetings of the BoD without the participation of other GEB members. The meetings had an average duration of 95 minutes and covered both UBS Group AG and UBS AG. Additionally, six ad hoc calls were held. The BoD held a two-day strategy workshop, which included deep dives on each business division and geographical region, and focused on the execution against the strategy defined in 2021. A separate one-day strategy deep dive was held with a specific focus on the Asia Pacific region.

At the BoD meetings, each committee Chairperson provides the BoD with an update on current activities of his or her committee and important committee issues.

In 2022, four UBS AG BoD meetings were held with members of the Executive Board in attendance. These standalone meetings are held regularly to discuss and agree on finance, risk, compliance, operational risk, regulatory and other topics related to UBS AG.

We also continued with the coordination and exchange of information between UBS Group AG and its significant group entities. Joint meetings between the BoD of UBS Group AG and the boards of directors of the significant group entities, as well as between the respective chairs of the risk and audit committees, have been held. As in prior years, an annual workshop, attended by independent members of the boards of the Group and significant group entities, was held.

Performance assessment

Every third year, an external assessment of the effectiveness of the BoD is conducted. In 2022, this review concluded that the UBS BoD and committees operate effectively, in line with best practice, and set a high standard in comparison with leading international peers. The review also confirmed that the BoD agenda covers all important and relevant topics and that these are addressed professionally and in great depth. It further found that the BoD members are independent, highly committed and of the highest integrity, and that the Chairman provides effective leadership and direction. The review emphasized that the cooperation between the BoD and the GEB is based on mutual trust, respect and constructive dialogue. The mix of expertise in the BoD is broad-based and the quality of BoD members is high. The BoD and GEB have responded well to the economic environment, including successfully managing the firm through the COVID-19 pandemic and other significant challenges, while maintaining an appropriate focus on control and regulatory issues. The review highlighted the successful CEO transition and onboarding, and the well-planned and professionally executed Chairman succession process. No significant weaknesses were identified in the review; maintaining a balanced agenda that provides sufficient room for each business performance, strategic review and growth initiatives was the main area recommended for further focus. In spring 2023, the performance assessment will be conducted in-house with a lengthy questionnaire.

BoD committees

The committees listed below assist the BoD in fulfilling the performance of its responsibilities. These committees and their charters are described in our Organization Regulations, available at *ubs.com/governance.* The committees meet as often as their business requires, but no less than four times a year in the case of the Audit Committee, the Risk Committee and the Compensation Committee, and no less than twice a year in the case of the Corporate Culture and Responsibility Committee (the CCRC) and the Governance and Nominating Committee. Topics of common interest or affecting more than one committee are discussed at joint committee meetings.

During 2022, a total of eight joint committee meetings were held for UBS Group AG (five joint committee meetings were held simultaneously for UBS AG). The Audit Committee met four times with the Risk Committee and twice with the CCRC. The Risk Committee met once with the CCRC and once with the Compensation Committee.

Board of Directors

Members in 2022	Meeting attendance without GEB[3]		Meeting attendance with GEB	
Axel A. Weber, Chairman[1]	2/2	100%	2/2	100%
Colm Kelleher, Chairman[2]	14/14	100%	13/13	100%
Lukas Gähwiler[2]	14/14	100%	13/13	100%
Jeremy Anderson	16/16	100%	15/15	100%
Claudia Böckstiegel	16/16	100%	15/15	100%
William C. Dudley	16/16	100%	15/15	100%
Patrick Firmenich	16/16	100%	15/15	100%
Reto Francioni[1]	2/2	100%	2/2	100%
Fred Hu	14/16	88%	14/15	93%
Mark Hughes	16/16	100%	15/15	100%
Nathalie Rachou	16/16	100%	15/15	100%
Julie G. Richardson	15/16	94%	15/15	100%
Dieter Wemmer	15/16	94%	15/15	100%
Jeanette Wong	16/16	100%	15/15	100%

Key responsibilities include:

The Board has ultimate responsibility for the success of the Group and for delivering sustainable shareholder value within a framework of prudent and effective controls. It decides on the Group's strategy and the necessary financial and human resources upon recommendation of the Group CEO and sets the Group's values and standards to ensure that its obligations to shareholders and other stakeholders are met.

› **Refer to the Organization Regulations of UBS Group AG, available at *ubs.com/governance*, for more information**

1 Axel A. Weber and Reto Francioni did not stand for re-election at the 2022 AGM; indicated are their attended and total meetings up to the 2022 AGM. 2 Colm Kelleher was elected as Chairman and Lukas Gähwiler to the Board at the 2022 AGM; indicated are their attended and total meetings after their election. 3 Additionally, six calls took place in 2022.

Audit Committee

Throughout 2022, the Audit Committee consisted of four independent BoD members. All Audit Committee members have accounting or related financial management expertise and, in compliance with the rules established pursuant to the 2002 US Sarbanes–Oxley Act, at least one member qualifies as a financial expert. The NYSE standards on corporate governance and Rule 10A-3 under the US Securities Exchange Act set more stringent independence requirements for members of audit committees than for the other members of the BoD. Throughout 2022, all members of the Audit Committee, in addition to satisfying our independence criteria, satisfied these requirements, in that they did not receive, directly or indirectly, any consulting, advisory or compensatory fees from any member of the Group other than in their capacity as a BoD member, did not hold, directly or indirectly, UBS Group AG shares in excess of 5% of the outstanding capital, and did not serve on the audit committees of more than two other public companies.

During 2022, the Audit Committee held 12 committee meetings, with a participation rate of 100%. The meetings had an average duration of approximately 135 minutes and covered both UBS Group AG and UBS AG. Additional attendees included the Group CFO, the Group Controller and Chief Accounting Officer, the Head Group Internal Audit (GIA), and the external auditors. The Chairman of the BoD, the Vice Chairman and the Group CEO attended most meetings. The Chairperson and the committee continued to maintain regular contact with core supervisory authorities.

Audit Committee

Members in 2022	Meeting attendance	
Jeremy Anderson (Chairperson)	12/12	100%
Patrick Firmenich	12/12	100%
Dieter Wemmer	12/12	100%
Jeanette Wong	12/12	100%

Key responsibilities include:

The function of the Audit Committee is to support the Board in fulfilling its oversight duty relating to financial reporting and internal controls over financial reporting, the effectiveness of the external and internal audit functions, and the effectiveness of whistleblowing procedures.

Management is responsible for the preparation, presentation and integrity of the financial statements, while the external auditors are responsible for auditing financial statements. The Audit Committee's responsibility is one of oversight and review.

› **Refer to the Organization Regulations of UBS Group AG, available at *ubs.com/governance,* for more information**

Compensation Committee

In 2022, the Compensation Committee consisted of four independent members before the AGM and three independent members after the AGM. In addition to the key responsibilities indicated in the same table, the Compensation Committee reviews the compensation disclosures included in this report.

During 2022, the Compensation Committee held eight meetings, with a participation rate of 100%. The meetings had an average duration of approximately 70 minutes and covered both UBS Group AG and UBS AG. All meetings were held in the presence of the Chairman and the Group CEO and most were attended by external advisors. In 2022, the Chairperson met regularly with core supervisory authorities.

› **Refer to "Compensation for the Board of Directors" in the "Compensation" section of this report for more information about the Compensation Committee's decision-making procedures**

Compensation Committee

Members in 2022	Meeting attendance[2]	
Julie G. Richardson (Chairperson)	8/8	100%
Reto Francioni[1]	2/2	100%
Dieter Wemmer	8/8	100%
Jeanette Wong	8/8	100%

Key responsibilities include:

The Compensation Committee is responsible for:
(i) supporting the Board in its duties to set guidelines on compensation and benefits;
(ii) approving the total compensation for the Chairman and the non-independent Board members;
(iii) proposing, upon proposal of the Chairman, financial and non-financial performance targets and objectives for the Group CEO for approval by the Board and reviewing, upon the proposal of the Group CEO, the performance framework for the other GEB members;
(iv) proposing, upon proposal of the Chairman, the Group CEO's performance assessment for approval by the Board, as well as informing the Board of the performance assessments of all GEB members, including the Group CEO;
(v) proposing, upon proposal of the Chairman, the total compensation for the Group CEO for approval by the Board; and
(vi) proposing, upon proposal of the Group CEO, the individual total compensation for the other GEB members for approval by the Board.

› **Refer to the Organization Regulations of UBS Group AG, available at *ubs.com/governance*, for more information**

1 Reto Francioni did not stand for re-election at the 2022 AGM; indicated are his attended and total meetings up to the 2022 AGM 2 Additionally, the Compensation Committee held one ad hoc call.

Corporate Culture and Responsibility Committee

In 2022, the CCRC consisted of the Chairperson and four independent BoD members. The Group CEO, the Group Chief Risk Officer, the President Asset Management and GEB Lead for Sustainability and Impact, the Group General Counsel and the Chief Sustainability Officer are permanent guests of the CCRC. During 2022, six meetings were held, with a participation rate of 100%. The average duration of each of the meetings was approximately 85 minutes.

Corporate Culture and Responsibility Committee

Members in 2022	Meeting attendance	
Axel A. Weber (Chairperson)[1]	2/2	100%
Colm Kelleher (Chairperson)[2]	4/4	100%
Claudia Böckstiegel[2]	4/4	100%
William C. Dudley	6/6	100%
Patrick Firmenich	6/6	100%
Mark Hughes	6/6	100%
Jeanette Wong[1]	2/2	100%

Key responsibilities include:

The CCRC supports the Board in its duties to safeguard and advance the Group's reputation for responsible and sustainable conduct. Its function is forward-looking in that it monitors and reviews societal trends and transformational developments and assesses their potential relevance for the Group.

In undertaking this assessment, it reviews stakeholder concerns and expectations pertaining to the societal performance of UBS and to the development of its corporate culture. The CCRC's function also encompasses the monitoring of the current state and implementation of the programs and initiatives within the Group pertaining to corporate culture and corporate responsibility, including sustainability.

› **Refer to the Organization Regulations of UBS Group AG, available at *ubs.com/governance*, for more information**

1 Axel A. Weber did not stand for re-election and Jeannette Wong stepped down from this committee at the 2022 AGM; indicated are their attended and total meetings up to the 2022 AGM. 2 Colm Kelleher became Chairman and Claudia Böckstiegel member of this committee; indicated are their attended and total meetings after election.

Governance and Nominating Committee

In 2022, the Governance and Nominating Committee consisted of, in addition to the Chairperson, five independent members before the AGM and three independent members after the AGM. During 2022, six meetings were held, with a participation rate of 100%. The average duration of each of the meetings was approximately 60 minutes. The Group CEO attended meetings as appropriate.

Governance and Nominating Committee

Members in 2022	Meeting attendance[3]	
Axel A. Weber (Chairperson)[1]	2/2	100%
Colm Kelleher (Chairperson)[2]	4/4	100%
Jeremy Anderson	6/6	100%
William C. Dudley[1]	2/2	100%
Fred Hu	6/6	100%
Nathalie Rachou[2]	4/4	100%
Julie G. Richardson[1]	2/2	100%
Dieter Wemmer[1]	2/2	100%

Key responsibilities include:

The function of the Governance and Nominating Committee is to support the Board in fulfilling its duty to establish best practices in corporate governance across the Group, including conducting a Board assessment, establishing and maintaining a process for appointing new Board and GEB members, as well as for the annual performance assessment of the Board.

› **Refer to the Organization Regulations of UBS Group AG, available at *ubs.com/governance*, for more information**

1 Axel A. Weber did not stand for re-election; William Dudley, Julie G. Richardson and Dieter Wemmer stepped down from this committee at the 2022 AGM; indicated are their attended and total meetings up to the 2022 AGM. 2 Colm Kelleher became Chairman and Nathalie Rachou member of this committee; indicated are their attended and total meetings after election. 3 Additionally, the Governance and Nominating Committee held one ad hoc call.

Risk Committee

In 2022, the Risk Committee consisted of six independent members before the AGM and four independent members after the AGM. During 2022, the Risk Committee held 12 committee meetings, with a participation rate of 100%. The average duration of each of the meetings was approximately 145 minutes, covering both UBS Group AG and UBS AG. The Chairman of the BoD, the Vice Chairman, the Group CEO, the Group CFO, the Group Chief Risk Officer, the Group Chief Digital and Information Officer, the Group Treasurer, the Group Chief Compliance and Governance Officer, the Group General Counsel, the Head GIA, and the external auditors attended the meetings. In 2022, the Chairperson or the full committee met with core supervisory authorities.

Risk Committee

Members in 2022	Meeting attendance	
Mark Hughes (Chairperson)	12/12	100%
William C. Dudley	12/12	100%
Reto Francioni[1]	3/3	100%
Fred Hu[1]	3/3	100%
Nathalie Rachou	12/12	100%
Julie G. Richardson	12/12	100%

Key responsibilities include:

The function of the Risk Committee is to oversee and support the Board in fulfilling its duty to set and supervise an appropriate risk management and control framework in the areas of:

(i) financial and non-financial risks;

(ii) balance sheet, treasury and capital management, including funding, liquidity and equity attribution.

› **Refer to the Organization Regulations of UBS Group AG, available at *ubs.com/governance*, for more information**

1 Reto Francioni did not stand for re-election and Fred Hu stepped down from this committee at the 2022 AGM; indicated are their attended and total meetings up to the 2022 AGM.

Ad hoc committees

The Special Committee and the Strategy Committee are two ad hoc committees, which have a standing composition and hold meetings as and when required.

Leading up to the 2022 AGM, the Special Committee was chaired by Jeremy Anderson, with Claudia Böckstiegel, Nathalie Rachou, Julie G. Richardson and Axel A. Weber as its members; after the AGM, Colm Kelleher and Lukas Gähwiler joined the Special Committee and Axel A. Weber stepped down from the BoD. Its primary purpose is to oversee activities related to key litigation and investigation matters, review management's respective proposals and provide to the BoD recommendations for decisions. In 2022, the main focus was the French cross-border matter. The Group CEO and the Group General Counsel are permanent guests of the Special Committee. During 2022, two meetings of the Special Committee were held, covering both UBS Group AG and UBS AG.

Leading up to the 2022 AGM, the Strategy Committee was chaired by Axel A. Weber, with William C. Dudley, Fred Hu and Dieter Wemmer as its members; after the AGM, Colm Kelleher replaced Axel A. Weber (who stepped down from the BoD) as the chair and Julie G. Richardson also joined the Strategy Committee. The primary purpose of this committee is to support management and the BoD with regard to the assessment of strategic considerations and to prepare decisions on behalf of the BoD. During 2022, four meetings of the Strategy Committee were held, covering both UBS Group AG and UBS AG. The Group CEO and other members of the GEB and management participated in these meetings as required.

Roles and responsibilities of the Chairman of the Board of Directors

At the 2022 AGM, Axel A. Weber stepped down and Colm Kelleher was elected as the full-time Chairman of the BoD. The Chairman coordinates tasks within the BoD, calls BoD meetings and sets their agendas. He presides over all general meetings of shareholders, chairs the Governance and Nominating Committee, as well as the CCRC, and works with the committee Chairpersons to coordinate the work of all BoD committees. Together with the Group CEO, the Chairman undertakes responsibility for UBS's reputation, and is responsible for effective communication with shareholders and other stakeholders, including government officials, regulators and public organizations. This is in addition to establishing and maintaining close working relationships with the Group CEO and other GEB members, and providing advice and support when appropriate.

› **Refer to "Employees" in the "How we create value for our stakeholders" section of this report for information about our Pillars, Principles and Behaviors**

In 2022, the respective Chairman in office met regularly with core supervisory authorities of all major locations where UBS is active. Meetings with important supervisory authorities were scheduled on an ad hoc or needs-driven basis.

Roles and responsibilities of the Vice Chairmen and the Senior Independent Director

The BoD appoints one or more Vice Chairmen and a Senior Independent Director. If the BoD appoints more than one Vice Chairman, at least one of them must be independent. Both the Vice Chairman and the Senior Independent Director support the Chairman with regard to his responsibilities and authorities and provide him with advice. In conjunction with the Chairman and the Governance and Nominating Committee, they facilitate good Group-wide corporate governance, as well as balanced leadership and control within the Group, the Board and the committees.

Lukas Gähwiler was appointed as Vice Chairman following the 2022 AGM. Jeremy Anderson has been the Senior Independent Director since 2020. The Vice Chairman is required to lead meetings of the BoD in the temporary absence of the Chairman. Together with the Governance and Nominating Committee, either one of them is tasked with the ongoing monitoring and the annual evaluation of the Chairman. The Vice Chairman also represents UBS on behalf of the Chairman in meetings with internal or external stakeholders. In particular, he represents UBS across a broad range of associations and industry bodies in Switzerland.

The Senior Independent Director enables and supports communication and the flow of information among the independent BoD members. At least twice a year, he organizes and leads a meeting of the independent BoD members without the participation of the Chairman. In 2022 and in early 2023, two independent BoD meetings were held, covering both UBS Group AG and UBS AG, with an average participation rate of 85% and an average duration of approximately 105 minutes. The Senior Independent Director also relays to the Chairman any issues or concerns raised by the independent BoD members and acts as a point of contact for shareholders and stakeholders seeking discussions with an independent BoD member.

Important business connections of independent members of the Board of Directors

As a global financial services provider and a major Swiss bank, we enter into business relationships with many large companies, including some in which our BoD members have management or independent board responsibilities. The Governance and Nominating Committee determines in each instance whether the nature of the Group's business relationship with such a company might compromise our BoD members' capacity to express independent judgment.

Our Organization Regulations require three-quarters of the UBS Group AG BoD members and one-third of those at UBS AG to be independent. For this purpose, independence is determined in accordance with FINMA Circular 2017/1 "Corporate governance – banks" and the NYSE rules.

In 2022, our BoD met the standards of the Organization Regulations for the percentage of directors who are considered independent under the criteria described above. Axel Weber, who served as Chairman of the Board until the Annual General Meeting on 6 April 2022, had a full-time contract with UBS Group AG and was not considered independent. Our Vice Chairman, Lukas Gähwiler, previously had a full-time contract with UBS Switzerland AG and, therefore, is currently not considered independent according to the regulatory independence rules. No current BoD member has either an employment contract or a significant business connection to UBS or any of its subsidiaries. Except for the Vice Chairman, no BoD member currently carries out, or has carried out over the past three years, any operational management tasks within the Group.

All relationships and transactions with UBS Group AG's independent BoD members are conducted in the ordinary course of business and are on the same terms as those prevailing at the time for comparable transactions with non-affiliated persons. All relationships and transactions with BoD members' associated companies are conducted at arm's length.

› **Refer to "Note 30 Related parties" in the "Consolidated financial statements" section on of this report for more information**

Checks and balances: Board of Directors and Group Executive Board

We operate under a strict dual board structure, as mandated by Swiss banking law. The separation of responsibilities between the BoD and the GEB is clearly defined in the Organization Regulations. The BoD decides on the strategy of the Group, upon recommendations by the Group CEO, and exercises ultimate supervision over management; whereas the GEB, headed by the Group CEO, has executive management responsibility. The functions of Chairman and Group CEO are assigned to two different people, leading to a separation of powers. This structure establishes checks and balances and preserves the institutional independence of the BoD from the executive management of the Group, for which responsibility is delegated to the GEB, under the leadership of the Group CEO. No member of one board may simultaneously be a member of the other.

Supervision and control of the GEB remain with the BoD. The authorities and responsibilities of the two bodies are governed by the AoA and the Organization Regulations.

Skills, expertise and training of the Board of Directors

At present, the BoD is well-diversified and composed of members with a broad spectrum of skills, educational backgrounds, experience, and expertise from a range of sectors that reflect the nature and scope of the firm's business. The Governance and Nominating Committee maintains a competencies and experience matrix to identify gaps in the competencies considered most relevant to the BoD, taking into consideration the firm's business exposure, risk profile, strategy and geographic reach.

In recent years, the composition of the BoD has been systematically rebuilt along the identified requirements. The appointment of a new Chairman and Vice Chairman in 2022 completed this process. As a result, no nominations are submitted for a vote at the AGM in 2023. Nevertheless, a list of potential candidates is prepared and updated regularly by UBS Group AG.

We asked our BoD members to select their four key competencies from the following eight categories and to indicate whether they have ever been a CEO or chairperson of a listed company or a member of the executive board of such a company:

Key competencies
- banking (wealth management, asset management, personal and corporate banking) and insurance
- investment banking, capital markets
- finance, audit, accounting
- risk management, compliance and legal
- human resources management, including compensation
- technology, cybersecurity
- regulatory authority, central bank
- environmental, social and governance (ESG)

Leadership experience
- experience as a CEO or chairperson
- executive board leadership experience (e.g., as CFO, chief risk officer or COO of a listed company)

The Governance and Nominating Committee reviews these categories and ratings annually to confirm that the BoD continues to possess the most relevant experience and competencies to perform its duties.

With regard to the composition of the BoD after the 2022 AGM, the members thereof identified all of the target competencies as being their key competencies. Particularly strong levels of experience and expertise existed in these areas:
- financial services
- risk management, compliance and legal
- finance, audit, accounting

Furthermore, 10 of the 12 BoD members have held or currently hold chairperson, CEO or other executive board-level leadership positions.

Moreover, education remained an important priority for our BoD members. In addition to a comprehensive induction program for new BoD members, continuous training and topical deep dives are part of the BoD agenda.

› **Refer to "Risk governance" in the "Risk management and control" section of this report for information about our risk governance framework**

Terms of office[1]

4	<3 years
7	3–6 years
1	7–9 years
0	>9 years

Geographic diversity[2]

33%	Switzerland
25%	Europe and the UK
25%	USA / Canada
17%	Asia

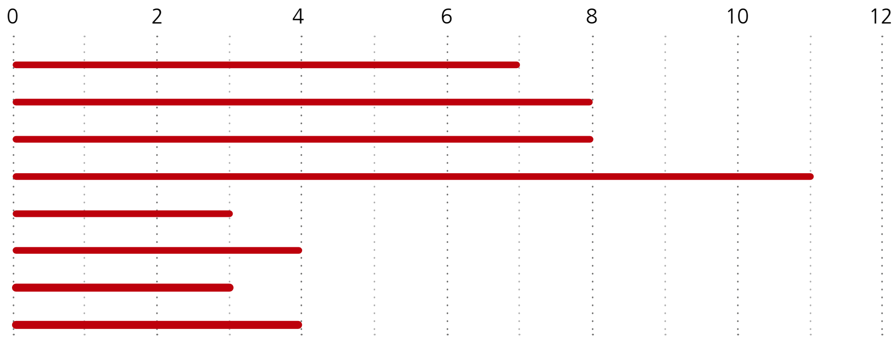
Gender[3]

67%	male
33%	female

Competencies and experience[4]

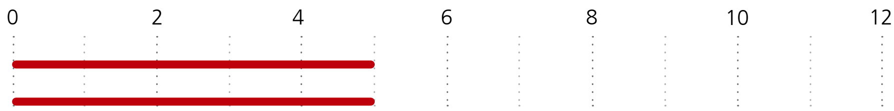
Key competencies

Banking[5] and insurance
Investment banking, capital markets
Finance, audit, accounting
Risk management, compliance and legal
HR management, including compensation
Technology, cybersecurity
Regulatory authority, central bank
ESG[6]



Leadership experience

Chief executive officer or chairman
Executive board[7]



1 Terms of office until the 2023 AGM. 2 In the case of dual-nationals, the domicile applies. 3 In accordance with the 30% gender quota of the revised Swiss Corporate Law. 4 The number of BoD members identifying a key competency as one of his / her key competencies; each member identified up to four key competencies (although not every sub-area of the respective competency might be applicable), plus one leadership experience. 5 Wealth management, asset management, and personal and corporate banking. 6 Environmental, social and governance. 7 For example, a CFO, chief risk officer or COO of a listed company.

Succession planning

Succession planning is one of the key responsibilities of both the BoD and the GEB. Across all divisions and regions, an inclusive talent development and succession planning process is in place that aims to foster the personal development and Group-wide mobility of our employees. Although the recruiting process for BoD and GEB members takes into account a broad spectrum of factors, such as skills, backgrounds, experience and expertise, our approach with regard to diversity considerations does not constitute a diversity policy within the meaning of the EU Directive on Non-Financial Reporting, and Swiss law does not require UBS to maintain such a policy.

In 2022, the GEB launched several strategic initiatives with the close involvement of the BoD and with the aim of further strengthening internal succession planning at UBS. This included the early identification of talents and their systematic development, including international and cross-divisional rotations. The succession plans for the GEB and the management layers below it are managed under the lead of the Group CEO and are reviewed and approved by the BoD.

For the BoD, the Chairman leads a systematic succession planning process as illustrated in the chart below.

Our strategy and the business environment constitute the main drivers in our succession planning process for new BoD members, as they define the key competencies required on the BoD. Taking the diversity and the tenure of the existing BoD into account, the Governance and Nominating Committee defines the recruiting profile for the search. Both external and internal sources contribute to identifying suitable candidates. The Chairman and the members of the Governance and Nominating Committee meet with potential candidates and, with the support of the full BoD, nominations are submitted to the AGM for approval. New BoD members follow an in-depth onboarding process designed to enable them to integrate efficiently and become effective in their new role. Due to this succession planning process, the composition of the BoD is in line with the demanding requirements of a leading global financial services firm.

The smooth and effective succession of both the CEO and Chairman, as well as that of new GEB members, demonstrates the strength and success of succession planning at UBS.

Board of Directors' succession planning process

Information and control instruments with regard to the Group Executive Board

The BoD is kept informed of the GEB's activities in various ways, including regular meetings between the Chairman, the Group CEO and GEB members. The Group CEO and other GEB members also participate in BoD meetings to update its members on all significant issues. The BoD receives regular comprehensive reports covering financial, capital, funding, liquidity, regulatory, compliance and legal developments, as well as performance against plan and forecasts for the remainder of the year. For important developments, BoD members are also updated by the GEB in between meetings. In addition, the Chairman receives the meeting material and minutes of the GEB meetings.

BoD members may request from other BoD or GEB members any information about matters concerning the Group that they require in order to fulfill their duties. When these requests are raised outside BoD meetings, such requests must go through the Group Company Secretary and be addressed to the Chairman.

The BoD is supported in discharging its governance responsibilities by GIA, which independently assesses whether risk management, control and governance processes are designed and operating sustainably and effectively.

The Head GIA reports directly to the Chairman. In addition, GIA has a functional reporting line to the Audit Committee in accordance with its responsibilities as set forth in our Organization Regulations. The Audit Committee assesses the independence and performance of GIA and the effectiveness of both the Head GIA and GIA as an organization, approves GIA's annual audit plan and objectives and monitors GIA's discharge of these objectives.

The committee is also in regular contact with the Head GIA. GIA issues quarterly reports that provide an overview of significant audit results and key issues, as well as themes and trends, based on results of individual audits, continuous risk assessment and issue assurance. The reports are provided to the Chairman, the members of the Audit and the Risk Committees, the GEB and other stakeholders. The Head GIA regularly updates the Chairman and the Audit Committee on GIA's activities, processes, audit plan execution, resourcing requirements and other important developments. GIA issues an annual Activity Report, which is provided to the Chairman and the Audit Committee to support their assessment of GIA's effectiveness.

› **Refer to "Group Internal Audit" in this section for more information**
› **Refer to "Internal risk reporting" in the "Risk management and control" section of this report for information about reporting to the BoD**

Group Executive Board

The BoD delegates the management of the business to the Group Executive Board (the GEB).

Responsibilities, authorities and organizational principles of the Group Executive Board

As of 31 December 2022, the GEB, under the leadership of the Group CEO, consisted of 12 members. It has executive management responsibility for the steering of the Group and its business, develops the strategies of the Group, business divisions and Group Functions, and implements the BoD-approved strategies. The GEB is also the risk council of the Group, with overall responsibility for establishing and supervising the implementation of risk management and control principles, as well as for managing the risk profile of the Group, as determined by the BoD and the Risk Committee.

In 2022, the GEB held a total of 74 meetings for UBS Group AG.

At UBS AG, management of the business is also delegated, and its Executive Board, under the leadership of its President, has executive management responsibility for UBS AG and its business. All members of the GEB are members of UBS AG's Executive Board, with the exception of Sabine Keller-Busse, who serves as President UBS Switzerland AG. The Executive Board held 74 combined meetings with the GEB and four standalone meetings for UBS AG in 2022.

› **Refer to the Organization Regulations of UBS Group AG, available at *ubs.com/governance*, for more information about the authorities of the Group Executive Board**

Changes to the Group Executive Board

Effective 16 May 2022, Kirt Gardner stepped down and Sarah Youngwood succeeded him as Group CFO, having joined the GEB on 1 March 2022. Formerly, she was CFO of JPMorgan Chase's Consumer & Community Banking line of business.

Effective 3 October 2022, Tom Naratil stepped down as Co-President Global Wealth Management and President UBS Americas and Naureen Hassan joined UBS as a GEB member with functions of President UBS Americas and CEO of UBS Americas Holding LLC. Ms. Hassan was most recently First Vice President and Chief Operating Officer of the Federal Reserve Bank of New York, where she was responsible for technology, operations, finance, risk and HR, and led the New York Fed's agile transformation. Iqbal Khan became sole President Global Wealth Management on the same date.

On 8 November 2022, UBS announced that Christian Bluhm will step down from his role as Group Chief Risk Officer on 30 April 2023. Damian Vogel will join the GEB on 1 May 2023 and will take over as Group Chief Risk Officer. Mr. Vogel is currently Chief Risk Officer for UBS's Global Wealth Management business division.

The biographies on the following pages provide information about the GEB members in office as of 31 December 2022. The biographies of Kirt Gardner and Tom Naratil can be found on pages 212 and 216 of the UBS Group AG Annual Report 2021, available under "Annual reporting" at *ubs.com/investors*. In addition to information on mandates, the biographies include memberships and other activities or functions, as required by the SIX Swiss Exchange Corporate Governance Directive.

In line with Swiss law, article 36 of our AoA limits the number of mandates that GEB members may hold outside UBS Group to one mandate in a listed company and five additional mandates in non-listed companies. Mandates in companies that are controlled by UBS or that control UBS are not subject to this limitation. In addition, GEB members may not hold more than 10 mandates at one time at the request of the company and more than eight mandates in associations, charitable organizations, foundations, trusts and employee welfare foundations. On 31 December 2022, no member of the GEB reached the aforementioned thresholds.

Responsibilities and authorities of the Asset and Liability Committees

The Asset and Liability Committees (the ALCOs) of UBS Group AG and UBS AG are sub-committees of the GEB and the Executive Board that are responsible for managing assets and liabilities in line with the strategy, risk appetite, regulatory commitments and the interests of shareholders and other stakeholders. The ALCO of UBS Group AG proposes the framework for capital management, capital allocation, and liquidity and funding risk, and proposes limits and indicators for the Group to the BoD for approval. It oversees the balance sheet management of the Group, its business divisions and Group Functions. In 2022, the ALCOs of UBS Group AG and UBS AG held 10 meetings.

Management contracts

We have not entered into management contracts with any companies or natural persons that do not belong to the Group.

Ralph Hamers

Group Chief Executive Officer, member of the GEB since 2020

Nationality: Dutch | **Year of birth:** 1966

Ralph Hamers has been Group CEO of UBS Group AG and President of the Executive Board of UBS AG since November 2020, after joining UBS as Group Executive Board member in September 2020. Mr. Hamers is committed to ensuring that our firm is positioned to evolve with our clients and the larger world. He has led work to transform our firm for the future, with our Group-wide strategy and newly defined purpose launched in April 2021. Prior to joining UBS, Mr. Hamers was CEO and Chairman of the Executive Board of ING Group, where he spent over 30 years of his career. During his time as CEO of ING, he steered the bank to profitability after the financial crisis and supported the firm's digital transformation. Mr. Hamers has played a leading role in driving efforts in areas such as digital disruption and sustainability.

Professional experience

2020 – date	Group CEO, UBS Group AG, and President of the Executive Board, UBS AG
2013 – 2020	CEO and Chairman of the Executive Board, ING Supervisory Board member of NN Group (2014 – 2015); Chairman Management Board Banking (2013 – 2020) and Chairman Management Board Insurance (2013 – 2014)
2011 – 2013	CEO of ING Belgium and Luxembourg, ING
2010 – 2011	Head of Network Management for Retail Banking Direct & International, ING
2007 – 2010	Global Head of the Commercial Banking network, ING
2005 – 2007	CEO of ING Bank Netherlands, ING
2002 – 2005	General Manager of the ING Bank branch network, ING

Education
– Master's degree, business econometrics and operations research, Tilburg University, Netherlands

Other activities and functions
– Member of the Board of the Swiss-American Chamber of Commerce
– Member of the Institut International d'Etudes Bancaires
– Member of the IMD Foundation Board
– Member of the McKinsey Advisory Council
– Member of the World Economic Forum International Business Council
– Governor of the Financial Services / Banking Community of the World Economic Forum
– Member of the International Advisory Panel, Monetary Authority of Singapore
– Member of the Board of the Institute of International Finance

Christian Bluhm

Group Chief Risk Officer, member of the GEB since 2016

Nationality: German | **Year of birth:** 1969

Christian Bluhm has been Group Chief Risk Officer since 2016. He held several positions in academia before starting his banking career in 1999 with Deutsche Bank in credit risk management, and subsequently working for Hypovereinsbank and Credit Suisse in the same area. Before joining UBS, he used his expertise and skills as Chief Risk & Financial Officer at FMS Wertmanagement. Mr. Bluhm is responsible for the development of the Group's risk management and control framework for various risk categories and implementation of its independent control frameworks.

Professional experience

2016 – date	Group Chief Risk Officer, UBS Group AG, and Chief Risk Officer, UBS AG
2012 – 2015	Spokesman of the Executive Board, FMS Wertmanagement
2010 – 2015	Chief Risk & Financial Officer, FMS Wertmanagement
2004 – 2009	Managing Director, Credit Risk Management (Switzerland and Private Banking worldwide), Credit Suisse
2008 – 2009	Head Credit Risk Management Analytics & Instruments, Credit Suisse
2004 – 2008	Head of Credit Portfolio Management, Credit Suisse
2001 – 2004	Head Structured Finance Analytics, Group Credit Portfolio Management, Hypovereinsbank

Education
– Master's degree, mathematics and informatics, and doctorate, mathematics, University of Erlangen-Nuremberg, Germany

Non-listed company boards
– Chairman of the Board of Christian Bluhm Photography AG

Other activities and functions
– Member of the Board of UBS Switzerland AG
– Member of the Foundation Board of the UBS Pension Fund
– Member of the Foundation Board International Financial Risk Institute

Mike Dargan

Group Chief Digital and Information Officer, member of the GEB since 2021

Nationality: British I **Year of birth:** 1977

Mike Dargan was appointed Group Chief Digital and Information Officer (CDIO) in May 2021 after leading our Group Technology function since joining UBS in 2016. In addition to his CDIO remit, where he oversees global functions such as technology and corporate services, he is also Group Executive Board sponsor for our firm's digital assets strategy and a co-sponsor of both our AI, Data and Analytics center of expertise (along with Robert Karofsky) and our agile transformation. Prior to joining UBS, Mr. Dargan held various senior roles in technology, corporate strategy and investment banking at Standard Chartered Bank, Merrill Lynch and Oliver Wyman.

Professional experience

May 2021 – date	Group CDIO, UBS Group AG, and CDIO, UBS AG
Oct. 2021 – date	President of the Executive Board, UBS Business Solutions AG
2016 – 2021	Head Group Technology, UBS
2015 – 2016	CIO for Corporate and Institutional Banking, Standard Chartered Bank
2014 – 2015	Global Group Technology and Operations Head for Global Markets, Wealth Management, Private Banking and Securities Services, Group Technology and Operations Engineering, Standard Chartered Bank
2013 – 2014	CIO for Financial Markets, Standard Chartered Bank
2009 – 2013	Global Head of Strategy and Corporate M&A, Global Markets, Standard Chartered Bank
2005 – 2009	Head Corporate Strategy & M&A, EMEA and Pacific Rim, Merrill Lynch

Education
– Master's degree, politics, philosophy and economics, St. John's College, University of Oxford

Non-listed company boards
– Member of the Board of Directors of Done Next Holdings AG

Other activities and functions
– Member of the Board of UBS Business Solutions AG
– Member of the Board of UBS Optimus Foundation
– Member of the Board of Trustees of the Inter-Community School Zurich

Suni Harford

President Asset Management, member of the GEB since 2019

Nationality: American (US) I **Year of birth:** 1962

Suni Harford was appointed President Asset Management in 2019 and is the Chair of UBS Optimus Foundation. Ms. Harford has been the UBS GEB Lead for Sustainability and Impact since May 2021. She started her Wall Street career at Merrill Lynch & Co., in investment banking, before embarking on a 24-year career at Citigroup Inc., the last nine years of which she was the Regional Head of Markets for North America. Ms. Harford joined UBS in 2017, bringing with her a broad experience from across the industry, including in research, client coverage and risk management, and successfully led UBS Asset Management's integrated investments capabilities, driving performance for its clients.

Professional experience

2019 – date	President Asset Management, UBS Group AG and UBS AG
2017 – 2019	Head of Investments, Asset Management, UBS
2008 – 2017	Regional Head of Markets for North Americas, Citigroup Inc.
2004 – 2008	Global Head of Fixed Income Research, Citigroup Inc.

Education
– Bachelor's degree, physics and mathematics, Denison University, Ohio
– MBA, Tuck School of Business, Dartmouth College, New Hampshire

Other activities and functions
– Chairman of the Board of Directors of UBS Asset Management AG
– Chair of the Board of UBS Optimus Foundation
– Member of the Leadership Council of the Bob Woodruff Foundation

Naureen Hassan

President UBS Americas, member of the GEB since October 2022

Nationality: American (US) I **Year of birth:** 1971

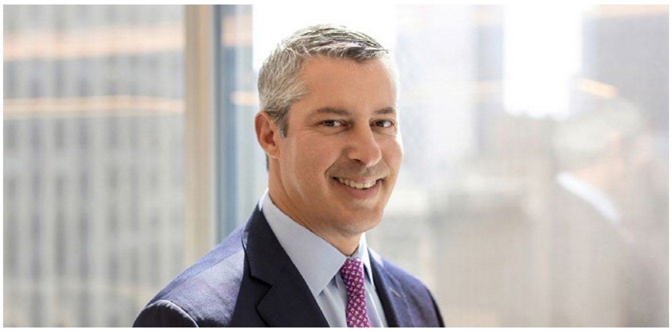
Naureen Hassan was appointed President UBS Americas and CEO of UBS Americas Holding LLC in October 2022. She joined UBS from the Federal Reserve Bank of New York, where she was COO and First Vice President. After starting her career at McKinsey & Company, Ms. Hassan held various business transformation, strategy, and client experience leadership roles at Charles Schwab Corporation. As Chief Digital Officer at Morgan Stanley Wealth Management, she led the digital strategy and executed digital transformation of the wealth management business to improve client experience and financial advisor effectiveness and efficiency.

Professional experience

Oct. 2022 – date	President UBS Americas, UBS Group AG and UBS AG CEO, UBS Americas Holding LLC
2021 – Sept. 2022	First Vice President and COO, Federal Reserve Bank of New York
2016 – 2020	Chief Digital Officer, Wealth Management, Morgan Stanley
2014 – 2016	Executive Vice President, Investor Services Segments & Platforms, Charles Schwab Corporation
2014	Senior Vice President, Business Process Transformation, Charles Schwab Corporation
2012 – 2014	Senior Vice President, Advisor Services Client Experience & Strategic Integration, Charles Schwab Corporation
2010 – 2012	COO and Board Director, Charles Schwab Corporation
2003 – 2010	Various senior positions at Charles Schwab Corporation

Education
– Bachelor's degree, economics, Princeton University
– Master's degree, business administration, Stanford University Graduate School of Business

Other activities and functions
– Member of the Board of UBS Americas Holding LLC
– Member of the Board of the Securities Industry and Financial Markets Association



Robert Karofsky

President Investment Bank, member of the GEB since 2018

Nationality: American (US) I **Year of birth:** 1967

Robert Karofsky was appointed Co-President of the Investment Bank in 2018. He became sole President in April 2021. Before joining UBS, he acquired know-how in investment banking as an analyst and trader, working for various financial institutions such as Morgan Stanley, Deutsche Bank and AllianceBernstein. He then became Global Head of Equities at UBS, responsible for driving UBS's growth strategy for equities globally. In October 2021, Mr. Karofsky was appointed to the additional role of UBS GEB sponsor to co-lead the AI, Data and Analytics center of expertise, along with Mike Dargan.

Professional experience

Apr. 2021 – date	President Investment Bank, UBS Group AG and UBS AG
2018 – Mar. 2021	Co-President Investment Bank, UBS
2015 – 2021	President UBS Securities LLC, UBS
2014 – 2018	Global Head Equities, UBS
2011 – 2014	Global Head of Equity Trading, AllianceBernstein
2008 – 2010	Co-Head of Global Equities, Deutsche Bank
2005 – 2008	Head of North American Equities, Deutsche Bank

Education
– Bachelor's degree, economics, Hobart and William Smith Colleges, New York
– MBA, finance and statistics, University of Chicago's Booth School of Business

Other activities and functions
– Member of the Board of UBS Americas Holding LLC
– Member of the Board of UBS Optimus Foundation
– Trustee of the UBS Americas Inc. Political Action Committee

Sabine Keller-Busse

President Personal & Corporate Banking and President UBS Switzerland, member of the GEB since 2016

Nationality: Swiss and German | **Year of birth:** 1965

Sabine Keller-Busse was appointed President Personal & Corporate Banking and President UBS Switzerland in 2021, heading the leading universal bank in Switzerland. In her previous role as Group COO, she oversaw global functions such as technology, operations, human resources and corporate services. She has been pivotal in driving business alignment, and digital and cultural transformation, while also facilitating business growth as President UBS Europe, Middle East and Africa. Ms. Keller-Busse also brings in-depth experience regarding financial market infrastructure, having served on the Board of SIX Group for nine years.

Professional experience

Feb. 2021 – date	President Personal & Corporate Banking and President UBS Switzerland, UBS Group AG
Feb. 2021 – date	President of the Executive Board, UBS Switzerland AG
2019 – 2021	President UBS Europe, Middle East and Africa, UBS
2018 – 2021	Group COO of UBS and President of the Executive Board, UBS Business Solutions AG
2016 – 2021	Member of the Executive Board of UBS AG
2014 – 2017	Group Head Human Resources, UBS
2010 – 2014	COO UBS Switzerland, UBS

Education
- Master’s degree, economic sciences, University of St. Gallen
- Ph.D., economic sciences (Dr. oec.), University of St. Gallen

Listed company boards
- Member of the Board of Zurich Insurance Group

Other activities and functions
- Member of the Foundation Council of the UBS International Center of Economics in Society
- Member of the Board and Board Committee of Zurich Chamber of Commerce
- Member of the Board of the University Hospital Zurich Foundation
- Member of the Board of Trustees of the Swiss Entrepreneurs Foundation

Iqbal Khan

President Global Wealth Management and President UBS Europe, Middle East and Africa, member of the GEB since 2019

Nationality: Swiss | **Year of birth:** 1976

Iqbal Khan has been President Global Wealth Management since October 2022 and President UBS Europe, Middle East and Africa since February 2021. From 2019 until September 2022, he was Co-President Global Wealth Management. Mr. Khan joined Ernst & Young in 2001, holding many leadership positions and becoming the youngest-ever partner of the firm’s Swiss arm; when leaving Ernst & Young, he was lead auditor of UBS. In 2013, he moved to Credit Suisse, holding senior leadership positions as CFO Private Banking & Wealth Management and later CEO International Wealth Management.

Professional experience

Oct. 2022 – date	President Global Wealth Management, UBS Group AG and UBS AG
Feb. 2021 – date	President UBS Europe, Middle East and Africa, UBS Group AG and UBS AG
2019 – Sept. 2022	Co-President Global Wealth Management, UBS
2015 – 2019	CEO International Wealth Management, Credit Suisse
2013 – 2015	CFO Private Banking & Wealth Management, Credit Suisse
2011 – 2013	Managing Partner Assurance and Advisory Services – Financial Services, Ernst & Young
2009 – 2011	Industry Lead Partner Banking and Capital Markets, Switzerland and EMEA Private Banking, Ernst & Young
2001 – 2009	Various positions in Ernst & Young

Education
- Swiss Certified Public Accountant
- Advanced Master of International Business Law degree (LL.M.), University of Zurich

Other activities and functions
- Member of the Supervisory Board of UBS Europe SE
- Member of the Board of UBS Optimus Foundation
- Member of the Board of Room to Read Switzerland

Edmund Koh

President UBS Asia Pacific, member of the GEB since 2019

Nationality: Singaporean | **Year of birth:** 1960

Edmund Koh has been President UBS Asia Pacific since 2019. He is a financial sector veteran, with more than 30 years in senior roles in financial services, including as Head Wealth Management Asia Pacific, Country Head Singapore and Head Wealth Management South-East Asia and Asia Pacific Hub for UBS. Before working for DBS Bank in Singapore, Mr. Koh was CEO for Prudential Assurance and Alverdine Pte Ltd, both companies based in Singapore. He joined UBS from Taiwan-based Ta Chong Bank, where he served as President and Director.

Professional experience

2019 – date	President UBS Asia Pacific, UBS Group AG and UBS AG
2016 – 2018	Head Wealth Management Asia Pacific, UBS
2012 – 2018	Country Head Singapore, UBS
2012 – 2015	Head Wealth Management South-East Asia and Asia Pacific Hub, UBS
2008 – 2012	President and Director, Ta Chong Bank, Taiwan
2001 – 2008	Managing Director and Regional Head, Consumer Banking Group, DBS Bank, Singapore

Education
- Bachelor's degree, psychology, University of Toronto

Non-listed company boards
- Member of the Board of Trustees of the Wealth Management Institute, Singapore
- Member of the Board of Next50 Limited, Singapore
- Member of the Board of Medico Suites (S) Pte Ltd
- Member of the Board of Curbside Pte Ltd

Other activities and functions
- Member of a sub-committee of the Singapore Ministry of Finance's Committee on the Future Economy
- Member of the Financial Centre Advisory Panel of the Monetary Authority of Singapore
- Council member of the Asian Bureau of Finance and Economic Research
- Trustee of the Cultural Matching Fund, Singapore
- Member of University of Toronto's International Leadership Council for Asia

Barbara Levi

Group General Counsel, member of the GEB since 2021

Nationality: Italian | **Year of birth:** 1971

Barbara Levi has been Group General Counsel since November 2021. A qualified attorney-at-law, she has been admitted to the Supreme Court of the United States, the New York State bar and the bar of Milan, Italy, and has worked in several law firms in New York and Milan. Ms. Levi began her corporate career with Novartis Group in 2004 and worked there for 16 years, holding a number of senior legal roles across Europe. Before joining UBS, she served as Chief Legal Officer & External Affairs at Rio Tinto Group and, before that, as General Counsel. In both roles, she was a member of that company's executive committee.

Professional experience

Nov. 2021 – date	Group General Counsel, UBS Group AG, and General Counsel, UBS AG
2021	Chief Legal Officer & External Affairs, Rio Tinto Group
2020 – 2021	Group General Counsel, Rio Tinto Group
2019	Group Legal Head, M&A and Strategic Transactions, Novartis
2016 – 2019	Global General Counsel, Sandoz International GmbH, Novartis
2014 – 2016	Global Legal Head, Product Strategy & Commercialization, Novartis
2013 – 2014	Global Legal Head, TechOps, Primary Care and Established Medicines, Novartis
2009 – 2013	Head of Legal & Compliance, Region Asia-Pacific, Middle East, and African Countries, Region Group Emerging Markets, Novartis

Education
- Law degree, University of Milan
- Master of Laws (LL.M.), banking, corporate and finance law, Fordham University School of Law, New York

Other activities and functions
- Member of the Employers' Board of the Global Institute for Women's Leadership, King's College London
- Member of the Board of Directors of the European General Counsel Association
- Member of the Legal Committee of the Swiss-American Chamber of Commerce

Markus Ronner

Group Chief Compliance and Governance Officer, member of the GEB since 2018

Nationality: Swiss l **Year of birth:** 1965

Markus Ronner has been Group Chief Compliance and Governance Officer since 2018. He has been with UBS for more than 40 years and held various positions across the firm, including manager of the Group-wide too-big-to-fail program, COO Wealth Management & Swiss Bank, Head Products and Services of Wealth Management & Swiss Bank, COO Asset Management, and Head Group Internal Audit. In his current position, he is responsible at the Group level for the control of all non-financial risks, governmental and regulatory affairs, as well as investigations and governance matters. Since 2022, he also serves as Chairman of UBS Switzerland AG, the leading Swiss universal bank.

Professional experience

2018 – date	Group Chief Compliance and Governance Officer, UBS Group AG, and Chief Compliance and Governance Officer UBS AG
2012 – 2018	Head Group Regulatory and Governance, UBS
2011 – 2013	Manager Group-wide too-big-to-fail program, UBS
2010 – 2011	COO Wealth Management & Swiss Bank, UBS
2009 – 2010	Head Products and Services of Wealth Management & Swiss Bank, UBS
2007 – 2009	COO Asset Management, UBS
2001 – 2007	Head Group Internal Audit, UBS

Education

– Swiss Banking Diploma

Other activities and functions

– Chairman of the Board of Directors of UBS Switzerland AG

Sarah Youngwood

Group Chief Financial Officer, member of the GEB since March 2022

Nationality: American (US) and French l **Year of birth:** 1974

Sarah Youngwood became Group CFO in May 2022. Before joining UBS, Ms. Youngwood was CFO for JPMorgan Chase Consumer & Community Banking, CFO for Firmwide Technology and CFO for Diversity & Inclusion. She set up the data and reporting infrastructure for that company's USD 30bn racial equity commitments. Previously, Ms. Youngwood was Head of Investor Relations and worked in the Financial Institutions Group within JPMorgan's investment bank in Paris, London and New York. She brings in-depth finance expertise to the table and has a strong track record of adding long-term value, and leading agile and data-driven transformations.

Professional experience

May 2022 – date	Group CFO, UBS Group AG, and CFO, UBS AG
2020 – 2022	CFO, Consumer & Community Banking and Diversity & Inclusion, incl. Global Technology, JPMorgan Chase
2016 – 2020	CFO, Consumer & Community Banking, JPMorgan Chase
2012 – 2016	Head of Investor Relations, JPMorgan Chase
1997 – 2012	Investment Bank, Financial Institutions Group, JPMorgan Chase, Paris, London and New York, including Managing Director – Head of Mortgage Coverage activities

Education

– Master's degree, Business and Finance, ESCP Business School, Paris

Other activities and functions

– Member of the Board of UBS Business Solutions AG
– Advisory Board Member – Wall Street Women's Alliance

Change of control and defense measures

Our Articles of Association (the AoA) do not provide any measures for delaying, deferring or preventing a change of control.

Duty to make an offer

Pursuant to the Swiss Federal Act on Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading of 19 June 2015, an investor who has acquired (whether directly, indirectly or in concert with third parties) more than 33⅓% of all voting rights of a company listed in Switzerland, whether such rights are exercisable or not, is required to submit a takeover offer for all listed shares outstanding. We have not elected to change or opt out of this rule.

Clauses on change of control

Neither the terms regulating the Board members' mandate nor any employment contracts with GEB members or employees holding key functions within the Group contain change of control clauses.

All employment contracts with GEB members stipulate a notice period of six months. During the notice period, GEB members are entitled to their salaries and the continuation of existing employment benefits and may be eligible to be considered for a discretionary performance award based on their contribution during their tenure.

In case of a change of control, we may, at our discretion, accelerate the vesting of and / or relax applicable forfeiture provisions of employees' awards.

› **Refer to the "Compensation" section of this report for more information**

Auditors

Audit is an integral part of corporate governance. While safeguarding their independence, the external auditors closely coordinate their work with Group Internal Audit (GIA). The Audit Committee and, ultimately, the BoD supervise the effectiveness of audit work.

› **Refer to "Board of Directors" in this section for more information about the Audit Committee**

External independent auditors

The 2022 AGM re-elected Ernst & Young Ltd (EY) as auditors for the Group for the 2022 financial year. EY assumes virtually all auditing functions according to laws, regulatory requests and the AoA. Bob Jacob is the EY lead partner in charge of the overall coordination of the UBS Group financial and regulatory audits and the co-signing partner of the financial audit. In 2020, Maurice McCormick became the lead audit partner for the financial statement audit and has an incumbency limit of five years. In 2021, Hannes Smit became the Lead Auditor to the Swiss Financial Market Supervisory Authority (FINMA) with an incumbency limit of seven years. Daniel Martin has been the co-signing partner for the FINMA audit since 2019, with an incumbency limit of seven years.

During 2022, the Audit Committee held 12 meetings with the external auditors.

Review of UBS Group AG and UBS AG audit engagement

EU rules require UBS Europe SE to rotate its external auditors in the 2024 financial year. In connection with this required change, and in consideration of governance best practices, the BoD considered whether it would propose to shareholders a rotation of the Group auditor concurrent with the change at UBS Europe SE. Under the direction of the Audit Committee, UBS conducted a formal review of the Group audit engagement including soliciting proposals from potential auditors. In early 2022, based on the results of this assessment, the BoD decided to retain EY as the Group's external auditors.

Audit effectiveness assessment

The Audit Committee assesses the performance, effectiveness and independence of the external auditors on an annual basis. The assessment is generally based on interviews with senior management and survey feedback from stakeholders across the Group. Assessment criteria include quality of service delivery, quality and competence of the audit team, value added as part of the audit, insightfulness, and the overall relationship with EY. Based on its own analysis and the assessment results, including feedback received as part of the review of the Group audit engagement described above, the Audit Committee concluded that EY's audit has been effective.

Fees paid to external independent auditors

UBS Group AG and its subsidiaries (including UBS AG) paid the following fees (including expenses) to their external independent auditors.

	For the year ended	
USD m	31.12.22	31.12.21
Audit		
Global audit fees	49	53
Additional services classified as audit (services required by law or statute, including work of a non-recurring nature mandated by regulators)	7	8
Total audit[1]	56	61
Non-audit		
Audit-related fees	11	9
of which: assurance and attestation services	*6*	*4*
of which: control and performance reports	*5*	*5*
of which: consultation concerning financial accounting and reporting standards	*0*	*0*
Tax fees	2	1
All other fees	1	0
Total non-audit[1]	14	10

1 Total audit and non-audit fees amounted to USD 70m for UBS Group AG consolidated as of 31 December 2022 (31 December 2021: USD 72m), of which USD 46m related to UBS AG consolidated (31 December 2021: USD 43m).

Special auditors for potential capital increases

At the AGM on 8 April 2021, BDO AG was reappointed as special auditors for a three-year term of office. Special auditors provide audit opinions in connection with potential capital increases independently from other auditors.

Services performed and fees

The Audit Committee oversees all services provided to UBS by the external auditors. For services requiring the approval from the Audit Committee, a preapproval may be granted either for a specific mandate or in the form of a blanket preapproval authorizing a limited and well-defined type and scope of services. The fees (including expenses) paid to EY are set forth in the table above. In addition, EY received USD 35.2m in 2022 (USD 34.1m in 2021) for services performed on behalf of our investment funds, many of which have independent fund boards or trustees.

Audit work includes all services necessary to perform the audit for the Group in accordance with applicable laws and generally accepted auditing standards, as well as other assurance services that conventionally only the auditor can provide. These include statutory and regulatory audits, attestation services and the review of documents to be filed with regulatory bodies. The additional services classified as audit in 2022 included several engagements for which EY was mandated at the request of FINMA.

Audit-related work consists of assurance and related services traditionally performed by auditors, such as attestation services related to financial reporting, internal control reviews and performance standard reviews, as well as consultation concerning financial accounting and reporting standards.

Tax work involves services performed by professional staff in EY’s tax division and includes tax compliance and tax consultation with respect to our own affairs.

“Other” services are permitted services, which include technical IT security control reviews and assessments.

Group Internal Audit

GIA performs the internal auditing role for the Group. It is an independent function that provides expertise and insights to confirm controls are functioning correctly and highlight where UBS needs to better manage current and emerging risks. In 2022, it operated with an average headcount of 585 full-time equivalent employees.

GIA supports the BoD in discharging its governance responsibilities by taking a dynamic approach to audit, issue assurance and risk assessment, drawing attention to key risks in order to drive action to prevent unexpected loss or damage to the firm's reputation. To support the achievement of UBS's objectives, GIA independently, objectively and systematically assesses the:

(i) soundness of the Group's risk and control culture;
(ii) reliability and integrity of financial and operational information, including whether activities are properly, accurately and completely recorded, and the quality of underlying data and models; and
(iii) design, operating effectiveness and sustainability of:
  - processes to define strategy and risk appetite, as well as the overall adherence to the approved strategy;
  - governance processes;
  - risk management, including whether risks are appropriately identified and managed;
  - internal controls, specifically whether they are commensurate with the risks taken;
  - remediation activities; and
  - processes to comply with legal and regulatory requirements, internal policies, and the Group's constitutional documents and contracts.

Audit reports that include significant issues are provided to the Group CEO, relevant GEB members and other responsible management. The Chairman, the Audit Committee and the Risk Committee of the BoD are regularly informed of such issues.

In addition, GIA provides independent assurance on the effective and sustainable remediation of control deficiencies within its mandate, taking a prudent and conservative risk-based approach and assessing at the issue level whether the root cause and the potential exposure for the firm have been holistically and sustainably addressed. GIA also cooperates closely with risk control functions and internal and external legal advisors on investigations into major control issues.

To ensure GIA's independence from management, the Head GIA reports to the Chairman of the BoD and to the Audit Committee, which assesses annually whether GIA has sufficient resources to perform its function, as well as its independence and performance. In the Audit Committee's assessment, GIA is sufficiently resourced to fulfill its mandate and complete its auditing objectives. GIA's role, position, responsibilities and accountability are set out in our Organization Regulations and the Charter for GIA, available at *ubs.com/governance*. The Charter also applies to UBS AG's internal audit function. GIA has unrestricted access to all accounts, books, records, systems, property and personnel, and must be provided with all information and data that it needs to fulfill its auditing responsibilities. GIA also conducts special audits at the request of the Audit Committee, or other BoD members, committees or the Group CEO in consultation with the Audit Committee.

GIA enhances the efficiency of its work through coordination and close cooperation with the external auditors.

Information policy

We provide regular information to our shareholders and to the wider financial community.

Financial reports for UBS Group AG are expected to be published on the following dates:

First quarter 2023	25 April 2023
Second quarter 2023	25 July 2023
Third quarter 2023	24 October 2023

The annual general meetings of the shareholders of UBS Group AG will take place on the following dates:

2023	5 April 2023
2024	11 April 2024

› **Refer to the corporate calendar available at *ubs.com/investors* for the dates of the publication of financial reports and other key dates, including the dates of the publication of UBS AG's financial reports**

We meet with institutional investors worldwide throughout the year and regularly hold results presentations, attend and present at investor conferences, and, from time to time, host investor days. When appropriate, investor meetings are hosted by senior management and are attended by members of our Investor Relations team. We use various technologies, such as webcasting, audio links and cross-location videoconferencing, to widen our audience and maintain contact with shareholders globally.

We make our publications available to all shareholders simultaneously to provide them with equal access to our financial information.

Our annual and quarterly publications are available in a fully digital and .pdf format at *ubs.com/investors*, under "Financial information." Starting with our Annual Report 2022, we no longer provide printed copies of our Annual Report and our Compensation Report in any language.

› **Refer to *ubs.com/investors* for a complete set of published reporting documents and a selection of senior management industry conference presentations**

› **Refer to the "Information sources" section of this report for more information**

› **Refer to "Corporate information" and "Contacts" of this report for more information**

Financial disclosure principles

We fully support transparency, and consistent and informative disclosure. We aim to communicate our strategy and results in a manner that enables stakeholders to gain a good understanding of how our Group operates, what our growth prospects are, and the risks that our businesses and our strategy entail. We assess feedback from analysts and investors on a regular basis and, where appropriate, reflect this in our disclosures. To continue achieving these goals, we apply the following principles in our financial reporting and disclosure:

– *transparency* that enhances the understanding of economic drivers and builds trust and credibility;
– *consistency* within each reporting period and between reporting periods;
– *simplicity* that allows readers to gain a good understanding of the performance of our businesses;
– *relevance,* by focusing not only on what is required by regulation or statute but also on what is relevant to our stakeholders; and
– *best practice* that leads to improved standards.

We regard the continuous improvement of our disclosures as an ongoing commitment.

Financial reporting policies

We report our Group's results for each financial quarter, including a breakdown of results by business division and disclosures or key developments relating to risk management and control, capital, liquidity and funding management. Each quarter, we publish quarterly financial reports for UBS Group AG, on the same day as the earnings releases.

The consolidated financial statements of UBS Group AG and UBS AG are prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

› **Refer to "Note 1 Summary of material accounting policies" in the "Consolidated financial statements" section of this report for more information about the basis of accounting**

We are committed to maintaining the transparency of our reported results and to allowing analysts and investors to make meaningful comparisons with prior periods. If there is a major reorganization of our business divisions or if changes to accounting standards or interpretations lead to a material change in the Group's reported results, our results are restated for previous periods as required by applicable accounting standards. These restatements show how our results would have been reported on the new basis and provide clear explanations of all relevant changes.

US disclosure requirements

As a foreign private issuer, we must file reports and other information, including certain financial reports, with the US Securities and Exchange Commission (the SEC) under the US federal securities laws.

An evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a–15e) under the US Securities Exchange Act of 1934 has been carried out, under the supervision of management, including the Group CEO, the Group CFO and the Group Controller and Chief Accounting Officer. Based on that evaluation, the Group CEO and the Group CFO concluded that our disclosure controls and procedures were effective as of 31 December 2022. No significant changes have been made to our internal controls or to other factors that could significantly affect these controls subsequent to the date of their evaluation.

› **Refer to the "Consolidated financial statements" section of this report for more information**

Compensation

Table of contents

Compensation

Julie G. Richardson
Chairperson of the
Compensation Committee
of the Board of Directors

Dear Shareholders,

The Board of Directors (the BoD) and I wish to thank you for your support once again at last year's Annual General Meeting (the AGM) and for sharing your views on our compensation practices over the past year.

Throughout 2022, the BoD Compensation Committee continued to oversee the compensation process, aiming to ensure that reward reflects performance, that risk-taking is appropriate and that employees' interests are aligned with those of our stakeholders. As the Chairperson of the Compensation Committee, I am pleased to present our Compensation Report for 2022.

As part of our ongoing engagement with shareholders during 2022, we received positive feedback on our compensation framework. We believe it is well suited to support our ambitions for the Group and provides strong alignment with shareholders. Its robustness supports pay-for-performance through varying business cycles and incentivizes both annual and longer-term performance. In addition to other measures taken in light of the increasing competition for talent, our compensation framework further reinforces the attractiveness of UBS for key talent.

Supporting our clients and executing in a challenging environment

The macroeconomic and geopolitical environment has become increasingly complex. Our clients remain focused on key issues, such as potential persistently high inflation, elevated energy prices, the war in Ukraine and residual effects of the pandemic. The related impact has been far-reaching, affecting asset levels, market volatility, rates and investor sentiment across the globe. Our highly accretive, capital-light business model and disciplined risk management position us well to face the challenges of the current macroeconomic environment.

Sustainable finance is crucial when it comes to helping our clients achieve their diverse sustainability objectives. Leveraging the deep expertise of our experienced teams, we work hard to service our clients' diverse sustainable financing, investing and/or advisory needs in the best way possible. In 2022, we expanded our sustainable investment offering with additional alternative and tailored-investment solutions and progressed a number of important investment product initiatives relevant to a broad spectrum of clients across our business areas.

› **Refer to "Financial and operating performance" in our Annual Report 2022 for further details about our Group and business division performance**

How does UBS respond to the increasing competition for talent?

– We continue to see heightened competition for talent. These pressures come from our competitors but also organizations in other industries, including technology, consulting and new entrants, such as fintech firms.
– We continue to be successful in hiring the talent we need to grow our businesses, who are increasingly interested in operating digitally, and they value diverse experiences, which requires flexibility and agility. That's one reason why we support hybrid working arrangements where possible as these benefit current employees and improve client service while attracting a wider range of candidates and making us a stronger, more dynamic company.
– Agility drives simplification; we are committed to making it even easier for our clients to do business with us and for our employees to work at UBS. As of year-end 2022, approximately 18,500 employees across the firm were working in agile teams.
– In 2022, we further expanded our employee health and well-being offering. This included a suite of programs, benefits and workplace resources, along with a bespoke eLearning curriculum, that aimed to help our employees manage their health, foster well-being, strengthen their resilience and support the sustainability of the organization.
– Ultimately, we strongly reflect pay-for-performance in our compensation decision-making, and additionally consider carefully inflation levels and our competitive market position.

› **Refer to *ubs.com/global/en/our-firm/our-employees* for more information about our workforce**

GEB hiring and succession planning

Succession planning is a pivotal activity for the BoD. We are convinced that a Group Executive Board (GEB) with diverse backgrounds and experiences is critical to our continued success. We have a successful track record of filling GEB roles with highly qualified, diverse candidates from within the Group and, in selected cases, from the outside. In order to attract external top talent, market practice dictates that we consider replacing the forfeited compensation from their prior employer. In selected situations and with careful consideration, we replace the lost compensation of senior hires. Awards for new GEB members are subject to independent review to support the like-for-like nature of the replacement and confirm that these awards do not represent sign-on payments (i.e., there are no "golden hellos"). In 2022, we made two external GEB hires and in this report we disclose their replacement awards.

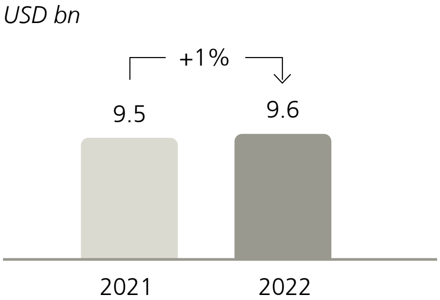
Financial performance

We delivered good results in 2022, with USD 9.6bn profit before tax and 17.0% RoCET1 in a challenging environment, achieving our Group returns and efficiency targets on a reported and underlying basis. This result was supported by strong momentum with our clients, who turned to us for advice, resulting in USD 60bn of net new fee-generating assets. We also demonstrated continued cost discipline despite the backdrop of rising inflation, resulting in a cost-income ratio of 72.1%. We are well positioned to continue executing our growth strategy and delivering strong capital returns, while weathering the challenges of the current macroeconomic environment. We enter 2023 in a position of strength and with a CET1 capital ratio of 14.2%, enabling us to fund growth and deliver attractive and sustainable returns to shareholders.

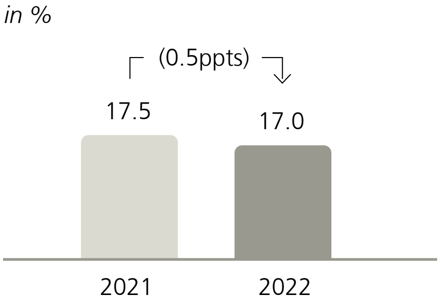
Commitment to return capital to shareholders

We remain committed to returning excess capital to our shareholders. We repurchased USD 5.6bn of shares in 2022. Looking ahead, we intend to continue repurchasing shares and accruing for a progressive dividend. The BoD is proposing a dividend of USD 0.55 per share for 2022 (which represents an increase of 10% compared with the previous year) for approval at the AGM in 2023.

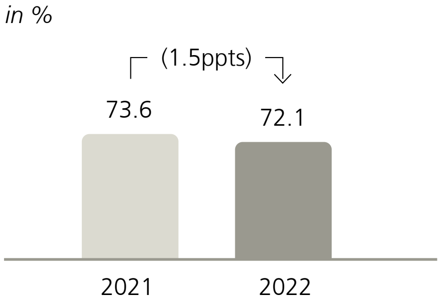
Group profit before tax



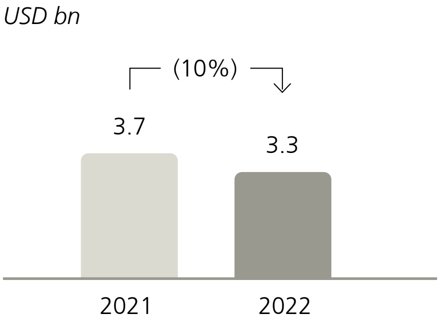
Return on CET1 capital



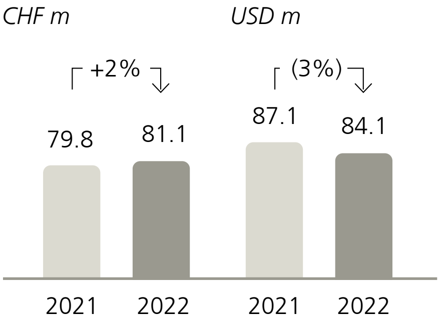
Cost / income ratio



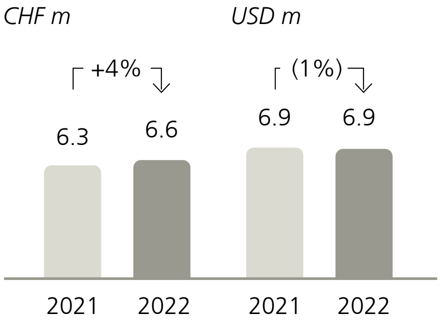
Group performance award pool



GEB performance award pool



Per capita GEB performance award pool



Note: As the compensation-related AGM agenda items are in Swiss franc terms, we show the total and per capita GEB performance award pool in Swiss francs and US dollars for comparability with our financial results.

2022 performance award pool and salaries

The performance award pool continues to reflect our strict pay-for-performance philosophy, our disciplined approach in managing compensation over business cycles and our alignment to shareholder interests. Reflecting our overall results while also considering our underlying results, the 2022 performance award pool was USD 3.3bn, a decrease of 10% compared with 2021.

In addition, the pool also reflects our achievements relative to non-financial objectives, such as our reconfirmed position among the leading firms when it comes to their approach to sustainability. It also takes into account risk considerations, as well as the competitive total shareholder return (TSR) of UBS shares versus our core peers. It also considers other factors, such as the continuing competition to attract and retain a talented and diverse workforce that delivers on our purpose and strategy.

While the 2022 GEB pool percentage change appears more favorable than the overall Group pool, this year's GEB comparison is impacted by the significant reduction made in 2021 to reflect the loss resulting from the default of a US client in our prime brokerage business. For 2022, we consider a GEB pool before the impact of the 2021 loss event to support competitive pay for competitive performance and not to carry forward the 2021 impact over multiple years. In addition, the 2022 GEB pool reflects changes in both foreign exchange rates and GEB composition. Adjusted for the direct impact of the 2021 loss event on specific GEB members, the 2022 GEB pool is down approximately 5% in Swiss franc terms or a decrease of 10% in US dollar terms, which is aligned with the Group pool development.

We take note of the increased impact of inflationary pressures on the broad-based employee population. At a Group level, we have carefully monitored and adjusted compensation levels where appropriate to address increased competition for talent in certain markets. For the GEB, we continue with the same salary level instituted in 2011 and propose no increase to our GEB fixed compensation budget and salary levels for 2024. Furthermore, we also propose no increase to the fee levels for the BoD and no change to the maximum aggregate amount for BoD from the 2023 AGM to the 2024 AGM.

Commitment to fair pay and diversity, equity and inclusion

Pay equity and equal opportunity are fundamental to achieving our purpose. We pay for performance, and we take pay equity seriously. Since 2020, we have been certified under the EQUAL-SALARY Foundation standards for our human resources practices in Switzerland, the US, the UK, the Hong Kong SAR and Singapore, covering more than two-thirds of our global employee population. Our processes are global and we apply the same standards across all our locations.

In 2022, we extended our internal fair pay analysis by assessing employees' salaries against local living wages, using benchmarks defined by the Fair Wage Network. We are committed to fair pay and support all employees being paid at least a living wage.

In 2020, we outlined our intention to increase diversity, especially among management, and we have made steady progress toward achieving our aspirations. Women now account for more than 40% of our workforce, nearly 28% of our Director-level and above population, and 42% of our GEB members.

The 2023 Annual General Meeting

At the 2023 AGM on 5 April, we will seek your support on the following compensation-related items:
- the maximum aggregate amount of compensation for the BoD for the period from the 2023 AGM to the 2024 AGM;
- the maximum aggregate amount of fixed compensation for the GEB for 2024;
- the aggregate amount of variable compensation for the GEB for 2022; and
- shareholder endorsement in an advisory vote for this Compensation Report.

On behalf of the Compensation Committee and the BoD, I thank you again for your feedback and we respectfully ask for your continued support at the upcoming AGM.

Julie G. Richardson
Chairperson of the Compensation Committee of the
Board of Directors

2022 key compensation themes

The feedback we seek from our shareholders about compensation-related topics is very important to us, as we are committed to maintaining a strong link between the interests of our employees and those of our shareholders. We continued engaging with shareholders during 2022 and received overall positive feedback about our compensation framework.

The text below summarizes key compensation themes for 2022 and provides answers to the questions we most frequently receive from shareholders.

Summary of 2022 key compensation themes / responses to frequently asked questions

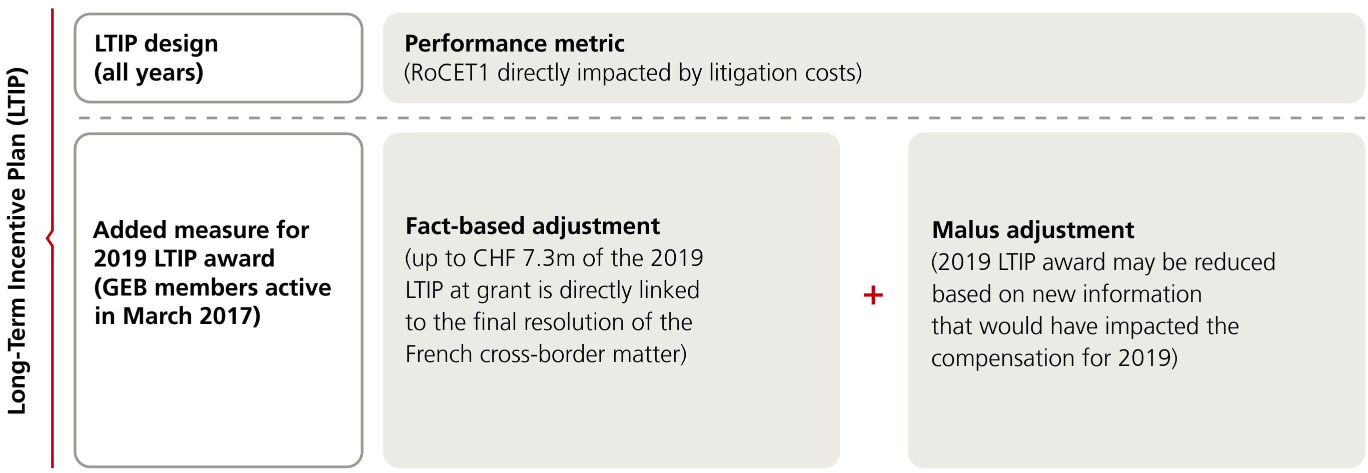
What progress has been made on resolving the French cross-border matter and how is this reflected in GEB compensation?

In December 2021, UBS filed an appeal with the French Supreme Court regarding the decision of the Court of Appeal relating to the French cross-border matter. This matter remains ongoing and was considered in the decision-making process for our 2021 performance award pool.

The use of the RoCET1 metric aims to ensure the cost of litigation matters, including the French cross-border matter, has an ongoing and direct impact on the compensation awarded and realized by our most senior leaders, including the GEB. Additionally, when determining the 2019 performance award pool, the impact of the French cross-border matter was considered in our decision making, following the verdict of the Court of First Instance in early 2019.

Furthermore, up to CHF 7.9m, or 30%, of the 2019 LTIP awards at grant for GEB members active in March 2017, as well as the former Chairman of the BoD's unvested share award, remains undelivered and continues to be at risk and directly linked to the final resolution of the French cross-border matter. In addition, a malus clause allows the Compensation Committee to assess any new information that becomes available in the future and to retrospectively reduce any undelivered 2019 LTIP award by up to the full amount if such new information would have impacted our compensation decision in 2019. This matter continues to be ongoing and, once resolved, the final outcome will be reflected in the final amounts delivered to relevant current and former employees.

Impact of litigation matters on the LTIP



Note: As disclosed in the Compensation Report 2019.

How does UBS support diversity and pay fairness?

Compensating employees fairly and consistently is key to ensuring equal opportunities. A strong commitment to pay for performance and pay equity is embedded in our compensation policies.

- **Refer to "Environmental, Social and Governance considerations" in the "Compensation philosophy and governance" section of this report for more information about pay fairness**
- **Refer to the "People and culture make the difference" section of our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about diversity, equity and inclusion (DE&I)**

How are environmental, social and governance considerations factored into the compensation process?

We maintain our well-established process that considers environmental, social and governance (ESG) objectives in the compensation determination process in objective setting, performance award pool funding, performance evaluation and compensation decisions.

› **Refer to "Environmental, Social and Governance considerations" in the "Compensation philosophy and governance" section of this report for more information**

How does UBS promote and support the health and well-being of employees?

Supporting employee health and well-being remained a priority, and we further expanded our offering in 2022. We are committed to helping employees thrive in their current roles and deliver sustainable performance over time. Regular "pulse" surveys gauged employees' views on remote work, stress, communication and other aspects. Resources to support holistic well-being included a suite of programs, benefits and workplace resources, along with a bespoke eLearning curriculum, that aimed to help our employees manage their health, foster well-being, strengthen their resilience and support the sustainability of the organization.

› **Refer to the "People and culture make the difference" section of our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about DE&I**

What is the achievement level of the Long-Term Incentive Plan granted in 2020 for 2019 performance?

The deferred portion of the performance award granted in 2020 (for 2019 performance) to members of the Group Executive Board (the GEB) and selected senior management was in part delivered through the Long-Term Incentive Plan (the LTIP) award. The three-year performance period concluded at the end of 2022, with the 2019 LTIP achieving 98% of the maximum opportunity (of up to 100%). We believe alignment of our senior leadership with our shareholders is important for long-term success. Our LTIP is designed to support alignment of compensation with the execution of our strategy, financial performance and long-term growth.

Performance achievement for the 2019 LTIP awarded in 2020

Performance metrics	Performance metric outcome			2019 LTIP achievement level			
	Threshold	Maximum			Threshold	Maximum	
RoCET1 (Weight: 50%)	6%	18%	Outcome: 17.3%	*Outcome below threshold: full forfeiture*	33%	100%	Achievement: 96%	*Outcome above maximum: achievement capped at 100%*
rTSR (Weight: 50%)	−25ppts	+25ppts	Outcome: 50.9ppts		33%	100%	Achievement: 100%
Overall 2019 LTIP achievement level					**Overall achievement: 98%**		

Say-on-pay

Say-on-pay votes at the AGM

In line with the revised Swiss Code of Obligations (which to a large extent integrates the Swiss Ordinance against Excessive Compensation in Listed Stock Corporations, which was enacted as an interim measure), we seek binding shareholder approval for the aggregate compensation awarded to the Group Executive Board (the GEB) and the Board of Directors (the BoD). Prospective approval of the fixed compensation of the BoD and GEB provides the firm and its governing bodies with the certainty needed to operate effectively. Retrospective approval of the GEB's variable compensation aligns their compensation with performance and contribution.

The table below outlines our compensation proposals, including supporting rationales, that we plan to submit to the 2023 AGM for binding votes, in line with the revised Swiss Code of Obligations and our Articles of Association (the AoA).

These binding votes on compensation and the advisory vote on our compensation report reflect our commitment to shareholders having their say on pay.

› **Refer to "Provisions of the Articles of Association related to compensation" in the "Supplemental information" section of this report for more information**

Audited I

Approved fixed compensation

At the 2021 AGM, the shareholders approved a maximum aggregate fixed compensation amount of CHF 33.0m for GEB members for the 2022 performance year. This budget reflects base salaries, role-based allowances in response to EU Capital Requirements Directive V, and estimated standard contributions to retirement benefit plans, as well as other benefits.

Our expenses related to fixed compensation for our continuing GEB members were within the budget; however, the amount of fixed compensation, including replacement awards, related to the hiring of Sarah Youngwood as Group Chief Financial Officer and Naureen Hassan as President UBS Americas, required the use of the supplemental amount as authorized by article 46 para. 5 of our AoA. A total of CHF 0.1m (of which CHF 0.05m related to Sarah Youngwood and CHF 0.05m related to Naureen Hassan) was used to fund the authorized excess to the approved aggregate amount of fixed compensation. ▲

› **Refer to "2022 total compensation for the GEB members" in the "Compensation for GEB members" section of this report**

Compensation-related proposals for binding and advisory votes at the 2023 AGM

Item	Approved at the 2022 AGM	BoD proposals for the 2023 AGM	Rationale
GEB variable compensation	Shareholders approved CHF 79,750,000 for the 2021 financial year[1,2,3] (vote "for": 86%)	The BoD proposes an aggregate amount of variable compensation of CHF 81,100,000 for the members of the GEB for the 2022 financial year.	The proposed pool reflects the solid performance of the GEB as demonstrated in the strength of our share price and the good performance of the Group in a challenging market environment. For 2022, we consider a GEB pool excluding the impact of the 2021 loss event to support competitive pay for competitive performance and not to carry forward the 2021 impact over multiple years. Adjusted for the direct impact of the 2021 loss event on specific GEB members, the 2022 GEB pool is down approximately 5% in Swiss franc terms or a decrease of 10% in US dollar terms, which is aligned with the Group pool development.
GEB fixed compensation	Shareholders approved CHF 33,000,000 for the 2023 financial year[1,2,3] (vote "for": 93%)	The BoD proposes a maximum aggregate amount of fixed compensation of CHF 33,000,000 for the members of the GEB for the 2024 financial year.	The proposed amount is unchanged from the previous year, reflecting consistency in planning over time and unchanged base salaries for the Group CEO and other GEB members. Besides the base salaries, it also includes role-based allowances, estimated standard contributions to retirement benefit plans, as well as other benefits. The proposed amount provides flexibility in light of potential changes of GEB composition or roles, competitive considerations where potential additional role-based allowances may be required as well as other factors (e.g., changes in FX rates or benefits).
BoD compensation	Shareholders approved CHF 13,000,000 for the period from the 2022 AGM to the 2023 AGM[1,2,4] (vote "for": 93%)	The BoD proposes a maximum aggregate amount of compensation of CHF 13,000,000 for the members of the BoD for the period from the 2023 AGM to the 2024 AGM.	The proposed amount is unchanged compared with the previous period and includes the total compensation of the Chairman and the newly defined Vice Chairman role. The compensation for the Chairman is approximately 8% lower compared with the previous Chairman. The fee for the new full-time Vice Chairman role was absorbed within the existing budget. All BoD fees remain unchanged for the period 2023 AGM to 2024 AGM.
Advisory vote on the Compensation Report	Shareholders approved the UBS Group AG Compensation Report 2021 in an advisory vote (vote "for": 86%)	The BoD proposes that the UBS Group AG Compensation Report 2022 be ratified in an advisory vote.	Our Total Reward Principles and compensation framework are fully aligned with our purpose and support our strategic imperatives. This aims to ensure that the interests of our employees are aligned with those of our clients and other stakeholders.

1 Local currencies are converted into Swiss francs at the 2022 performance award currency exchange rates. 2 Excludes the portion related to the legally required employer's social security contributions. 3 As stated in "Group Executive Board" in the "Corporate governance" section of our Annual Report 2022, twelve GEB members were in office on 31 December 2022 and on 31 December 2021. 4 Twelve BoD members were in office on 31 December 2022 and on 31 December 2021.

Compensation philosophy and governance

Our compensation philosophy

Total Reward Principles

Our Total Reward Principles provide a strong link to our strategic imperatives and encourage employees to live our strong and inclusive culture that is grounded in our three keys to success: our Pillars, Principles and Behaviors. These guiding principles underpin our approach to compensation and define our compensation framework. In 2022, we reviewed our Total Reward Principles and compensation framework to confirm they are fully aligned with our purpose and support our strategic imperatives. This aims to ensure that the interests of our employees are aligned with those of our clients and other stakeholders.

Therefore, our compensation approach supports our capital strength and risk management, and provides for simplification and efficiency. It encourages employees to focus on client centricity, connectivity and sustainable impact in everything we do. Moreover, we reward behaviors that help build and protect the firm's reputation, specifically Accountability with integrity, Collaboration and Innovation. Compensation for each employee is based on individual, team, business division and Group performance, within the context of the markets in which we operate.

Total Reward Principles

Our Total Reward Principles apply to all employees globally, but vary in certain locations according to local legal requirements, regulations and practices. The table below provides a summary of our Total Reward Principles.

Support our purpose and strategy	Our compensation approach supports the firm's purpose and strategy, fosters engagement among employees and aligns their long-term interests with those of clients and stakeholders.
Attract, retain and connect a diverse, talented workforce	We embrace a culture of diversity, equity and inclusiveness. Pay at UBS is fair, reflects equal treatment and is competitive. In this way, our investment in a connected workforce supports the sustainability of the organization.
Apply a pay-for-performance approach to promote development and our ways of working	The setting of clear objectives, as well as a thorough evaluation of what was achieved and how it was achieved, combined with effective communication, promotes clarity, accountability and establishes a strong link between pay and performance. This approach emphasizes our Behaviors, which are Accountability with integrity, Collaboration and Innovation.
Reinforce sustainable growth and support long-term value creation	Compensation is appropriately balanced between fixed and variable elements and delivered over an adequate period to support our growth ambitions and sustainable performance.
Support risk awareness and appropriate risk-taking	Our compensation structure encourages employees to have a focus on risk management and behave consistently with the firm's risk framework and appetite, thereby anticipating and managing risks effectively to protect our capital and reputation.

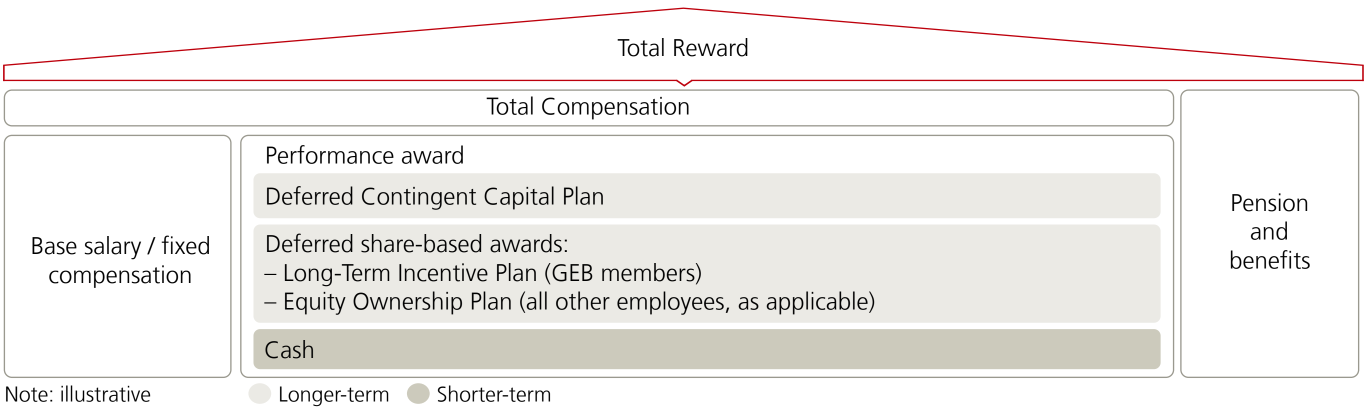
Our Total Reward approach

At UBS, we apply a holistic Total Reward approach, generally consisting of fixed compensation (base salary and role-based allowances, if applicable), performance awards, pension contributions and benefits. Our Total Reward approach is structured to support sustainable results and growth ambitions.

For employees whose total compensation exceeds certain levels, performance awards are delivered in a combination of cash, deferred contingent capital awards and deferred share-based awards.

A substantial portion of performance awards is deferred and vests over a five-year period (or longer for certain regulated employees). This deferral approach supports alignment of employee and investor interests, our capital base and the creation of sustainable shareholder value.

› **Refer to "Compensation elements for all employees" in the "Group compensation" section of this report for more information**



Note: illustrative

Compensation governance

Board of Directors and Compensation Committee

The BoD is ultimately responsible for approving the compensation strategy and principles proposed by the Compensation Committee, which determines compensation-related matters in line with the principles set forth in the AoA.

As determined in the AoA and the firm's Organization Regulations, the Compensation Committee supports the BoD with its duties to set guidelines on compensation and benefits, to oversee implementation thereof, to approve certain compensation and to scrutinize executive performance. The Compensation Committee consists of independent BoD members, who are elected annually by shareholders at the AGM, and is responsible for governance and oversight of our compensation process and practices. This includes the alignment between pay and performance, and ensuring that the compensation framework supports appropriate risk awareness and management, as well as appropriate risk-taking. In 2022, to additionally support the connection between the Compensation Committee and the Risk Committee, the Compensation Committee Chairperson was also a member of the Risk Committee.

Annually, and on behalf of the BoD, the Compensation Committee:
- reviews our Total Reward Principles;
- approves key features of the compensation framework and plans for the non-independent Board members and GEB members;
- reviews performance award funding throughout the year and proposes, upon proposal of the Group CEO, the final annual Group performance award pool to the BoD for approval;
- upon proposal of the Group CEO, reviews the performance framework for the other GEB members;
- upon proposal of the Group CEO, proposes the performance assessments and the individual total compensation for the other GEB members for approval by the BoD;
- upon proposal of the Chairman, for the Group CEO, proposes the financial and non-financial performance targets and objectives, the performance assessment and the total compensation for approval by the Board;
- approves the total compensation for the Chairman and the non-independent Board members;
- upon proposal of the Chairman, proposes the remuneration / fee framework for independent Board members for approval by the Board;
- upon proposal of the Chairman and Group CEO, approves the remuneration / fee frameworks for external supervisory board members of Significant Group Entities and is informed of remuneration / fee frameworks for external supervisory board members of Significant Regional Entities;
- proposes to the BoD for approval the annual compensation report and approves other material public disclosures on UBS compensation matters; and
- proposes to the BoD, for approval by the AGM, the maximum aggregate amounts of BoD compensation and GEB fixed compensation and the aggregate amount of variable compensation for the GEB.

The Compensation Committee is required to meet at least four times each year. All meetings in 2022 were held in the presence of the Chairman and the Group CEO and most were attended by external advisors. Individuals, including the Chairman and the Group CEO, are not permitted to attend a meeting or participate in a discussion on their own performance and compensation.

After the meetings, the Chairperson of the Compensation Committee reports to the BoD on the Compensation Committee's activities and discussions and, if necessary, submits proposals for approval by the full BoD. Compensation Committee meeting minutes are also sent to all members of the BoD.

On 31 December 2022, the members of the Compensation Committee were Julie G. Richardson (Chairperson), Dieter Wemmer and Jeanette Wong.

› **Refer to "Board of Directors" in the "Corporate governance" section of our Annual Report 2022 for more information**

External advisors

The Compensation Committee may retain external advisors to support it in fulfilling its duties. In 2022, HCM International Ltd. (HCM) provided independent advice on compensation matters. HCM holds no other mandates with UBS. Additionally, Willis Towers Watson provided the Compensation Committee with data on market trends and pay levels. Various subsidiaries of Willis Towers Watson provide similar information to UBS's human resources department in relation to compensation for employees. Willis Towers Watson holds no other compensation-related mandates with UBS.

The Risk Committee's role in compensation

The Risk Committee, a committee of the BoD, works closely with the Compensation Committee with the goal of ensuring that our compensation framework appropriately reflects risk awareness and management, and supports appropriate risk-taking. It supervises and sets appropriate risk management and risk control principles and is regularly briefed on how risk is factored into the compensation process. It also monitors the involvement of Group Risk Control and Compliance and Operational Risk in compensation and reviews risk-related aspects of the compensation process.

› **Refer to *ubs.com/governance* for more information**

Compensation Committee 2022 / 2023 key activities and timeline

	April	July	Sept	Oct	Nov	Dec[1]	Jan	Feb
Strategy, policy and governance								
Total Reward Principles			●					
Sustainability / ESG in the compensation process		●				●	●	
Compensation disclosure and stakeholder communication matters		●				●		●
AGM reward-related items		●					●	
Compensation Committee governance								●
Annual compensation review								
Accruals and full-year forecast of the performance award pool funding		●			●	●	●	
Performance targets and performance assessment of the Group CEO and GEB members		●				●	●	
Group CEO and GEB members' salaries and individual performance awards		●				●	●	
Update on market practice, trends and peer group matters	●	●			●		●	
Pay for performance, including governance on certain higher-paid employees, and non-standard compensation arrangements	●	●	●		●	●	●	●
Board of Directors remuneration							●	
Compensation framework								
Compensation framework and deferred compensation matters		●	●				●	●
Risk and regulatory								
Risk management in the compensation approach and joint meeting with BoD Risk Committee	●			●	●		●	
Regulatory activities impacting employees and engagement with regulators		●		●		●		●

1 The Compensation Committee held two meetings in December 2022.

Compensation governance

The table below provides an overview of compensation governance by specific role.

Recipients	Compensation recommendations proposed by	Approved by
Chairman of the BoD and Vice Chairman of the BoD	Compensation Committee	Compensation Committee[1]
Other BoD members	Compensation Committee and Chairman of the BoD	BoD[1]
Group CEO	Compensation Committee and Chairman of the BoD	BoD[1]
Other GEB members	Compensation Committee and Group CEO	BoD[1]
Key Risk Takers (KRTs) / senior employees	Respective GEB member and functional management team	Individual compensation for KRTs and senior employees: Group CEO

1 Aggregate variable compensation and maximum aggregate amount of fixed compensation for the GEB, as well as maximum aggregate remuneration for the BoD, are subject to shareholder approval.

Environmental, Social and Governance considerations

Environmental, social and governance in the compensation determination process

Environmental, social and governance (ESG) objectives are considered in the compensation determination process in objective setting, performance award pool funding, performance evaluation and compensation decisions.

ESG-related objectives have been embedded in our Pillars and Principles since they were established in 2011. In 2021, we introduced explicit sustainability objectives in the non-financial goal category of the Group CEO and GEB scorecards. These sustainability objectives are linked to our priorities, and their progress is measured via robust quantitative metrics and qualitative criteria. The table below provides an overview of our metrics and progress achieved in 2022, including climate-related goals under the priority "Planet." Sustainability objectives are individually assessed for each GEB member, and consequently directly impact their performance assessments and compensation decisions.

In addition, in the performance award pool funding across the Group, ESG is also reflected through an assessment of progress made against targets linked to our focus areas of Planet, People (including progress made against our diversity ambitions) and Partnerships, alongside other key dimensions. Therefore, ESG is taken into consideration when the Compensation Committee assesses not only what results were achieved but also how they were achieved.

For 2022, we established robust and concrete targets, and made good progress toward achieving them. We continue to increase our focus on this topic.

› **Refer to "GEB performance assessments" in the "Compensation for GEB members" section of this report for more information about the GEB performance measurement process**

› **Refer to "Our focus on sustainability and climate," "Employees" and "Society" in the "How we create value for our stakeholders" section of our Annual Report 2022 for more information**

› **Refer to *ubs.com/gri* for more information about ESG-related topics**

Paying our people fairly and equitably

Pay equity and equal opportunity are fundamental to achieving our purpose. To connect for a better world, providing equal support to all our employees, with their diverse experiences, perspectives and backgrounds, is critical to our success. Factors such as gender, race, ethnicity, part-time status or a recent leave of absence should not impact opportunities.

Fair and consistent pay practices are designed to ensure that employees are appropriately rewarded for their contribution. We pay for performance, and we take pay equity seriously. We've embedded clear commitments in our global compensation policies and practices, and we regularly conduct internal reviews and external audits as quality checks. If we find any gaps not explained by business or by appropriate employee factors such as role, responsibility, experience, performance or location, we look at the root causes and address them.

Since 2020, we have been certified under the EQUAL-SALARY Foundation standards for our human resources practices in Switzerland, the US, the UK, the Hong Kong SAR and Singapore, covering more than two-thirds of our global employee population. Our global human resources policies and standards, including reward, performance management and promotion, from hiring through retirement, are reviewed annually to further improve our approach and processes. Our processes are global and we apply the same standards across all our locations.

The firm also successfully completed an equal pay analysis in Switzerland in 2020, as required by the Swiss Federal Act on Gender Equality. The results of the analysis confirmed that we are fully compliant with Swiss equal pay standards. These holistic certifications are a testament to our well-established equal opportunity environment and the strength of our human resources practices, including performance and reward.

In 2022, we extended our internal fair pay analysis by assessing employees' salaries against local living wages, using benchmarks defined by the Fair Wage Network. Excluding our US Financial Advisor population and their related support population (as their compensation is primarily based on a formulaic approach), our analysis showed that employees' salaries were at or above the respective benchmarks, and the few outliers have all been addressed. UBS is committed to fair pay and supports all employees being paid at least a living wage.

Our aspirational goals and progress

Our priorities	Our aspirational goals	Our progress in 2022
Planet, people, partnerships	USD 400bn invested assets in sustainable investments by 2025.	Increased invested assets in sustainable investments to USD 268bn (compared with USD 251bn in 2021).
Planet	Decarbonization targets for 2030 for financing of the real estate, fossil fuels, power generation and cement sectors (from 2020 levels): – reduce emissions intensity of UBS's residential real estate lending portfolio by 42%; – reduce emissions intensity of UBS's commercial real estate lending portfolio by 44%; – reduce absolute financed emissions associated with UBS loans to fossil fuel companies by 71%; – reduce emissions intensity associated with UBS loans to power generation companies by 49%; and – reduce emissions intensity associated with UBS loans to cement companies by 15%.	Calculated progress against pathways for the real estate (commercial and residential), fossil fuel and power generation sectors:[1] – reduced emissions intensity of UBS's residential real estate lending portfolio by 8% (end of 2021 vs 2020 baseline); – reduced emissions intensity of UBS's commercial real estate lending portfolio by 7% (end of 2021 vs 2020 baseline); – reduced absolute financed emissions associated with UBS loans to fossil fuel companies by 42% (end of 2021 vs 2020 baseline); and – reduced emissions intensity associated with UBS loans to power generation companies by 12% (end of 2021 vs 2020 baseline). Introduction of an additional decarbonization target for the cement sector, as well as an estimation of the overall financed emissions.
	Align 20% of AuM to be managed in line with net zero (Asset Management).[2] Achieve net-zero emissions across discretionary client portfolios by 2050 (Asset Management).[3]	Initiated analysis of revisions to fund documentation and investment management agreements to align with Asset Management's net-zero-aligned frameworks.
	Achieve net-zero energy emissions resulting from our own operations (scopes 1 and 2) by 2025; cut energy consumption by 15% by 2025 (compared with 2020).	Reduced net greenhouse gas (GHG) footprint for scope 1 and 2 emissions by 13% and energy consumption by 8% (compared with 2021); continued implementation of the replacement of fossil fuel heating systems and investing in credible carbon removal projects; achieved 99% renewable electricity coverage despite challenging market conditions.
	Offset historical emissions back to the year 2000 by sourcing carbon offsets (by year-end 2021) and by offsetting credit delivery and full retirement in registry (by year-end 2025).	Continued to follow up on credit delivery and retirement of sourced portfolio.
	Engage with key vendors on aiming for net zero by 2035.	Identified "GHG key vendors" (vendors that collectively account for >50% of our estimated vendor GHG emissions) and invited the vendors that accounted for 67% of our annual vendor spend (including all GHG key vendors) to disclose their environmental performance through CDP's Supply Chain Program, with 66% of the invited vendors completing their disclosures in the CDP platform.
People	30% global female representation at Director level and above by 2025.	Increased to 27.8% (2021: 26.7%) female representation at Director level and above.
	26% of US roles at Director level and above held by employees from ethnic minorities by 2025.	Increased to 20.4% (2021: 20.1%) ethnic minority representation at Director level and above in the US.
	26% of UK roles at Director level and above held by employees from ethnic minorities by 2025.	Increased to 23.0% (2021: 21.3%) ethnic minority representation at Director level and above in the UK.
	Raise USD 1bn in donations to our client philanthropy foundations and funds and reach 25 million beneficiaries by 2025 (cumulative for 2021–2025).	Achieved a UBS Optimus Foundation network donation volume of USD 274m in 2022, totaling USD 436m since 2021 (both figures include UBS matching contributions). Reached 5.9 million beneficiaries.
	Support 1.5 million young people and adults to learn and develop skills through our community impact activities (2022–2025).	Reached 370,916 beneficiaries through strategic community impact activities.[4]
Partnerships	Establish UBS as a leading facilitator of discussion, debate and idea generation.	Co-organized, with the Institute of International Finance, the first Wolfsberg Forum for Sustainable Finance. Joined a consortium that is pioneering methods of assessing and maximizing the GHG reduction potential of energy storage. Co-founded Carbonplace, a technology platform for the voluntary carbon market that has the goal of creating a streamlined and transparent market for our clients.
	Drive standards, research and development, and product development.	Co-led the Taskforce on Nature-related Financial Disclosures' financial-sector-specific working group. Collaboration with two Swiss companies that are pioneering innovative carbon removal technologies. Joined the Partnership for Carbon Accounting Financials (PCAF).

1 Refer to the "Environment" section of our Sustainability Report 2022, available under "Annual reporting" at ubs.com/investors, for further information. The inherent one-year time lag between the as-of date of our lending exposure and the as-of date of emissions can be explained by two factors: corporates disclose their emissions in annual reporting only a few months after the end of a financial year; and specialized third-party data providers take up to nine months to collect disclosed data and make it available to data users. Consequently, the baselines for our net-zero ambitions are based on year-end 2020 lending exposure and 2019 emissions data. Our 2021 emissions actuals are based on year-end 2021 lending exposure and 2020 emissions data. 2 The 20% alignment goal amounted to USD 235bn at the time of Asset Management's commitment in 2021. By 2030, the weighted average carbon intensity of funds is to be 50% below the carbon intensity of the respective 2019 benchmark. 3 The near- and medium-term plans for the achievement of this goal include our Asset Management business division only. 4 Our Community Impact program has a strategic focus on education and the development of skills.

Cautionary note: We have developed methodologies that we use to set our climate-related targets and identify climate-related risks and which underly the metrics that are disclosed in this report. Standard setting organizations and regulators continue to provide new or revised guidance and standards, as well as new or enhanced regulatory requirements for climate disclosures. Our disclosed metrics are based upon data available to us, including estimates and approximations where actual or specific data is not available. We intend to update our disclosures to comply with new guidance and regulatory requirements as they become applicable to UBS. Such updates may result in revisions to our disclosed metrics, our methodologies and related disclosures, which may be substantial, as well as changes to the metrics we disclose.

› **Refer to our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information**

Build a diverse, equitable and inclusive workplace

Our diversity, equity and inclusion (DE&I) strategy and initiatives focus on a wide range of characteristics including gender, gender identity, sexual orientation, ethnic diversity, disabilities, age, and veteran status, along the entire employee life cycle. Our businesses aim to hire individuals with strong potential along with diverse skills, backgrounds and perspectives. We invest in the development of all employees and give them the visibility and opportunities to realize their potential, and implement Group-wide divisional and regional initiatives that support their career growth. These efforts collectively support the progress towards achieving our DE&I aspirational goals. For example, our partnerships with the Investments and Wealth Institute (the IWI) and Kaplan Financial Education in the US provide scholarships for diverse Wealth Management professionals at UBS to pursue industry certifications in investment management, private wealth advisory, retirement management and financial planning. Our leaders and employee networks are essential in our work to build a sense of belonging and to advance our goals.

We have an ongoing focus on the importance of inclusive leadership skills, ensuring equity in our policies and practices, and increasing the representation of women and ethnic minority employees. We take a multi-faceted approach that considers recruitment, development and belonging perspectives. For example, we support flexible working arrangements that benefit current employees and help us attract a more diverse pool of applicants. We also assess executive candidates for inclusive leadership competencies.

In 2020, we outlined our intention to increase our female and ethnic minority representation, especially among management, and we have made steady progress toward achieving those aspirations. Women now account for 41% of our workforce and 27.8% of our Director-level and above population. At the same time, 42% of our GEB members are female. Due to variations in legal requirements and historical progress, we continue to take a country-specific approach to increasing our representation of ethnic minorities, and we have published aspirations for the US and the UK, specifically. In 2022, we increased the ethnic minority representation at Director level and above to 20.4% (in the US) and 23.0% (in the UK).

Progress against these aspirations is considered in the determination of the annual performance award pool and included in the sustainability objectives under "Strategic & Growth" for the GEB, as outlined in the table above.

› **Refer to the "People and culture make the difference" section of our Sustainability Report 2022, available under "Annual reporting" at *ubs.com/investors*, for more information about DE&I**

Performance award pool funding

Our compensation philosophy focuses on balancing performance with appropriate risk-taking, retaining talented employees and shareholder returns. Our overall performance award pool funding percentage decreases as financial performance increases. In years of strong financial performance, this prevents excessive compensation and results in an increased proportion of profit before performance awards being available for distribution to shareholders or growing the Group's capital. In years where performance declines, the performance award pool will generally decrease; however, the funding percentage may increase.

Our performance award pool funding framework is based on Group and business division performance, including achievements against defined performance measures. In assessing performance, we also consider industry peers, market competitiveness of our results and pay position, as well as progress against our strategic objectives, including returns, risk-weighted assets and cost efficiency. The Risk and Compliance functions support our holistic reflection and consideration of the financial and non-financial impact (including reputation) of risk matters. We further consider the firm's risk profile and culture, the extent to which operational risks and audit issues have been identified and resolved, and the success of risk reduction initiatives including significant events.

The funding for Group Functions is linked to overall Group performance and reflects headcount, workforce location and demographics. For each functional area, quantitative and qualitative assessments evaluate service quality, risk management and financial achievements.

Our decisions regarding the performance award pool also balance consideration of financial performance with a range of factors, including DE&I and other ESG metrics, the impact of litigation, regulatory costs, the effect of changes in financial accounting standards, capital returns and relative total shareholder return.

Before making its final proposal to the BoD, the Compensation Committee considers the CEO's proposals and can apply a positive or negative adjustment to the performance award pool.

› **Refer to "2022 Group performance outcomes" in the "Group compensation" section of this report**
› **Refer to the "Group performance" section of our Annual Report 2022 for more information about our results**

Performance award pool funding process – illustrative overview

Financial performance	Risk adjustment	Quantitative and qualitative adjustments				Consultation of Group CEO with GEB members	Compensation Committee / BoD governance and decision
1	2	3				4	5
Business division financial performance	Risk-adjusted business division performance award pool	Business division measures	Qualitative, risk, regulatory and sustainability assessment	Relative performance versus peers	Market position and trends	Recommended business division performance award pools	Final Group performance award pool

1	**Business division financial performance**	The starting point for the funding process is the business division financial performance, which may be adjusted for items that are not reflective of the underlying business division performance.
2	**Risk-adjusted business division performance award pool**	Predetermined business division-specific funding rates are applied to risk-adjusted performance, which excludes items that are not reflective of the underlying business performance.
3	**Business division measures**	Each division is assessed based on specific measures (e.g., net new fee-generating assets, return on attributed equity).
	Qualitative, risk, regulatory and sustainability assessment	Decision making considers the firm's risk profile and the extent to which operational risks and audit issues have been identified and resolved. Diversity, equity & inclusion and other ESG metrics, the impact of litigation and regulatory costs are also considered. The Risk and Compliance functions support our holistic reflection and consideration of the financial and non-financial impact (including reputation) of risk matters.
	Relative performance versus peers	Performance is assessed relative to our peers, including financial performance, returns and relative total shareholder return.
	Market position and trends	Market intelligence, based on external advisors, helps assess the competitiveness of our pay levels and compensation structure. It also provides a prospective view of market trends in terms of absolute compensation levels, compensation framework and industry practice.
4	**Recommended business division performance award pools**	The business division performance award pool determination process, based on quantitative and qualitative assessments, results in a proposal from the Group CEO (after consultation with the GEB) to the Compensation Committee for consideration.
5	**Final Group performance award pool**	The Compensation Committee considers the proposal in the context of the factors outlined above and verifies it is in line with our strategy and our Total Reward Principles to create sustainable shareholder value and support our growth ambitions. The Committee may alter the proposal of the Group CEO (upward or downward including proposing a zero award) before making its final proposal to the BoD.

Compensation for GEB members

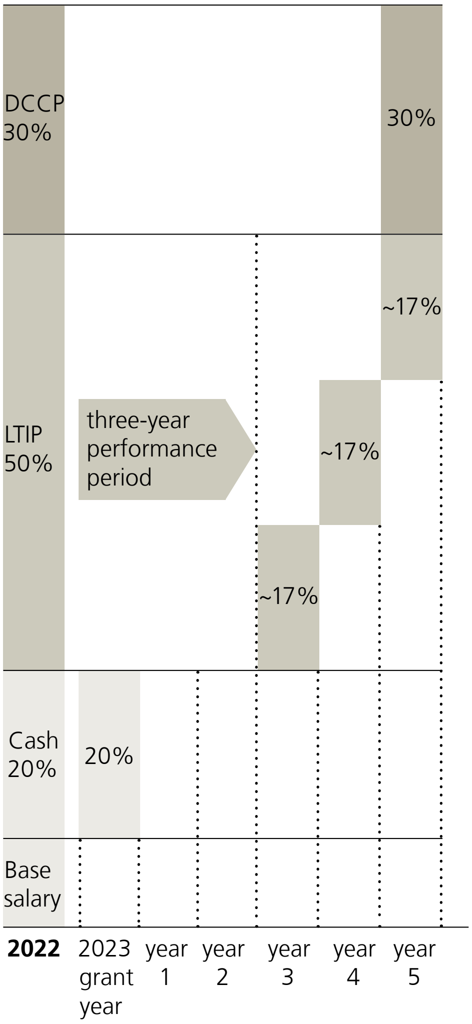
GEB compensation framework

In 2022, we made no changes to our GEB compensation framework. The chart below illustrates the compensation elements, pay mix and key features for GEB members. Of the annual performance award, 20% is paid in the form of cash and 80% is deferred over a period of five years,[1] with 50% of the annual performance awards granted under the Long-Term Incentive Plan (the LTIP) and 30% under the Deferred Contingent Capital Plan (the DCCP).

› **Refer to "Our deferred compensation plans" in the "Group compensation" section of this report for more information**

2022 compensation framework for GEB members (illustrative example)

GEB[1]



Key features

DCCP:
- Notional additional tier 1 (AT1) instruments
- Award vests in year 5 after grant year, subject to a write-down if a viability event occurs or the CET1 capital ratio falls below 10% (i.e., a trigger event)
- Award is subject to 20% forfeiture for each financial year that UBS does not achieve a Group profit before tax, adjusted for disclosed items generally not representative of underlying business performance
- Award is subject to employment conditions and harmful acts provisions

LTIP:
- Notional shares
- Award vests in equal installments in years 3, 4 and 5 after grant year, depending on the achievement of RoCET1 and rTSR measured over a three-year performance period
- Award is subject to employment conditions and harmful acts provisions

1 Performance awards to GEB members who are SMF / MRT are subject to additional deferral and vesting requirements.

› **Refer to the "Group Compensation" section of this report for more information**
› **Refer to "Regulated staff" in the "Supplemental information" section of this report for more information**

Pay-for-performance safeguards for GEB members

Performance award caps	– Cap on the total GEB performance award pool (2.5% of profit before tax)[1] – Caps on individual performance awards (for the Group CEO capped at five times the fixed compensation and at seven times for the other GEB members) – Cap of 20% of performance award in cash
Delivery and deferral	– 80% of performance awards are at risk of forfeiture – Long-term deferral over five years (or longer for certain regulated GEB members) – Alignment with shareholders (through the LTIP) and bondholders (through the DCCP) – Final payout of equity-based LTIP award (50% of performance award) subject to absolute and relative performance conditions (three-year performance period)
Contract terms	– No severance terms – Notice period between six and twelve months
Other safeguards	– Share ownership requirements – No hedging allowed

1 The Compensation Committee may consider adjustments to profit for items that are not reflective of underlying performance.

GEB share ownership requirements

To align the interests of GEB members with those of our shareholders and to demonstrate personal commitment to the firm, we require the Group CEO and the other GEB members to hold a substantial number of UBS shares. GEB members must reach their minimum shareholding requirements within five years from their appointment and retain it throughout their tenure. The total number of UBS shares held by a GEB member consists of any vested or unvested shares and any privately held shares. At the end of 2022, all GEB members met their share ownership requirements, except for those appointed within the last three years, who still have time to build up and meet the required share ownership.

As of 31 December 2022, our GEB members held shares with an aggregate value of approximately USD 154m, demonstrating their commitment to our strategy and alignment with shareholders.

Share ownership requirements

Group CEO	min. 1,000,000 shares	Must be built up within five years from their appointment and retained throughout their tenure
Other GEB members	min. 500,000 shares	

GEB base salary and role-based allowance

Each GEB member receives a fixed base salary, which is reviewed annually by the Compensation Committee. The 2022 annual base salary for the Group CEO role was CHF 2.5m and has remained unchanged since 2011. The other GEB members each received a base salary of CHF 1.5m (or local currency equivalent), also unchanged since 2011.

Over the course of 2022, one GEB member held a UK Senior Management Function (SMF) role for one of our UK entities. In addition to base salary, a role-based allowance was part of the fixed compensation.

At the AGM, shareholders are asked to approve the maximum aggregate amount of fixed compensation for GEB members for the following financial year.

› **Refer to the "Supplemental information" section of this report for more information about Material Risk Takers (MRTs) and SMFs**
› **Refer to the "Say-on-pay" section of this report for more information about the AGM vote on fixed compensation for the GEB**

Caps on the GEB performance award pool

The size of the GEB performance award pool may not exceed 2.5% of the Group's profit before tax. This limits the overall GEB compensation based on the firm's profitability.

For 2022, the Group's profit before tax was USD 9.6bn and the total GEB performance award pool was CHF 81.1m. The GEB performance award pool was 0.9% of Group profit before tax, well below the 2.5% cap.

In line with the individual compensation caps on the proportion of fixed pay to variable pay for all GEB members (introduced in 2013), the Group CEO's granted performance award is capped at five times his fixed compensation. Granted performance awards of other GEB members are capped at seven times their fixed compensation (or two times for GEB members who are also MRTs). For 2022, performance awards granted to GEB members and the Group CEO were, on average, 3.5 times their fixed compensation (in Swiss franc terms, excluding one-time replacement awards, benefits and contributions to retirement plans).

› **Refer to "Performance award pool funding" in the "Compensation philosophy and governance" section of this report for more information**

GEB employment contracts

GEB members' employment contracts do not include severance terms or supplementary pension plan contributions and are subject to a notice period of between six and twelve months. A GEB member leaving UBS before the end of a performance year may be considered for a performance award. Such awards are subject to approval by the BoD, and ultimately by the shareholders at the AGM.

Benchmarking for GEB members

When recommending performance awards for the Group CEO and the other GEB members, the Compensation Committee reviews the respective total compensation for each role against a financial industry peer group. The peer group is selected based on comparability of their size, business mix, geographic presence and the extent to which they compete with us for talent. The Compensation Committee considers our peers' strategies, practices and pay levels, as well as their regulatory environment; it also periodically reviews other firms' pay levels or practices, including both financial and non-financial sector peers, as applicable. The total compensation for a GEB member's specific role considers the compensation paid by our peers for a comparable role and performance within the context of our organizational profile. The Compensation Committee periodically reviews and approves the peer group composition.

The table below presents the composition of our peer group as approved by the Compensation Committee for the 2022 performance year.

Bank of America	Goldman Sachs
Barclays	HSBC
BlackRock	JPMorgan Chase
BNP Paribas	Julius Baer
Citigroup	Morgan Stanley
Credit Suisse	Standard Chartered
Deutsche Bank	State Street

GEB performance assessments

We assess each GEB member's performance against a set of Group financial targets, non-financial objectives and Behaviors. Under the non-financial objectives, we maintained the categories introduced in 2021: Core Job (which covers job-specific, risk and people objectives) and Strategic & Growth (which covers strategy, digital, and environmental, social and governance (ESG) objectives). This approach fosters an even greater focus on GEB priorities and the success of the Group overall among all GEB members, and strengthens the understanding and importance of interdependence within and across the GEB. At the same time, it creates stronger individual accountability, and further increases the focus on core activities.

The Compensation Committee exercises its judgment with respect to the performance achieved relative to the prior year, our strategic plan and our competitors, and considers the Group CEO's proposals. The Compensation Committee's proposals are subject to approval by the BoD.

The Compensation Committee, and then the full BoD, follows a similar process for the Group CEO, except that the proposal comes from the Chairman of the BoD.

Overview of the GEB compensation determination process

The compensation for the Group CEO and the other GEB members is governed by a rigorous process under Compensation Committee and BoD oversight. The chart below shows how compensation for all GEB members is determined.

The Compensation Committee is involved at all stages of the performance and total compensation decision-making process for the Group CEO and the other GEB members, for review and approval by the BoD.

	Objective setting	**Performance assessment**	**Compensation determination**
Decision-making process	Financial targets are based on Group performance measures. Non-financial objectives are related to core job, strategic and growth. Behaviors objectives are related to the three UBS Behaviors of accountability with integrity, collaboration and innovation. Financial targets weight: 60% Non-financial objectives weight: 30% Behavior objectives weight: 10%	Financial results are assessed quantitatively based on full-year financial results versus predetermined targets and plan figures. Non-financial objectives are assessed predominantly based on achievements relative to quantitative key performance indicators. Behaviors objectives are assessed qualitatively. The achievements of non-financial measures and Behaviors are determined in three performance categories, outlined on the next page. The total of all weighted achievement scores cannot exceed 100%.	When determining actual pay levels, the Compensation Committee factors in: – financial performance; – performance assessment; – relative performance versus peers; and compensation market benchmarks and trends. Final compensation decisions for GEB members consider the Group CEO's proposal (the Group CEO makes no proposal on his own awards).
Role of the Compensation Committee	Together with the BoD Chairman, proposes performance targets and objectives for the Group CEO for approval by the BoD. Together with the Group CEO, reviews the performance framework for the other GEB members.	Together with the BoD Chairman, proposes the Group CEO's performance assessment for approval by the BoD. Together with the Group CEO, proposes the performance assessments of the other GEB members for approval by the BoD.	Proposes to the BoD for approval: – together with the BoD Chairman, the total compensation for the Group CEO; and – together with the Group CEO, the individual total compensation for the other GEB members. The final decision on the aggregate amount is subject to shareholder approval.

Overview of performance assessment measures

We apply a range of quantitative measures to assess GEB member performance against financial and non-financial objectives while Behaviors are assessed qualitatively. The table below provides a summary of the main metrics and measures used for 2022.

Financial measures (60%)				– Reported Group profit before tax – Reported Group cost / income ratio – Reported Return on CET1 capital
Non-financial measures (30%)	Strategic & Growth	Strategy		– Progress on Group-wide transformation initiatives – Delivery on division- / function-specific strategic programs and initiatives
		Digital		– Progress on digital transformation initiatives – Delivery of digital offering and user experience for clients
		ESG		– Refer to the "Our aspirational goals and progress" table in the "Environmental, Social and Governance considerations" section of this report
	Core Job	Job-specific		– Business-specific criteria, such as net new investable asset targets and client engagement-level objectives – Operating income growth targets for specific client segments and total cost goals – Post-stress CET1 objectives and capital ratio guidance – Execution progress regarding key client and internal initiatives; e.g., cross-divisional collaboration initiatives, efficiency and cost-saving initiatives
		Risk		– Operating within risk appetite constraints – Progress to delivering on risk reduction initiatives
		People		– Employee listening / sentiment results and feedback – Progress toward meeting 2025 ambitions for female representation and for ethnic minority representation in the US and the UK at Director and above levels (as per ESG disclosure) – People development, mobility, turnover and succession plan metrics
Behaviors (10%)	Accountability with integrity		Qualitative assessment against expected Behaviors:	– Responsible for what they say and do – Takes ownership and makes things happen – Steps up and acts when something is not right
	Collaboration			– Trusts others and helps them to be successful – Delivers One UBS, together with their colleagues – Fosters a diverse, inclusive and equitable work environment
	Innovation			– Challenges perspectives and looks at every opportunity to improve – Actively seeks and provides feedback – Learns from every success and failure

Performance assessment categories

The table below presents the three performance categories for the assessment of the performance against non-financial objectives related to Core Job, Strategic & Growth and Behaviors. The achievement score represents the maximum percentage, and the Compensation Committee may apply downward adjustments.

Non-financial measures		
Needs focus	**Good contribution**	**Excellent contribution**
Achievement score: up to 33%	Achievement score: up to 66%	Achievement score: up to 100%

Behaviors		
Needs focus	**Expected behavior**	**Exemplary behavior**
Achievement score: up to 33%	Achievement score: up to 66%	Achievement score: up to 100%

2022 performance for the Group CEO

The performance award for the Group CEO is based on the achievement of financial performance targets and non-financial objectives related to Core Job, Strategic & Growth and Behaviors, as described earlier in this section.

These objectives were set to reflect the strategic priorities determined by the Chairman and the BoD.

› **Refer to "GEB compensation framework" in this section of this report for more information**

Performance assessment for the Group CEO

The BoD recognized that Ralph Hamers successfully led UBS through a challenging year and delivered good financial results despite significant headwinds due to geopolitical and macroeconomic developments. In this environment, he focused the firm on maintaining client momentum and the disciplined execution of our strategy across regions to deliver the benefits of our geographic diversification. Furthermore, the resulting growth enabled us to achieve a performance in line with our 2022 targets. In addition, our strong capital position enabled us to return USD 7.3bn of capital to shareholders for the 2022 financial year.

Furthermore, Mr. Hamers effectively led the Group through the challenging and volatile risk environment and continued to promote an effective risk culture throughout the organization. He also kept the firm focused on risk reduction and operating within our risk appetite.

Additionally, the BoD acknowledged that Mr. Hamers continued to be a strong ambassador for the drive to make our organization more digital. He continued to increase the Group's focus on technology as a differentiator for our clients and employees, achieving important progress on our technology initiatives and agile transformation that benefit clients and employees.

Mr. Hamers successfully continued to focus the Group on delivering on its diversity, equity and inclusion (DE&I) strategy and initiatives. Important progress was made in our diversity and ethnicity ambitions and it remains a key area of focus. He also successfullly managed Group Executive Board (GEB) transitions that rejuvenated the GEB and increased the female ratio on the GEB to 42%.

Mr. Hamers continued to demonstrate strong leadership and focus on delivering the Group's sustainability strategy, including the commitment to net zero. He continued to focus the organization to deliver on the ambitions in the key ESG focus areas including a reduction of 11% in scope 1 and 2 emissions year on year, partnering with two pioneering companies on CO_2 removal, supporting clients with USD 268bn invested assets in sustainability-focused and impact investments. As a result, UBS retained its position amongst the leaders in the field, as evidenced by the ratings from the most important independent sustainability rating agencies.

The table below illustrates the assessment criteria used to evaluate the achievements of Mr. Hamers in 2022.

Financial performance

Weight	Performance measures	2022 targets	2022 results	Achievement[2]	Weighted assessment	2022 commentary
20%	**Reported Group PBT**	USD 9.8bn	USD 9.6bn	97.6%	19.5%	– Profit before tax (PBT) increased to USD 9.6 bn, slightly below target but up from 2021 and the highest annual result since 2006, reflecting good profitability in a challenging market.
20%	**Reported Group C/I ratio**	70 to 73%[1]	72.1%	100%[3]	20.0%	– The cost / income (C/I) ratio was 72.1%, in line with the 2022 performance target range and an improvement of 1.5 percentage points compared with 2021. This demonstrates good cost discipline in an inflationary environment.
20%	**Reported RoCET1**	15 to 18%[1]	17.0%	100%	20.0%	– Delivered strong capital returns with a return on CET1 capital (RoCET1) of 17.0%, in line with the 2022 performance target range.

1 The return on CET1 capital and cost / income ratio performance targets reflect externally communicated target ranges. The determination of the achievement is based on specific target levels defined within the indicated target ranges. 2 Achievement score capped at 100%. 3 For the assessment of the cost / income ratio, each 1% difference between actual and target affects the score by 10%.

Performance assessment for the Group CEO (continued)

Non-financial performance and Behaviors

Weight	Performance measures	Achieve-ment	Weighted assess-ment	2022 commentary
30%		Good contribution (66%)	20%	– The evaluation of each non-financial objective considers **quantitative metrics** that are assessed against internal targets / plan.
	Core Job (Job specific, Risk, People)			**Core Job** – Good client momentum in a challenging market environment and maintained strong focus on managing our costs – Active capital management to protect our business, enable growth and deliver attractive returns including executing USD 5.6bn in share buybacks – Operated within risk appetite constraints – Improved **employee listening / sentiment** results across key categories – Successfully managed effective leadership transitions in GEB – Continued focus on people diversity, with the **ratio of female leaders increased to 28%**, on track to meet the 2025 target; stayed on track toward the 2025 ambition for ratios of **UK (23%) and US (20%) employees from ethnic minorities**
	Strategic & Growth (Strategy, Digital, ESG)			**Strategic & Growth** – Embedded our purpose into the organization and executed on the strategic imperatives, including executing across regions and delivering benefits of geographic diversification. – Focused the Group to deliver **simplification** initiatives, making it easier for our businesses to deliver for our clients. – **Progressed our technology initiatives and agile transformation** with new launches of key products such as Key4 in Switzerland, Circle One, and WE.UBS in China and approximately 18,500 employees operating in an **agile** work environment – See **ESG** metrics and progress in separate table in this report
10%	**Behaviors** (Accountability with integrity, Collaboration, Innovation)	Expected behavior (66%)	7%	The assessment of the Behavior objectives is **qualitative** and has resulted in the following summary assessment: – Mr. Hamers continued to be a **role model** in accountability and empowerment in the organization. He remained the most important ambassador of **collaboration** to deliver the whole firm to our clients. – Mr. Hamers **exemplifies innovation** in UBS. He continued the successful digitalization through new ways of working and **continuously promoted innovative thinking** and simplification.
		Total weighted assessment (maximum 100%)	**86.5%**	

In addition to the overall 2022 Group performance and Mr. Hamers's achievements outlined above, the BoD also considered other factors, such as the Group's good profitability, UBS's performance in context of the underlying results and the strong relative share price performance. For context, as outlined in our compensation report last year, Mr. Hamers's 2021 performance award was additionally impacted by the significant risk event related to a loss from a US-based client of our prime brokerage business. The 2022 proposal considers a year-on-year change that reflects pay-for-performance and does not carry forward the 2021 impact over multiple years.

The BoD approved the proposal by the Compensation Committee to grant Mr. Hamers a performance award of CHF 9.7m, resulting in a total compensation for 2022 of CHF 12.2m (excluding benefits and contributions to his retirement benefit plan).

Aligned with the GEB compensation framework, the Group CEO's performance award will be delivered 20% (CHF 1.94m) in cash and the remaining 80% (CHF 7.76m) subject to deferral and forfeiture provisions, as well as meeting performance conditions over the next five years.

2022 total compensation for the GEB members

The 2022 GEB performance award pool is CHF 81.1m, which is an increase of 2% in Swiss franc terms and a decrease of 3% in US dollar terms. Adjusted for the direct impact of the 2021 loss event on specific GEB members, the 2022 GEB pool is down approximately 5% in Swiss franc terms or a decrease of 10% in US dollar terms, which is aligned with the Group pool development. This pool also considers the impact of changes in GEB composition and foreign exchange rates. This outcome reflects the solid performance of the GEB as demonstrated by the strength of our share price and the good performance of the Group in a challenging market environment, achieving our returns and efficiency targets on a reported basis, while also considering our underlying reported results.

At the 2023 AGM, shareholders will vote on the aggregate 2022 total variable compensation for the GEB in Swiss francs. The tables below provide the awarded compensation for the Group CEO and the GEB members in Swiss francs and, for reference, the total amounts in US dollars for comparability with financial performance. The individual variable performance awards for each GEB member will only be confirmed upon shareholder approval at the AGM.

› **Refer to "Deferred compensation" in the "Supplemental information" section of this report for more information about the vesting of outstanding awards for GEB members**

› **Refer to "Provisions of the Articles of Association related to compensation" in the "Supplemental Information" section of this report for more information**

Audited |

Total compensation for GEB members

CHF, except where indicated										*USD (for reference)*[1]		
For the year	Base salary	Contribution to retirement benefit plans	Benefits[2]	Total fixed compensation	Cash[3]	Performance award under LTIP[4]	Performance award under DCCP[5]	Total variable compensation	Total fixed and variable compensation[6]	Total fixed compensation	Total variable compensation	Total fixed and variable compensation[6]
Group CEO Ralph Hamers (Highest Paid Executive excluding replacement awards)[11]												
2022	2,500,000	242,239	198,378	2,940,617	1,940,000	4,850,000	2,910,000	9,700,000	12,640,617	3,050,684	10,063,071	13,113,755
2021	2,500,000	246,415	251,856	2,998,271	1,700,000	4,250,000	2,550,000	8,500,000	11,498,271			
Aggregate of all GEB members (excluding replacement awards)[7,8,9,10,11,12]												
2022	23,318,410	1,796,872	693,473	25,808,756	16,220,000	40,550,000	24,330,000	81,100,000	106,908,756	26,774,777	84,135,571	110,910,348
2021	24,853,521	2,064,009	1,179,512	28,097,041	15,950,000	39,875,000	23,925,000	79,750,000	107,847,041			

1 Swiss franc amounts have been translated into US dollars for reference at the 2022 performance award currency exchange rate of CHF / USD 1.037430. 2 All benefits are valued at market price. 3 For GEB members who are also MRTs or SMFs, the cash portion includes blocked shares. 4 LTIP awards for performance year 2022 were awarded at a value of 71.45% of maximum which reflects our best estimate of the fair value of the award. The maximum number of shares is determined by dividing the awarded amount by the estimated fair value of the award at grant, divided by CHF 20.092 or USD 21.790, the average closing price of UBS shares over the last ten trading days leading up to and including the award date in February. 5 The amounts reflect the amount of the notional additional tier 1 (AT1) capital instrument excluding future notional interest. 6 Excludes the portion related to the legally required employer's social security contributions for 2022 and 2021, which are estimated at grant at CHF 4,675,424 and CHF 4,997,243, respectively, of which CHF 841,402 and CHF 763,059, respectively, are for the highest-paid GEB member (excluding replacement awards). The legally required employees' social security contributions are included in the amounts shown in the table above, as appropriate. 7 As stated in "Group Executive Board" in the "Corporate governance" section of our Annual Report 2022, twelve GEB members were in office on 31 December 2022 and 31 December 2021. 8 Includes compensation paid under employment contracts during notice periods for GEB members who stepped down during the respective years. 9 Includes compensation for newly appointed GEB members for their time in office as GEB members during the respective years. 10 Base salary may include role-based allowances in line with market practice in response to regulatory requirements. 11 The 2022 total compensation of Sarah Youngwood, Group CFO, including both the one-time replacement awards of her compensation forfeited upon joining UBS as well as her compensation for the 2022 performance year, amounts to a total of CHF 13,475,863 (which makes her the highest paid executive including replacement awards). 12 For 2022, the one-time replacement awards of CHF 7,206,683 for Sarah Youngwood and CHF 65,229 for Naureen Hassan are not included in the above table; including these, the 2022 total aggregate compensation of all GEB members is CHF 114,180,668. For 2021, the one-time replacement award of CHF 7,081,474 for Barbara Levi is not included in the above table; including this, the 2021 total aggregate compensation of all GEB members is CHF 114,928,515.

▲

Total realized compensation for the Group CEO

The realized compensation for the Group CEO reflects the total amount paid out in the year. It includes the base salary, cash performance award payments, and all deferred performance awards vested in the year. As such, realized pay is the natural culmination of awards granted and approved by shareholders in previous years.

To illustrate the effect of our long-term deferral approach, which has been in place since 2012, we disclose the annual realized compensation of Mr. Hamers, including a comparison with his total awarded compensation.

Total realized compensation vs awarded compensation for Ralph A.J.G Hamers

CHF					Realized	Awarded
For the year	Base salary	Cash award[2]	Performance award under equity plans[2]	Performance award under DCCP[2]	Total realized fixed and variable compensation	Total awarded fixed and variable compensation[3,4]
2022	2,500,000	1,700,000	0	0	4,200,000	12,200,000
2021	2,500,000	600,000	0	0	3,100,000	11,000,000
2020[1]	833,333	0	0	0	833,333	3,833,333

1 Includes compensation for 4 months as Ralph A.J.G. Hamers joined UBS on 1 September 2020. 2 Excludes dividend / interest payments. 3 Excludes contributions to retirement benefit plans and benefits. Includes social security contributions paid by Ralph A.J.G. Hamers but excludes the portion related to the legally required social security contributions paid by UBS. 4 Excludes the one-time replacement award granted in 2020.

Group compensation

Compensation elements for all employees

All elements of pay are considered when making our compensation decisions. We regularly review our principles and compensation framework in order to remain competitive and aligned with stakeholders. In 2022, we made no material changes to our overall framework. We will continue to review our approach to salaries and performance awards, considering market developments, our performance and our commitment to deliver sustainable returns to shareholders.

Base salary and role-based allowance

Employees' fixed compensation (e.g., base salary) reflects their level of skill, role and experience, as well as local market practice. Base salaries are usually paid monthly or fortnightly, in line with local market practice. We offer competitive base salaries that reflect location, function and role. Salary increases generally consider promotions, skill set, performance and overall responsibility.

In addition to base salary, and as part of fixed compensation, some employees may receive a role-based allowance. This allowance is a shift in the compensation mix between fixed and variable compensation, not an increase in total compensation. It reflects the market value of a specific role and is fixed, non-forfeitable compensation. Unlike salary, a role-based allowance is paid only if the employee is in a specific role. Similar to previous years, 2022 role-based allowances consisted of a cash portion and, where applicable, a blocked UBS share award.

Pensions and benefits

We provide a range of benefit plans, such as retirement benefits and health insurance, aiming to provide financial protection in case of significant life events, and support our employees' well-being and diverse needs. Retirement and other benefits are set in the context of local market practice and regularly reviewed for competitiveness.

Pension plan rules in any one location are generally the same for all employees, including GEB members and other management. There are no enhanced or supplementary pension contributions for the GEB.

Performance award

Most of our employees are eligible for an annual performance award. The level of this award, where applicable, generally depends on the firm's overall performance, the employee's business division, team and individual performance, and behavior, reflecting their overall contribution to the firm's results. These awards are in line with applicable local employment conditions and at the discretion of the firm.

In addition to the firm's Pillars and Principles, Behaviors related to Accountability with integrity, Collaboration and Innovation are part of the performance management approach. Therefore, when assessing performance, we consider not only what was achieved but also how it was achieved.

Our deferred compensation plans

Underlining our emphasis on sustainable performance and risk management, and our focus on achieving our growth ambitions, we deliver part of our employees' annual variable compensation through deferred compensation plans. We believe that our approach, with a single incentive decision and a mandatory deferral, is transparent and well suited to implementing our compensation philosophy and delivering sustainable performance. This aligns the interests of our employees and shareholders and appropriately links compensation to longer-term sustainable performance.

Our mandatory deferral approach applies to all employees with regulatory-driven deferral requirements or total compensation greater than USD / CHF 300,000. Certain regulated employees, such as Senior Management Functions (SMFs) and Material Risk Takers (MRTs), are subject to additional requirements (e.g., more stringent deferral requirements and additional blocking periods). In addition, SMFs and MRTs receive 50% of their cash portion in the form of immediately vested shares, which are blocked for 12 months after grant.

The deferred amount increases at higher marginal rates in line with the value of the performance award. The effective deferral rate therefore depends on the amount of the performance award and the amount of total compensation.

We believe our deferral regime has one of the longest vesting periods in the industry. The weighted average deferral period for non-regulated employees is 4.4 years for GEB members and is 3.5 years for employees outside of the GEB. Additionally, from time to time, we may utilize alternative deferred compensation arrangements to remain competitive in specific business areas.

To further promote sustainable performance, all of our deferred compensation plans include employment conditions and malus conditions. These enable the firm to reduce or fully forfeit unvested deferred awards under certain circumstances, pursuant to performance and harmful acts provisions. In addition, forfeiture is triggered in cases where employment has been terminated for cause.

Our share delivery obligations related to notional share awards are satisfied by delivering treasury shares, which are purchased in the market, to employees at vesting.

› **Refer to "Note 27 Employee benefits: variable compensation" in the "Consolidated financial statements" section of our Annual Report 2022 for more information**
› **Refer to the "Supplemental information" section of this report for more information about MRTs and SMFs**

Variable compensation elements by employee category

Employee category	Cash	LTIP	EOP	DCCP
		Deferred compensation elements		
GEB members	✓	✓		✓
Employees subject to mandatory deferral framework	✓		✓[1]	✓

1 Employees in investment areas within Asset Management typically receive notional funds (Fund Ownership Plan, previously named AM EOP) in lieu of EOP to align their compensation more closely with fund performance, industry standards and regulatory requirements.

Long-Term Incentive Plan

The Long-Term Incentive Plan (the LTIP) granted for 2022 performance is a mandatory deferral plan for GEB members. For the 2022 performance year, we awarded LTIP to 14 GEB members in office during 2022, at a fair value of 71.45% of the maximum. The value was calculated by an independent third party using a well-established valuation methodology.

The performance metrics of the share-based LTIP awards are average return on CET1 capital (RoCET1) and relative total shareholder return (rTSR) over a three-year performance period starting on 1 January in the year of grant. Performance outcomes and actual payout levels will be disclosed at the end of the performance period.

The three-year average RoCET1 performance metric reflects our strategic return ambitions and considers our financial targets, as well as our cost of capital as outlined below:
– the required RoCET1 performance for a maximum payout is set at 18%, which represents the upper end of our target range, without encouraging excessive risk-taking;
– the required performance threshold for the minimum payout is 8%, the mid-point of the payout thresholds appropriately reflects our cost of equity; and
– the linear payout design between threshold and maximum level supports our growth ambitions and our focus on delivering sustainable performance without encouraging excessive risk-taking.

The rTSR performance metric over the three-year period further aligns the interests of employees with those of shareholders:
– the metric compares the total shareholder return (the TSR) of UBS with the TSR of an index consisting of listed Global Systemically Important Banks (G-SIBs) as determined by the Financial Stability Board (excluding UBS Group);
– the G-SIBs are independently defined and reflect companies with a comparable risk profile and impact on the global economy;
– the index, which includes publicly traded G-SIBs, is equally weighted, calculated in Swiss francs and maintained by an independent index provider, so as to ensure independence of the TSR calculation; and
– the payout interval of ±25 percentage points versus the index performance demonstrates our ambition of delivering attractive relative returns to shareholders. The linear payout and the threshold level set below index performance further support sustainability of results and appropriate risk-taking.

Global Systemically Important Banks (G-SIBs) that are listed companies[1]

Agricultural Bank of China	Goldman Sachs	Santander
Bank of America	Groupe Crédit Agricole	Société Générale
Bank of China	HSBC	Standard Chartered
Bank of New York Mellon	ING	State Street
Barclays	ICBC	Sumitomo Mitsui FG
BNP Paribas	JPMorgan Chase	Toronto-Dominion
China Construction Bank	Mitsubishi UFJ FG	UniCredit
Citigroup	Mizuho FG	Wells Fargo
Credit Suisse	Morgan Stanley	
Deutsche Bank	Royal Bank of Canada	

1 As of November 2022. Excludes UBS Group.

Dividend equivalents (granted where applicable regulation permits) are subject to the same terms as the underlying LTIP award.

LTIP awards reflect the long-term focus of our compensation framework. The final number of shares as determined at the end of the three-year performance period will vest in three equal installments in each of the three years following the performance period for GEB members (i.e., years 3, 4 and 5 after grant), although longer deferral periods may apply for regulated employees).

LTIP payout illustration

- The final number of notional shares vesting will vary based on the achievement versus the performance metrics.
- Linear payout between threshold and maximum performance.
- Achievement levels are a percentage of the maximum opportunity of the LTIP and cannot exceed 100%.
- Full forfeiture for performance below the predefined threshold levels.
- UK Senior Management Function holders (SMFs) and UK Material Risk Takers (UK MRTs) are subject to an additional non-financial metric based on a conduct assessment with a potential downward adjustment of up to 100% of the entire award.

Performance metric: **average RoCET1 (50% of award)**		
Below threshold (<8%)	Threshold (8%) up to maximum (<18%)	Maximum and above (≥18%)
Full forfeiture (payout 0%)	**Partial vest** (payout between 33% and <100%)	**Full vest** (payout 100%)

Performance metric: **rTSR vs G-SIBs index (50% of award)**		
Below threshold (<–25 ppts)	Threshold (–25 ppts) up to maximum (+25 ppts)	Maximum and above (≥+25 ppts)
Full forfeiture (payout 0%)	**Partial vest** (payout between 33% and <100%)	**Full vest** (payout 100%)

Performance achievement of the 2019 LTIP granted in 2020

The 2019 LTIP was granted in 2020 (for 2019 performance) at a fair value of 62.25% of a maximum of 100%. The final performance achieved is 98% of a maximum of 100%. This achievement reflects the outcome of the two equally weighted performance metrics, RoCET1 and rTSR, both measured over the three-year performance period from 1 January 2020 to 31 December 2022. The achievement level of this 2019 LTIP award (granted in 2020) applies to 8 current GEB members and 102 other plan participants.

We achieved a three-year average RoCET1 performance of 17.3% against the performance range of 6% to 18%, and an rTSR outperformance of +50.9 percentage points versus the index of listed Global Systemically Important Banks (G-SIBs). No adjustments, pandemic-related or otherwise, were made in the assessment of the performance conditions. For context, at the time when the LTIP was introduced, our communicated ambition for RoCET1 was 12–15%. This ambition level has since been updated and was raised to 15–18%, as communicated in February 2022.

For GEB members, the first of the three equal installments of the 2019 LTIP vested on 1 March 2023 and the second and third installments will vest in March 2024 and 2025; while for selected senior management, the 2019 LTIP cliff vested on 1 March 2023 (later dates may apply for regulated employees). For context, and as outlined in our 2019 Compensation Report, up to CHF 7.3m, or 30%, of the 2019 LTIP awards at grant for GEB members active in March 2017 continues to be at risk and directly linked to the final resolution of the French cross-border matter. In addition, a malus clause allows the Compensation Committee to assess any new information that becomes available in the future in relation to the matter and for the affected GEB members, and to retrospectively reduce any undelivered 2019 LTIP award by up to the full amount if any new information would have impacted our compensation decision in 2019. This matter continues to be ongoing and, once resolved, the final outcome will be reflected in the final amounts delivered to relevant current and former employees.

Performance achievement for the 2019 LTIP awarded in 2020

Performance metrics	Performance metric outcome			2019 LTIP achievement level			
	Threshold	Maximum	Outcome		Threshold	Maximum	
RoCET1 (Weight: 50%)	6%	18%	Outcome: 17.3%	*Outcome below threshold: full forfeiture*	33%	100%	Achievement: 96%	*Outcome above maximum: achievement capped at 100%*
rTSR (Weight: 50%)	−25ppts	+25ppts	Outcome: 50.9ppts		33%	100%	Achievement: 100%	
Overall 2019 LTIP achievement level					Overall achievement: 98%		

Equity Ownership Plan / Fund Ownership Plan

The Equity Ownership Plan (the EOP) is the deferred compensation plan for employees outside of the GEB that are subject to deferral requirements. For the 2022 performance year, we granted EOP awards to 4,458 employees.

Delivering sustainable results is a key objective for UBS. Our EOP creates a direct link with shareholder returns as a notional equity award and has no upward leverage. This approach promotes growth and sustainable performance. EOP awards generally vest over three years.

In place of EOP, employees in investment areas within Asset Management receive some or all of their EOP in the form of notional funds (the Fund Ownership Plan (the FOP), previously named AM EOP) to align their compensation more closely with industry standards. This plan is generally delivered in cash and vests over three years.

› **Refer to "Vesting of outstanding awards granted in prior years subject to performance metrics and thresholds" in the "Supplemental information" section of this report for more information**

Deferred Contingent Capital Plan

The Deferred Contingent Capital Plan (the DCCP) is a key component of our compensation framework and supports alignment of the interests of our senior employees with those of our stakeholders.

All employees subject to deferral requirements receive DCCP awards. For the 2022 performance year, we granted DCCP awards to 4,326 employees.

The DCCP is consistent with many of the features of the loss-absorbing bonds that we issue to investors and may be paid at vesting in cash or, at the discretion of the firm, as a perpetual, marketable additional tier 1 (AT1) capital instrument. Employees can elect to have their DCCP awards denominated in Swiss francs or US dollars.

DCCP awards vest in full after five years (longer deferral periods may apply for regulated employees). DCCP awards bear notional interest paid annually (except as limited by regulation for MRTs), subject to review and confirmation by the Compensation Committee. The notional interest rate for grants in 2023 was 4.85% for awards denominated in Swiss francs and 7.80% for awards denominated in US dollars. These interest rates are based on the current market rates for similar AT1 capital instruments issued by UBS Group.

Awards are forfeited if a viability event occurs (i.e., if FINMA notifies the firm that the DCCP awards must be written down to mitigate the risk of an insolvency, bankruptcy or failure of UBS) or if the firm receives a commitment of extraordinary support from the public sector that is necessary to prevent such an event. DCCP awards are also written down for GEB members if the Group's CET1 capital ratio falls below 10% and for all other employees if it falls below 7%.

In addition, GEB members forfeit 20% of DCCP awards for each loss-making year during the vesting period. This means 100% of the award is subject to risk of forfeiture. The forfeiture features of DCCP create a strong alignment with our debt holders and support the sustainability of the firm.

Over the last five years, USD 2.0bn of DCCP awards have been issued, contributing to the Group's total loss-absorbing capacity (TLAC). Therefore, DCCP awards not only support competitive pay but also provide a loss absorption buffer that protects the firm's capital position. The following table illustrates the contribution of the DCCP to our AT1 capital and the effect on our TLAC ratio.

› **Refer to the "Supplemental information" section of this report for more information about performance award and personnel-related expenses**

› **Refer to the "Supplemental information" section of this report for more information about longer vesting and clawback periods for MRTs and SMFs**

Contribution of the Deferred Contingent Capital Plan to our loss-absorbing capacity[1]

USD m, except where indicated	31.12.22	31.12.21
Deferred Contingent Capital Plan (DCCP), eligible as high-trigger loss-absorbing additional tier 1 capital	1,794	1,730
DCCP contribution to the total loss-absorbing capacity ratio (%)	0.6	0.6

1 Refer to "Bondholder information" at ubs.com/investors for more information about the capital instruments of UBS Group AG and UBS AG both on a consolidated and a standalone basis.

Other variable compensation components

To support hiring and retention, particularly at senior levels, we may offer other compensation components, such as:

- retention payments to key employees to induce them to stay, particularly during critical periods for the firm, such as a sale or wind-down of a business;
- on a limited basis, guarantees that may be required to attract individuals with certain skills and experience – these awards are fixed incentives subject to our standard deferral rules and limited to the first full year of employment;
- awards granted to employees hired late in the year to replace performance awards that they would have earned at their previous employer, but have foregone by joining UBS – these awards are generally structured with the same level of deferral as for employees at a similar level at UBS; and
- in exceptional cases, sign-on awards may be offered to candidates to increase the chances of them accepting our offer.

These other variable compensation components are subject to a comprehensive governance process, which may involve the Compensation Committee, depending on the amount or type of such payments.

Employees outside of the GEB that are made redundant may receive severance payments. Our severance terms comply with the applicable local laws (legally obligated severance). In certain locations, we may provide severance packages that are negotiated with our local social partners and may go beyond the applicable minimum legal requirements (standard severance). Such payments are governed by location-specific severance policies. In addition, we may make severance payments that exceed legally obligated or standard severance payments where we believe these are aligned with market practice and appropriate under the circumstances (supplemental severance). GEB members do not receive severance payments.

Replacement awards and forfeitures

In line with industry practice, our compensation framework and plans include provisions generally requiring reduction / forfeiture of a terminated employee's unvested or deferred awards. In particular, these provisions apply if the terminated employee joins another financial services organization and / or violates restrictive covenants, such as solicitation of clients or employees.

Conversely, to attract external top talent, market practice dictates that we consider replacing their forfeited compensation from their prior employer. In select situations and based on careful consideration, we replace the lost compensation of senior hires. The replacement awards are subject to UBS's harmful acts provisions. Their value is subject to independent review as part of the "Report of the statutory auditor on the compensation report" to support the like-for-like nature of the replacement and to confirm that these awards do not represent sign-on payments (i.e., there are no "golden hellos").

Based on a thorough review of available documentation, we aim to mirror the type, conditions and timing of the forfeited compensation, based on actual facts and circumstances. Replacement awards can include cash payments and / or deferred awards, including EOP share awards and DCCP awards. Where payments are made in cash, there is typically a clawback period if the employee leaves UBS voluntarily within 12 months of the start of employment. The replacement awards do not exceed the commercial or fair value of the compensation actually forfeited by the individual and, in case of GEB members, are disclosed transparently. The total 2022 forfeitures of USD 188m of previously awarded deferred compensation offset the 2022 total sign-on payments, replacement payments and guarantees of USD 153m.

In March 2022, Sarah Youngwood joined the GEB and succeeded Kirt Gardner as Group CFO effective 16 May 2022. Before joining UBS, Ms. Youngwood was CFO for JPMorgan Chase Consumer & Community Banking, CFO for Firmwide Technology and CFO for Diversity & Inclusion. In October 2022, Naureen Hassan joined the GEB and succeeded Tom Naratil in his role as President UBS Americas. She joined UBS from the Federal Reserve Bank of New York, where she was COO and First Vice President.

Consistent with the terms of the compensation forfeited at her previous employer, Sarah Youngwood received replacement awards with a total value of CHF 7,206,683, consisting of an EOP share award representing 291,584 UBS shares (denominated in Swiss francs), and replacement of cash items. The deferred portion of the award will vest in various installments between 2023 and 2026. Similarly, Naureen Hassan received replacement awards with a total value of CHF 65,229, consisting of a deferred cash award (vesting in 2023) and replacement of cash items. These replacement awards reflect the different compensation structures of the industries and organizations we recruit from.

Sign-on payments, replacement payments, guarantees and severance payments

	Total 2022	*of which: non-deferred cash*	*of which: deferred compensation awards*	Total 2021	Number of beneficiaries	
USD m, except where indicated					2022	2021
Total sign-on payments[1]	0	*0*	*0*	0	1	0
of which: Key Risk Takers[2]	*0*	*0*	*0*	*0*	*0*	*0*
Total replacement payments[3]	110	*28*	*82*	119	452	463
of which: Key Risk Takers[2]	*32*	*10*	*22*	*43*	*19*	*13*
Total guarantees[4]	43	*22*	*21*	17	49	40
of which: Key Risk Takers[2]	*26*	*12*	*15*	*2*	*9*	*1*
Total severance payments[1,5]	233	*233*	*0*	160	1,745	1,477
of which: Key Risk Takers[2]	*1*	*1*	*0*	*3*	*8*	*10*

1 GEB members are not eligible for sign-on or severance payments. Sign-on awards exclude one-time payments for junior associate hires into the Investment Bank. Including these, the 2022 and 2021 total sign-on payments are USD 1m for each respective year. All one-time payments for junior associate hires are subject to a 12-month clawback condition. Prior period information has been adjusted to exclude awards granted to employees hired late in the year. 2 Expenses for Key Risk Takers are full-year amounts for individuals in office on 31 December 2022. Key Risk Takers as defined by UBS, including all employees with a total compensation exceeding USD / CHF 2.5m (Highly Paid Employees). 3 Includes replacement payments for two GEB members in 2022 and for one GEB member in 2021. Includes awards granted to employees hired late in the year to replace performance awards that they would have earned at their previous employers, but have foregone by joining UBS. Prior period information has been adjusted to include awards granted to employees hired late in the year. 4 No GEB member received a guarantee in 2022 or 2021. 5 Includes legally obligated and standard severance payments, as well as payments in lieu of notice.

Forfeitures[1]

	Total 2022	Total 2021
USD m, except where indicated		
Total forfeitures	188	258
of which: former GEB members	*3*	*23*
of which: Key Risk Takers[2]	*12*	*8*

1 For notional share awards, forfeitures are calculated as units forfeited during the year, valued at the share price on 31 December 2022 (USD 18.67) for 2022. The 2021 data is valued using the share price on 31 December 2021 (USD 17.87). For LTIP the forfeited units reflect the fair value awarded at grant. For the notional funds awarded to Asset Management employees under the EOP, this represents the forfeiture credits recognized in 2022 and 2021. For the DCCP, the fair value at grant of the forfeited awards during the year is reflected. Numbers presented may differ from the effect on the income statement in accordance with IFRS. 2 Key Risk Takers as defined by UBS, including all employees with a total compensation exceeding USD / CHF 2.5m (Highly Paid Employees) and excluding former GEB members who forfeited awards in 2022 or 2021.

Employee share ownership

According to available records on employee shareholdings, including unvested deferred compensation, as of 31 December 2022, employees held at least USD 4.6bn of UBS shares (of which approximately USD 2.9bn were unvested), representing approximately 7% of our total shares issued.

The Equity Plus Plan is our employee share purchase program. It allows employees at Executive Director level and below to voluntarily invest up to 30% of their base salary and / or regular commission payments to purchase UBS shares. In addition (where offered), eligible employees can invest up to 35% of their performance award under the program. Participation in the program is capped at USD / CHF 20,000 annually. Eligible employees may purchase UBS shares at market price and receive one additional share for every three shares purchased through the program. Additional shares vest after a maximum of three years, provided the employee remains employed by UBS and has retained the purchased shares throughout the holding period.

› **Refer to "Note 27 Employee benefits: variable compensation" in the "Consolidated financial statements" section of our Annual Report 2022 for more information**

Compensation for US financial advisors in Global Wealth Management

In line with market practice for US wealth management businesses, the compensation for US financial advisors in Global Wealth Management consists of cash compensation and deferred compensation awards, determined using a formulaic approach based on production.

The monthly cash compensation is determined using an overall percentage rate for each financial advisor. It reflects a percentage of the compensable production that each financial advisor generates during that month. Compensable production is generally based on transaction revenue and investment advisory fees and may reflect further adjustments. The percentage rate generally varies based on the level of the production and firm tenure, supporting growth and alignment with the investment strategy and goals of our clients.

Financial advisors may also be granted annual deferred compensation. These amounts generally vest over a six-year period. The annual deferred compensation amount reflects their overall percentage rate and production, as previously outlined.

Cash compensation and deferred compensation awards may be reduced for, among other things, errors, negligence or carelessness, or failure to comply with the firm's rules, standards, practices and / or policies, and / or applicable laws and regulations.

Financial advisors may also participate in additional programs to support promoting and developing their business or supporting the transition of client relationships where appropriate.

2022 Group performance outcomes

Performance awards granted for the 2022 performance year

The "Variable compensation" table below shows the amount of variable compensation awarded to employees for the 2022 performance year, together with the number of beneficiaries for each type of award granted. In the case of deferred awards, the final amount paid to an employee depends on performance conditions and consideration of relevant forfeiture provisions. The deferred share award amount is based on the market value of these awards on the date of grant.

Variable compensation

	Expenses recognized in the IFRS income statement		Expenses deferred to future periods[3]		Accounting adjustments[3,4]		Total		Number of beneficiaries[6]	
USD m, except where indicated	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Non-deferred cash	2,276	2,383	0	0	(18)	0	2,259	2,383	59,570	57,783
Deferred compensation awards	364	405	605	797	58	65	1,026	1,267	4,349	4,202
of which: Equity Ownership Plan	*202*	*183*	*310*	*393*	*55*	*46*	*568*	*623*	*4,042*	*3,807*
of which: Deferred Contingent Capital Plan	*129*	*140*	*245*	*299*	*0*	*0*	*375*	*438*	*4,206*	*4,170*
of which: Long-Term Incentive Plan	*11*	*54*	*30*	*50*	*3*	*18*	*43*	*122*	*14*	*117*
of which: Fund Ownership Plan	*21*	*29*	*20*	*56*	*0*	*0*	*41*	*84*	*295*	*374*
Variable compensation – performance award pool	2,640	2,788	605	797	40	65	3,285	3,650	59,590	57,793
Variable compensation – financial advisors[1]	3,799	4,175	1,290	1,097	0	0	5,089	5,272	6,245	6,218
Variable compensation – other[2]	169	191	237	215	(146)[5]	(121)[5]	260	285		
Total variable compensation	6,608	7,155	2,131	2,109	(106)	(56)	8,634	9,207		

1 Financial advisor compensation consists of cash and deferred compensation awards and is based on compensable revenues and firm tenure using a formulaic approach. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 2 Consists of replacement payments, forfeiture credits, severance payments, retention plan payments and interest expense related to the Deferred Contingent Capital Plan. 3 Estimates as of 31 December 2022 and 2021. Actual amounts to be expensed in future periods may vary; e.g., due to forfeiture of awards. 4 Represents estimated post-vesting transfer restriction and permanent forfeiture discounts, as well as currency translation adjustments. 5 Included in expenses deferred to future periods is an amount of USD 146m (2021: USD 121m) in interest expense related to the Deferred Contingent Capital Plan. As the amount recognized as performance award represents the present value of the award at the date it is granted to the employee, this amount is excluded. 6 Excludes awards that are part of other variable compensation.

2022 performance award pool and expenses

The performance award pool, which includes performance-based variable awards for 2022, was USD 3.3bn, reflecting a decrease of 10% compared with 2021. Performance award expenses for 2022 remained at USD 3.2bn, reflecting decreased performance award expenses accrued in the performance year, offset by increased performance award expenses related to prior performance years. The "Performance award pool and expenses" table below compares the performance award pool with performance award expenses.

Performance award pool and expenses

USD m, except where indicated	2022	2021	% change
Performance award pool[1]	3,285	3,650	(10)
of which: expenses deferred to future periods and accounting adjustments[2,3]	*645*	*862*	*(25)*
Performance award expenses accrued in the performance year	2,640	2,788	(5)
Performance award expenses related to prior performance years	566	402	41
Total performance award expenses recognized for the year[4]	3,205	3,190	0

1 Excluding employer-paid taxes and social security. 2 Estimate as of the end of the performance year. Actual amounts expensed in future periods may vary, e.g., due to forfeiture of awards. 3 Accounting adjustments represent estimated post-vesting transfer restriction and permanent forfeiture discounts, as well as currency translation adjustments. 4 Refer to "Note 27 Employee benefits: variable compensation" in the "Consolidated financial statements" section of our Annual Report 2022 for more information.

Compensation for the Board of Directors

Chairman of the BoD

Colm Kelleher was elected Chairman of the BoD at the 2022 AGM on 6 April 2022. Under his leadership, the BoD determines, among other things, the strategy for the Group, based on recommendations by the Group CEO, exercises ultimate supervision over management and appoints all GEB members.

The Chairman leads all general meetings and BoD meetings and works with the committee Chairpersons to coordinate the work of all BoD committees. Together with the Group CEO, the Chairman is responsible for effective communication with shareholders and stakeholders, including clients, government officials, regulators and public organizations. The Chairman works closely with the Group CEO and other GEB members, providing advice and support when appropriate, and continues to strengthen and promote our culture through the three keys to success: our Pillars, Principles and Behaviors.

As an independent director, the Chairman's total compensation for the period from AGM to AGM consists of a fixed fee without any variable component, which is delivered 50% in cash and 50% in shares (blocked for four years). For the current period, from the 2022 AGM to the 2023 AGM, his fixed fee was CHF 4.7m and consisted of a cash payment of CHF 2.35m and a share component of CHF 2.35m, consisting of 116,961 UBS shares at CHF 20.092 per share. The share component aligns the Chairman's pay with the Group's long-term performance. The Chairman does not receive performance awards, severance payments or pension contributions in addition to his fixed fee, but, given the full-time nature of his role, he is eligible for employee conditions on UBS products and services.

› **Refer to "Board of Directors" in the "Corporate governance" section of our Annual Report 2022 for more information about the responsibilities of the Chairman**

Vice Chairman of the BoD

Lukas Gähwiler was elected as a member of the BoD at the 2022 AGM on 6 April 2022 and thereafter appointed as Vice Chairman. In this newly defined full-time role, he leads the BoD in the absence of the Chairman. Together with the Senior Independent Director, he also supports the Chairman in all aspects of corporate governance and oversight across the Group. In particular, he represents UBS across a broad range of associations and industry bodies in Switzerland.

The Vice Chairman's total compensation for the period from AGM to AGM consists of a fixed fee without any variable component, which is delivered 50% in cash and 50% in shares (blocked for four years). For the current period, from the 2022 AGM to the 2023 AGM, his fixed fee was CHF 1.5m, excluding benefits and pension fund contributions. The fixed fee consisted of a cash payment of CHF 0.75m and a share component of CHF 0.75m, consisting of 37,328 UBS shares at CHF 20.092 per share. The fee for the new full-time Vice Chairman was absorbed within the existing budget and does not result in an increase of the proposed maximum aggregate amount for BoD compensation.

As a non-independent director, Mr. Gähwiler is entitled to pension fund contributions. Including these, his total reward for his service as Vice Chairman for the current period was CHF 1,879,010.

The Vice Chairman is not eligible for performance awards, severance terms or supplementary contributions to pension plans. The pension contributions and benefits for the Vice Chairman, in his capacity as non-independent director, are consistent with all UBS employees and aligned with local market practice.

› **Refer to "Board of Directors" in the "Corporate governance" section of our Annual Report 2022 for more information about the responsibilities of the Vice Chairman**

Other BoD members

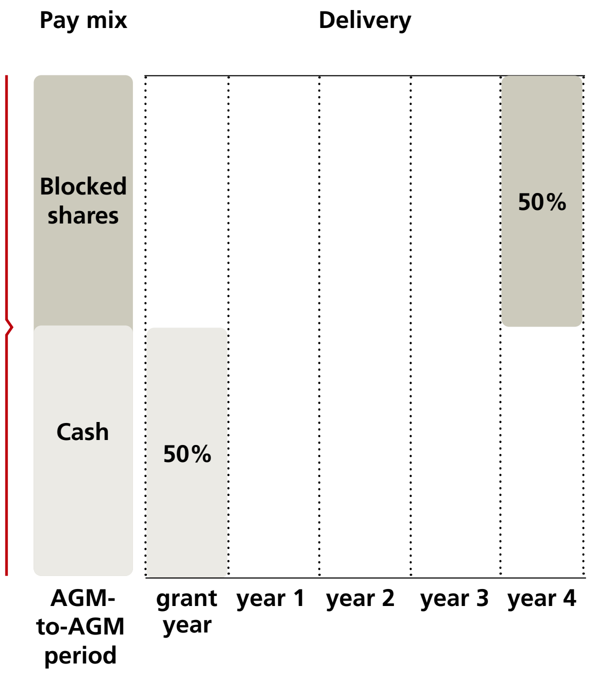
BoD members, except the Chairman and Vice Chairman, receive fixed fees for their services on the BoD and its committees. BoD members do not receive performance awards, severance payments, benefits or pension contributions (the benefit eligibility of the Chairman and that of the Vice Chairman are described above).

BoD members must use a minimum of 50% of their fees to purchase UBS shares, which are blocked for four years, and they may elect to use up to 100% of their fees to purchase blocked UBS shares. As outlined above, the fixed fees of the Chairman and Vice Chairman are delivered 50% in cash and 50% in shares, which are blocked for four years. The number of shares is calculated based on the average closing price of the 10 trading days leading up to and including the grant date.

At each AGM, shareholders are invited to approve the aggregate amount of BoD remuneration, including the compensation for the Chairman and Vice Chairman, which applies until the next AGM. The chart and the tables below provide details on the fee structure for the BoD members.

Remuneration framework for BoD members

CHF	**2022 AGM to 2023 AGM**	
Annual fixed fees[1]		
Chairman	4,700,000	
Vice Chairman	1,500,000	
Fees for other BoD members[2]		
Fixed base fee	300,000	
Senior Independent Director	150,000	
	Chair	**Member**
Audit Committee	300,000	200,000
Compensation Committee	200,000	100,000
Governance and Nominating Committee		100,000
Corporate Culture and Responsibility Committee		50,000
Risk Committee	350,000	200,000



1 The Chairman and the Vice Chairman do not receive committee or other fees in addition to their annual fixed fee. Their fixed fee is delivered 50% in cash and 50% in shares (blocked for four years). See above for the benefit eligibility of the Chairman and Vice Chairman. 2 At least 50% of the total amounts must be used to purchase UBS shares, which are blocked for four years, but other BoD members can elect to use 100% of their remuneration to purchase blocked UBS shares.

Approval governance for BoD compensation

The Chairperson of the Compensation Committee proposes and the Compensation Committee approves the compensation of the Chairman and that of the Vice Chairman annually for the upcoming AGM-to-AGM period, taking into consideration fee or compensation levels for comparable roles based on our core financial industry peers and other relevant leading Swiss companies included in the Swiss Market Index.

The fee structure for the other BoD members is reviewed annually based on the Chairman's proposal to the Compensation Committee, which in turn submits a proposal to the BoD for approval. In our regular review of the BoD fee structure, we concluded that our overall approach for BoD member compensation remains appropriate and thus unchanged.

› **Refer to "Compensation Governance" in the "Compensation philosophy and governance" section of this report for more information about the remuneration responsibilities of the BoD and Compensation Committee**

Audited |

Remuneration details and additional information for BoD members

Period 2022 AGM to 2023 AGM

CHF, except where indicated

Name, function[1]	Audit Committee	Compensation Committee	Corporate Culture and Responsibility Committee	Governance and Nominating Committee	Risk Committee	Base fee	Committee fee(s)	Additional payments[2]	Benefits[3]	Total[4]	Share percentage[5]	Number of shares[6,7]
Colm Kelleher, Chairman[8]			C	C		4,700,000			86,494	4,786,494	50	116,961
Lukas Gähwiler, Vice Chairman[8]						1,500,000			379,010	1,879,010	50	37,328
Jeremy Anderson, Senior Independent Director	C			M		300,000	400,000	150,000		850,000	50	21,152
Claudia Böckstiegel, member			M			300,000	50,000			350,000	50	8,709
William C. Dudley, member			M		M	300,000	250,000			550,000	50	13,687
Patrick Firmenich, member	M		M			300,000	250,000			550,000	100	26,130
Fred Hu, member				M		300,000	100,000			400,000	100	14,722
Mark Hughes, member			M		C	300,000	400,000			700,000	50	17,419
Nathalie Rachou, member				M	M	300,000	300,000			600,000	50	14,931
Julie G. Richardson, member		C			M	300,000	400,000			700,000	50	17,419
Dieter Wemmer, member	M	M				300,000	300,000			600,000	50	14,931
Jeanette Wong, member	M	M				300,000	300,000			600,000	100	22,127
Aggregate of all BoD members 2022/2023										12,565,504		
Aggregate of all BoD members 2022/2023 in USD (for reference)[9]										13,035,831		

Period 2021 AGM to 2022 AGM

CHF, except where indicated

Name, function[1]	Audit Committee	Compensation Committee	Corporate Culture and Responsibility Committee	Governance and Nominating Committee	Risk Committee	Base fee	Committee fee(s)	Additional payments[10]	Benefits	Total[4]	Share percentage[5]	Number of shares[6,7]
Axel A. Weber, Chairman[11]			C	C		4,900,000			324,913	5,224,913	29	72,939
Jeremy Anderson, Vice Chairman and Senior Independent Director	C			M		300,000	400,000	150,000		850,000	50	22,142
Claudia Böckstiegel, member						300,000	0			300,000	50	7,814
William C. Dudley, member			M	M	M	300,000	350,000			650,000	50	16,932
Patrick Firmenich, member						300,000	250,000			550,000	100	27,275
Reto Francioni, member		M			M	300,000	300,000			600,000	50	15,629
Fred Hu, member				M	M	300,000	300,000			600,000	100	23,062
Mark Hughes, member			M		C	300,000	400,000			700,000	50	18,234
Nathalie Rachou, member					M	300,000	200,000			500,000	50	13,024
Julie G. Richardson, member		C		M	M	300,000	500,000			800,000	50	20,839
Dieter Wemmer, member	M	M		M		300,000	400,000			700,000	50	18,234
Jeanette Wong, member	M	M	M			300,000	350,000			650,000	100	24,988
Aggregate of all BoD members 2021/2022										12,124,913		

Legend: C = Chairperson of the respective Committee, M = Member of the respective Committee

1 Twelve BoD members were in office on 31 December 2022. At the 2022 AGM, Colm Kelleher and Lukas Gähwiler were newly elected and Reto Francioni and Axel A. Weber did not stand for re-election. Twelve BoD members were in office on 31 December 2021. 2 These payments are associated with the Senior Independent Director role. 3 For the period from the 2022 AGM to the 2023 AGM, benefits amount is an estimate. For the Vice Chairman, the benefits include the portion related to UBS's contribution to the statutory pension scheme. 4 Excludes UBS's portion related to the legally required social security contributions, which for the period from the 2022 AGM to the 2023 AGM (including the Chairman and Vice Chairman) is estimated at grant at CHF 731,329 and which for the period from the 2021 AGM to the 2022 AGM was estimated at grant at CHF 719,763. The legally required social security contributions paid by the independent BoD members are included in the amounts shown in this table, as appropriate. 5 Except for the former Chairman (see footnote 11), fees are paid 50% in cash and 50% in blocked UBS shares. 6 For 2022, UBS shares were valued at CHF 20.092 (average closing price of UBS shares over the last 10 trading days leading up to and including the grant date). For 2021, UBS shares were valued at CHF 19.194 (average closing price of UBS shares over the last 10 trading days leading up to and including the grant date). These shares are blocked for four years. 7 Number of shares is reduced in case of the 100% election to deduct legally required contributions. All remuneration payments are, where applicable, subject to social security contributions and / or withholding tax. 8 The Chairman and the Vice Chairman do not receive committee fees in addition to their annual fixed fee. 9 Swiss franc amounts have been translated into US dollars for reference at the 2022 performance award currency exchange rate of CHF / USD 1.03743. 10 This payment is associated with the Senior Independent Director function and the Vice Chairman role. 11 In his function as non-independent BoD member for the AGM period 2021/2022, the former Chairman received a base salary of CHF 3,500,000 and an annual share award of CHF 1,400,000. This remuneration is included above in the Base fee column.

Supplemental information

Fixed and variable compensation for GEB members

Fixed and variable compensation for GEB members[1,2,3]

	Total for 2022		Not deferred		Deferred[4]		Total for 2021
CHF m, except where indicated	Amount	%	Amount	%	Amount	%	Amount
Total compensation							
Amount[5]	104	100	39	38	65	63	105
Number of beneficiaries	15				0		15
Fixed compensation[5,6]	23	22	23	100	0	0	25
Cash-based	21	20	21		0		22
Equity-based	2	2	2		0		3
Variable compensation	81	78	16	20	65	80	80
Cash[7]	16	15	16		0		16
Long-Term Incentive Plan (LTIP)[8]	41	39	0		41		40
Deferred Contingent Capital Plan (DCCP)[8]	24	23	0		24		24

1 The figures include all GEB members in office during the respective years. 2 Includes compensation paid under the employment contract during the notice period for GEB members who stepped down during the respective years. 3 Includes compensation for newly appointed GEB members for their time in office as a GEB member during the respective years. 4 Based on the specific plan vesting and reflecting the total award value at grant, which may differ from the expense recognized in the income statement in accordance with IFRS. 5 Excludes benefits and employer's contributions to retirement benefit plans. Includes social security contributions paid by GEB members but excludes the portion related to the legally required social security contributions paid by UBS. For 2022, Sarah Youngwood received a one-time replacement award of CHF 7m and Naureen Hassan received a one-time replacement award of CHF 0.07m. The replacement awards are not included in the above table; including these, the 2022 total aggregate compensation of all GEB members is CHF 112m. For 2021, Barbara Levi received a one-time replacement award of CHF 7m. This replacement award is not included in the above table; including this, the 2021 total aggregate compensation of all GEB members is CHF 112m. 6 Includes base salary and role-based allowances, rounded to the nearest million. 7 Includes allocation of vested but blocked shares, in line with the remuneration section of the UK Prudential Regulation Authority Rulebook. 8 For the GEB members who are also MRTs or SMFs, the awards do not include dividend and interest payments. Accordingly, the amounts reflect for the LTIP the fair value of the non-dividend-bearing awards and for the DCCP the fair value of the granted non-interest-bearing awards.

Regulated staff

Key Risk Takers

Key Risk Takers (KRTs) are defined as those employees that, by the nature of their roles, have been determined to materially set, commit or control significant amounts of the firm's resources and / or exert significant influence over its risk profile. This includes employees working in front-office roles, logistics and control functions. Identifying KRTs globally is part of our risk control framework and an important element in ensuring we incentivize only appropriate risk-taking. For 2022, in addition to GEB members, 699 employees were classified as KRTs throughout UBS Group globally, including all employees with a total compensation exceeding USD / CHF 2.5m (Highly Paid Employees), who may not have been identified as KRTs during the performance year.

In line with regulatory requirements, the performance of employees identified as KRTs during the performance year is evaluated by the control functions. In addition, KRTs' performance awards are subject to a mandatory deferral rate of at least 50%, regardless of whether the deferral threshold has been met (excluding KRTs with de minimis performance awards below a predetermined threshold where standard deferral rates apply). A KRT's deferred compensation award will only vest if the Group performance conditions are met. Consistent with all other employees, the deferred portion of a KRT's compensation is also subject to forfeiture or reduction if the KRT commits harmful acts.

Fixed and variable compensation for Key Risk Takers[1]

	Total for 2022		Not deferred		Deferred[2]		Total for 2021
USD m, except where indicated	Amount	%	Amount	%	Amount	%	Amount
Total compensation							
Amount	1,292	100	790	61	502	39	1,561
Number of beneficiaries	699						699
Fixed compensation[3,4]	438	34	438	100	0	0	477
Cash-based	435	34	435				474
Equity-based	3	0	3				3
Variable compensation	855	66	353	41	502	59	1,084
Cash[5]	353	27	353				418
Long-Term Incentive Plan (LTIP) / Equity Ownership Plan (EOP) / Fund Ownership Plan (FOP)[6]	306	24			306		423
Deferred Contingent Capital Plan (DCCP)[6]	196	15			196		243

1 Includes employees with a total compensation exceeding USD / CHF 2.5m (Highly Paid Employees), excludes payments made to individuals related to their time as GEB member. 2 Based on the specific plan vesting and reflecting the total value at grant, which may differ from the expense recognized in the income statement in accordance with IFRS. 3 Excludes benefits and employer's contributions to retirement benefits plan. Includes social security contributions paid by KRTs but excludes the legally required social security contributions paid by UBS. 4 Includes base salary and role-based allowances. 5 Includes allocation of vested but blocked shares, in line with regulatory requirements where applicable. 6 KRTs who are also MRTs do not receive dividend and interest payments. Accordingly, the amounts for the EOP / LTIP reflect the fair value of the non-dividend-bearing awards and for the DCCP the fair value of the granted non-interest-bearing awards.

Deferred compensation of the GEB and KRTs

The table below shows the current economic value of unvested outstanding deferred variable compensation awards subject to ex post adjustments. For share-based plans, the economic value is determined based on the closing share price on 31 December 2022. For notional funds, it is determined using the latest available market price for the underlying funds at year-end 2022, and for deferred cash plans, it is determined based on the outstanding amount of cash owed to award recipients.

Deferred compensation of the GEB and KRTs[1,2,3]

USD m, except where indicated	Relating to awards for 2022[4]	Relating to awards for prior years[5]	Total	*of which: exposed to ex-post explicit and / or implicit adjustments*	Total deferred compensation year-end 2021	Total amount of deferred compensation paid out in 2022[6]
GEB						
Deferred Contingent Capital Plan	25	86	111	*100%*	98	21
Equity Ownership Plan (including notional funds)		45	45	*100%*	78	27
Long-Term Incentive Plan	42	118	160	*100%*	119	
KRTs						
Deferred Contingent Capital Plan	196	907	1,104	*100%*	1,183	159
Equity Ownership Plan (including notional funds)	306	905	1,210	*100%*	1,414	355
Long-Term Incentive Plan		184	184	*100%*	235	
Total GEB and KRTs	569	2,245	2,814		3,127	562

1 Based on the specific plan vesting and reflecting the economic value of the outstanding awards, which may differ from the expense recognized in the income statement in accordance with IFRS. Year-to-year reconciliations would also need to consider the impacts of additional items including off-cycle awards, FX movements, population changes, and dividend equivalent reinvestments. 2 Refer to "Note 27 Employee benefits: variable compensation" in the "Consolidated financial statements" section of the Annual Report 2022 for more information. 3 GEB members and KRTs who are also MRTs do not receive dividend and interest payments. Accordingly, the amounts for the EOP / LTIP reflect the fair value of the non-dividend-bearing awards and for the DCCP the fair value of the granted non-interest-bearing awards. 4 Where applicable, amounts are translated into US dollars at the performance award currency exchange rate. LTIP values reflect the fair value awarded at grant. 5 Takes into account the ex post implicit adjustments, given the share price movements since grant. Where applicable, amounts are translated from award currency into US dollars using FX rates as of 31 December 2022. LTIP values reflect the fair value awarded at grant. 6 Valued at distribution price and FX rate for all awards distributed in 2022.

The table below shows the value of actual ex post explicit and implicit adjustments to outstanding deferred compensation in the 2022 financial year for GEB members and KRTs.

Ex post adjustments occur after an award has been granted. Explicit adjustments occur when we adjust compensation by forfeiting deferred awards. Implicit adjustments are unrelated to any action taken by the firm and occur as a result of price movements that affect the value of an award.

The total value of ex post explicit adjustments made to UBS share awards in 2022, based on the approximately 5.8m shares forfeited during 2022, is a reduction of USD 110m.

GEB and KRTs ex post explicit and implicit adjustments to deferred compensation

	Ex post explicit adjustments to unvested awards[1]		Ex post implicit adjustments to unvested awards[2]	
USD m	31.12.22	31.12.21	31.12.22	31.12.21
GEB				
Deferred Contingent Capital Plan	0	0	0	0
Equity Ownership Plan (including notional funds, if applicable)	0	0	9	17
Long-Term Incentive Plan	0	0	25	21
KRTs				
Deferred Contingent Capital Plan	(8)	(14)	0	0
Equity Ownership Plan (including notional funds)	(4)	(16)	129	250
Long-Term Incentive Plan		(1)	38	47
Total GEB and KRTs	(12)	(31)	201	335

1 For notional share awards, ex post explicit adjustments are calculated as units forfeited during the year, valued at the share price on 31 December 2022 (USD 18.67) for 2022 (which may differ from the expense recognized in the income statement in accordance with IFRS). The 2021 data is valued using the share price on 31 December 2021 (USD 17.87). For LTIP, the forfeited units reflect the fair value awarded at grant. For the notional funds awarded to employees in investment areas within Asset Management under the FOP, this represents the forfeiture credits recognized in 2022 and 2021. For the DCCP, the fair value at grant of the forfeited awards during the year is reflected. 2 Ex post implicit adjustments for UBS shares are calculated based on the difference between the weighted average grant date fair value and the share price at year-end. The amount for notional funds is calculated using the mark-to-market change during 2022 and 2021. For the GEB member who was appointed to the GEB during 2022, awards have been fully reflected in the GEB entries.

Material Risk Takers

For relevant EU- or UK-regulated entities, we identify individuals who are deemed to be Material Risk Takers (MRTs) based on local regulatory requirements, including the respective EU Commission Delegated Regulation, the fifth iteration of the EU Capital Requirements Directive (CRD V) and equivalent UK requirements, as applicable. This group consists of senior management, risk takers, selected staff in control or support functions and certain highly compensated employees. For 2022, UBS identified 616 MRTs in relation to its relevant EU or UK entities.

Variable compensation awarded to MRTs is subject to additional deferral and other requirements. These include a maximum variable to fixed compensation ratio of 200% based on approval through relevant shareholder votes, a minimum deferral rate of 40% or 60% (depending on role / variable compensation level) on performance awards and delivery of at least 50% of any upfront performance award in UBS shares that are vested but blocked for 12 months after grant.

Deferred awards granted to MRTs under UBS's deferred compensation plans for their performance in 2022 are subject to 6- or 12-month blocking periods post vesting and do not pay out dividends or interest during the deferral period.

For up to seven years after grant, performance awards granted to MRTs are subject to clawback provisions, which allow the firm to claim repayment of both the upfront and the vested deferred element of any performance award if an individual is found to have contributed substantially to significant financial losses for the Group or corporate structure in scope, a material downward restatement of disclosed results, or engaged in misconduct and / or failed to take expected actions that contributed to significant reputational harm.

LTIP awards granted to UK MRTs and SMFs are subject to an additional non-financial conduct-related metric as required by UK regulation.

UK Senior Managers and Certification Regime

The Senior Managers and Certification Regime (the SMCR) of the UK Prudential Regulation Authority and Financial Conduct Authority requires that individuals with specified responsibilities, performing certain significant functions and / or those in certain other identified categories be designated as SMFs.

Subject to de minimis and other compensation-related considerations, variable compensation awards made to SMFs must comply with specific requirements, including longer deferral, blocking and clawback periods. The deferral period for SMFs is seven years, with the deferred performance awards vesting no faster than pro rata from years 3 to 7, except those that have total compensation below GBP 500,000 and variable incentive accounting for less than 33% of total compensation, for whom a five-year deferral period (instead of a seven-year period) applies. Such awards are also subject to a 12-month blocking period post vesting. The clawback policy for SMFs permits clawback for up to 10 years from the date of performance award grants (applicable if an individual is subject to an investigation at the end of the initial seven-year clawback period). All SMFs are also MRTs and, as such, subject to the same prohibitions on dividend and interest payments.

Control functions and Group Internal Audit

Our control functions must be independent in order to monitor risk effectively. Therefore, their compensation is determined separately from the revenue areas that they oversee, supervise or monitor. Their performance award pool is based not on the performance of these businesses, but on the performance of the Group as a whole. We also consider other factors, such as how effectively the function has performed and our market position. Decisions on individual compensation for the senior managers of the control functions are made by the function heads and approved by the Group CEO. Decisions on individual compensation for the members of Group Internal Audit (GIA) are made by the Head GIA and approved by the Chairman. Following a proposal by the Chairman, total compensation for the Head GIA is approved by the Compensation Committee.

2022 Group personnel expenses

The number of personnel employed as of 31 December 2022 increased by 1,212 to 72,597 (full-time equivalents) compared with 31 December 2021.

The table below shows our total personnel expenses for 2022, including salaries, pension expenses, social security contributions, variable compensation and other personnel costs. Variable compensation includes cash performance awards paid in 2023 for the 2022 performance year, amortization of unvested deferred awards granted in previous years and the cost of deferred awards granted to employees that are eligible for retirement in the context of the compensation framework at the date of grant.

The performance award pool reflects the value of performance awards granted relating to the 2022 performance year, including awards that are paid out immediately and those that are deferred. To determine our variable compensation expenses, the following adjustments are required in order to reconcile the performance award pool to the expenses recognized in the Group's financial statements prepared in accordance with IFRS:
– a reduction for expenses deferred to future periods (amortization of unvested awards granted in 2023 for the 2022 performance year) and accounting adjustments; and
– an addition for the 2022 amortization of unvested deferred awards granted in prior years.

As a large part of compensation consists of deferred awards, the amortization of unvested deferred awards granted in prior years forms a significant part of the IFRS expenses in both 2022 and 2023.

› **Refer to "Note 6 Personnel expenses" and "Note 27 Employee benefits: variable compensation" in the "Consolidated financial statements" section of our Annual Report 2022 for more information**

Personnel expenses

	Expenses recognized in the IFRS income statement				
USD m	Related to the performance year 2022	Related to prior performance years	Total expenses recognized in 2022	Total expenses recognized in 2021	Total expenses recognized in 2020
Salaries[1]	7,045	0	7,045	7,339	7,023
Non-deferred cash	2,276	(16)	2,260	2,373	2,141
Deferred compensation awards	364	581	945	817	1,068
of which: Equity Ownership Plan	*202*	*235*	*437*	*363*	*463*
of which: Deferred Contingent Capital Plan	*129*	*219*	*349*	*297*	*463*
of which: Long-Term Incentive Plan	*11*	*32*	*43*	*73*	*54*
of which: Fund Ownership Plan	*21*	*95*	*116*	*84*	*88*
Variable compensation – performance awards	2,640	566	3,205	3,190	3,209
Variable compensation – financial advisors[2]	3,799	709	4,508	4,860	4,091
Variable compensation – other[3]	169	71	241	229	220
Total variable compensation[4]	6,608	1,346	7,954	8,280	7,520
Contractors	323	0	323	381	375
Social security	903	40	944	978	899
Pension and other post-employment benefit plans[5]	794	0	794	833	845
Other personnel expenses	598	23	621	576	561
Total personnel expenses	16,271	1,410	17,680	18,387	17,224

1 Includes role-based allowances. 2 Financial advisor compensation consists of cash and deferred compensation awards and is based on compensable revenues and firm tenure using a formulaic approach. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 3 Consists of replacement payments, forfeiture credits, severance payments, retention plan payments and interest expense related to the Deferred Contingent Capital Plan. 4 Refer to "Note 27 Employee benefits: variable compensation" in the "Consolidated financial statements" section of our Annual Report 2022 for more information. 5 Refer to "Note 26 Post-employment benefit plans" in the "Consolidated financial statements" section of our Annual Report 2022 for more information.

Deferred compensation

Vesting of outstanding awards granted in prior years subject to performance metrics and thresholds

The tables below show the extent to which the performance metrics and thresholds for awards granted in prior years have been met and the related vesting in 2023.

Long-Term Incentive Plan (LTIP) 2019 (performance period 2020–2022)		
Performance metrics	**Performance achievement[1]**	**Vesting**
Return on common equity tier 1 capital (RoCET1) and relative Total Shareholder Return (rTSR)	The overall achievement level is 98% of the maximum opportunity (of up to 100%), based on outcomes for rTSR (weighted 50%) and RoCET1 (weighted 50%).	- For GEB, the first installment will vest in 2023 and the remaining tranches will vest in 2024 and 2025 accordingly. For context, and as outlined in our 2019 Compensation Report, up to CHF 7.3m, or 30%, of the 2019 LTIP awards at grant for GEB members active in March 2017 continues to be at risk and directly linked to the final resolution of the French cross-border matter. - For other select senior management, the full award will vest in 2023.

1 As disclosed in our Compensation Report 2019, LTIP awards for the 2019 performance year were awarded at a value of 62.25% of maximum, which reflected our best estimate of the fair value of the award. The maximum number of shares was determined by dividing the awarded amount by the fair value of the award at the date of grant, divided by CHF 12.919 or USD 13.141, the average closing price of UBS shares over the last ten trading days leading up to and including the grant date.

› **Refer to “Performance achievement of the 2019 LTIP granted in 2020” in the “Group compensation” section of this report for more information**

The below EOP and DCCP thresholds have been set to support the sustainability of the organization and represent minimum performance levels to retain the awards.

Equity Ownership Plan (EOP) 2017 / 2018, EOP 2018 / 2019, EOP 2019 / 2020 and EOP 2020 / 2021		
Thresholds	**Threshold achievement[1]**	**Vesting**
Return on common equity tier 1 capital (RoCET1) and divisional return on attributed equity	The Group and divisional thresholds have been satisfied.	The following installments vest in full: - for EOP 2017 / 2018, the third and final installment for GEB members; - for EOP 2018 / 2019, the second installment for the GEB members; - for EOP 2019 / 2020, the second installment for all other employees covered under the plan; and - for EOP 2020 / 2021, the first installment for all other employees covered under the plan.

Deferred Contingent Capital Plan (DCCP) 2017 / 2018		
Thresholds	**Threshold achievement[1]**	**Vesting**
Common equity tier 1 (CET1) capital ratio, viability event and, additionally for GEB, Group profit before tax	The thresholds have been satisfied.	- DCCP 2017 / 2018 vests in full.

1 Performance may be adjusted for disclosed items generally not representative of underlying business performance.

Audited |

Share ownership / entitlements of GEB members[1]

Name, function	on 31 December	Number of unvested shares / at risk[2]	Number of vested shares	Total number of shares	Potentially conferred voting rights in %
Ralph A.J.G. Hamers, Group Chief Executive Officer	2022	349,441	5,238	354,679	0.023
	2021	122,453	2,673	125,126	0.008
Christian Bluhm, Group Chief Risk Officer	2022	707,979	0	707,979	0.046
	2021	654,579	226	654,805	0.041
Mike Dargan, Group Chief Digital and Information Officer	2022	386,141	17,955	404,096	0.026
	2021	240,343	82,743	323,086	0.020
Kirt Gardner, former Group Chief Financial Officer	2022	-	-	-	-
	2021	780,640	236,421	1,017,061	0.063
Suni Harford, President Asset Management	2022	1,028,210	44,202	1,072,412	0.070
	2021	636,122	22,199	658,321	0.041
Naureen Hassan, President UBS Americas	2022	0	0	0	0.000
	2021	-	-	-	-
Robert Karofsky, President Investment Bank	2022	1,037,028	364,914	1,401,942	0.092
	2021	851,520	357,064	1,208,584	0.075
Sabine Keller-Busse, President Personal & Corporate Banking and President UBS Switzerland	2022	973,150	566,106	1,539,256	0.101
	2021	798,457	421,491	1,219,948	0.076
Iqbal Khan, President Global Wealth Management and President EMEA	2022	960,301	0	960,301	0.063
	2021	898,111	113,715	1,011,826	0.063
Edmund Koh, President Asia Pacific	2022	724,865	579,937	1,304,802	0.085
	2021	501,322	493,977	995,299	0.062
Barbara Levi, Group General Counsel	2022	407,195	45,818	453,013	0.030
	2021	430,732	0	430,732	0.027
Tom Naratil, former Co-President Global Wealth Management and President UBS Americas	2022	-	-	-	-
	2021	1,374,044	950,682	2,324,726	0.145
Markus Ronner, Group Chief Compliance and Governance Officer	2022	586,283	0	586,283	0.038
	2021	418,452	57,856	476,308	0.030
Sarah Youngwood, Group Chief Financial Officer	2022	299,729	0	299,729	0.020
	2021	-	-	-	-
Total	2022	7,460,322	1,624,170	9,084,492	0.593
	2021	7,706,776	2,739,047	10,445,823	0.650

1 Includes all vested and unvested shares of GEB members, including those held by related parties. No options were held in 2022 and 2021 by any GEB member or any of its related parties. Refer to "Note 27 Employee benefits: variable compensation" in the "Consolidated financial statements" section of our Annual Report 2022 for more information. 2 Includes shares granted under variable compensation plans with forfeiture provisions. For the 2019/20 LTIP award, the values reflect the final value. For all other LTIP awards, the values reflect the fair value awarded at grant. The actual number of shares vesting in the future will be calculated under the terms of the plans. Refer to the "Group compensation" section of this report for more information about the plans.

Audited |

Total of all vested and unvested shares of GEB members[1,2]

	Total	*of which: vested*	*of which: vesting*					
			2023	*2024*	*2025*	*2026*	*2027*	*2028*
Shares on 31 December 2022	9,084,492	*1,624,170*	*1,572,210*	*1,952,123*	*2,020,881*	*1,281,201*	*599,733*	*34,174*
			2022	*2023*	*2024*	*2025*	*2026*	*2027*
Shares on 31 December 2021	10,445,823	*2,739,047*	*1,463,440*	*1,688,568*	*2,112,516*	*1,488,544*	*877,856*	*75,852*

1 Includes shares held by related parties. 2 Includes shares granted under variable compensation plans with forfeiture provisions. The actual number of shares vesting in the future will be calculated under the terms of the plans. Refer to the "Group compensation" section of this report for more information.

Audited |

Number of shares of BoD members[1]

Name, function	on 31 December	Number of shares held	Voting rights in %
Colm Kelleher, Chairman[2]	2022	339,084	0.022
	2021	-	
Lukas Gähwiler, Vice Chairman[2, 3]	2022	283,907	0.019
	2021	-	
Axel A. Weber, former Chairman[2]	2022	-	
	2021	1,148,369	0.071
Jeremy Anderson, Senior Independent Director	2022	119,660	0.008
	2021	97,518	0.006
Claudia Böckstiegel, member	2022	7,814	0.001
	2021	0	0.000
William C. Dudley, member	2022	66,646	0.004
	2021	49,714	0.003
Patrick Firmenich, member	2022	27,275	0.002
	2021	0	0.000
Reto Francioni, member[2]	2022	-	
	2021	139,609	0.009
Fred Hu, member	2022	97,543	0.006
	2021	74,481	0.005
Mark Hughes, member	2022	48,497	0.003
	2021	30,263	0.002
Nathalie Rachou, member	2022	31,126	0.002
	2021	18,102	0.001
Julie G. Richardson, member	2022	138,204	0.009
	2021	117,365	0.007
Dieter Wemmer, member	2022	132,320	0.009
	2021	114,086	0.007
Jeanette Wong, member	2022	93,440	0.006
	2021	68,452	0.004
Total	2022	1,385,516	0.090
	2021	1,857,959	0.116

1 Includes blocked and unblocked shares held by BoD members, including those held by related parties. No options were granted in 2022 and 2021. 2 At the 2022 AGM, Lukas Gähwiler and Colm Kelleher were newly elected and Reto Francioni and Axel A. Weber did not stand for re-election. 3 Includes 203,246 unvested shares granted under variable compensation plans with forfeiture provisions as part of Lukas Gähwiler's compensation for his executive roles previously held at UBS.

Audited |

Total of all blocked and unblocked shares of BoD members[1]

	Total	*of which: unblocked*	*of which: blocked until*			
			2023	*2024*	*2025*	*2026*
Shares on 31 December 2022	1,385,516[2]	*472,981*	*207,155*	*250,165*	*262,671*	*192,544*
			2022	*2023*	*2024*	*2025*
Shares on 31 December 2021	1,857,959	*701,594*	*178,603*	*305,947*	*329,875*	*341,940*

1 Includes shares held by related parties. 2 Includes 203,246 unvested shares granted under variable compensation plans with forfeiture provisions as part of Lukas Gähwiler's compensation for his executive roles previously held at UBS.

Audited |

Loans granted to GEB members[1]

Pursuant to article 38 of the Articles of Association (the AoA) of UBS Group AG, GEB members may be granted loans. Such loans are made in the ordinary course of business on substantially the same terms as those granted to other employees, including interest rates and collateral, and neither involve more than the normal risk of collectability nor contain any other unfavorable features for the firm. The total amount of such loans must not exceed CHF 20m per GEB member.

CHF, except where indicated[2]			*USD (for reference)*
Name, function	on 31 December	Loans[3]	Loans[3]
Christian Bluhm, Group Chief Risk Officer (highest loan in 2022)	2022	6,927,000	7,494,391
Christian Bluhm, Group Chief Risk Officer (highest loan in 2021)	2021	7,059,000	
Aggregate of all GEB members[4]	2022	30,752,035	33,270,934
	2021	29,635,590	

1 No loans have been granted to related parties of the GEB members at conditions not customary in the market. 2 Swiss franc and US dollar amounts disclosed represent local currency amounts translated at the relevant year-end closing exchange rate. 3 All loans granted are secured loans. 4 No unused uncommitted credit facilities in 2022 and 2021.

Audited |

Loans granted to BoD members[1]

Pursuant to article 33 of the AoA of UBS Group AG, loans to independent BoD members are made in the ordinary course of business at general market conditions. The Vice Chairman, given the full-time nature of his role, may be granted loans in the ordinary course of business on substantially the same terms as those granted to employees, including interest rates and collateral. Such loans neither involve more than the normal risk of collectability nor contain any other unfavorable features for the firm. The total amount of such loans must not exceed CHF 20m per BoD member.

CHF, except where indicated[2]			*USD (for reference)*
	on 31 December	Loans[3,4]	Loans[3,4]
Aggregate of all BoD members	2022	0	0
	2021	1,500,000	

1 No loans have been granted to related parties of the BoD members at conditions not customary in the market. 2 Swiss franc and US dollar amounts disclosed represent local currency amounts translated at the relevant year-end closing exchange rate. 3 All loans granted are secured loans. 4 No loans in 2022 and CHF 1,500,000 for Reto Francioni in 2021.

Audited |

Compensation paid to former BoD and GEB members[1]

CHF, except where indicated[2]					*USD (for reference)*
	For the year	Compensation	Benefits	Total	Total
Former BoD members	2022	0	0	0	0
	2021	0	0	0	
Aggregate of all former GEB members[3]	2022	0	89,657	89,657	97,001
	2021	0	187,876	187,876	
Aggregate of all former BoD and GEB members	2022	0	89,657	89,657	97,001
	2021	0	187,876	187,876	

1 Compensation or remuneration that is related to the former members' activity on the BoD or GEB or that is not at market conditions. 2 Swiss franc and US dollar amounts disclosed represent local currency amounts translated at the relevant year-end closing exchange rate. 3 Includes benefit payments in 2022 and 2021 to two former GEB members.

Provisions of the Articles of Association related to compensation

Swiss say-on-pay provisions give shareholders of companies listed in Switzerland significant influence over board and management compensation. At UBS, this is achieved by means of an annual binding say-on-pay vote in accordance with the following provisions of the AoA.

Say on pay

In line with article 43 of the AoA, the General Meeting approves proposals from the BoD in relation to:

a) the maximum aggregate amount of compensation of the BoD for the period until the next AGM;

b) the maximum aggregate amount of fixed compensation of the GEB for the following financial year; and

c) the aggregate amount of variable compensation of the GEB for the preceding financial year.

The BoD may submit for approval by the General Meeting deviating or additional proposals relating to the same or different periods. If the General Meeting does not approve a proposal from the BoD, the BoD will determine, taking into account all relevant factors, the respective (maximum) aggregate amount or (maximum) partial amounts and submit the amount(s) so determined for approval by the General Meeting. UBS Group AG or companies controlled by it may pay or grant compensation prior to approval by the General Meeting, subject to subsequent approval.

Principles of compensation

In line with articles 45 and 46 of the AoA, compensation of the members of the BoD includes base remuneration and may include other compensation elements and benefits. Compensation of the members of the BoD is intended to recognize the responsibility and governance nature of their role, to attract and retain qualified individuals, and to ensure alignment with shareholders' interests.

Compensation of the members of the GEB includes fixed and variable compensation elements. Fixed compensation includes the base salary and may include other compensation elements and benefits. Variable compensation elements are governed by financial and non-financial performance measures that take into account the performance of UBS Group AG and / or parts thereof, targets in relation to the market, other companies or comparable benchmarks, short- and long-term strategic objectives, and / or individual targets. The BoD or, where delegated to it, the Compensation Committee, determines the respective performance measures, the overall and individual performance targets, and their achievement. The BoD or, where delegated to it, the Compensation Committee, aims to ensure alignment with sustainable performance and appropriate risk-taking through adequate deferrals, forfeiture conditions, caps on compensation, harmful acts provisions and similar means with regard to parts of or all of the compensation. Parts of variable compensation are subject to a multi-year vesting period.

Additional amount for GEB members appointed after the vote on the aggregate amount of compensation by the AGM

In line with article 46 of the AoA of UBS Group AG, if the maximum aggregate amount of compensation already approved by the General Meeting is not sufficient to also cover the compensation of a person that becomes a member of or is being promoted within the GEB after the General Meeting has approved the compensation, UBS Group AG, or companies controlled by it, is authorized to pay or grant each such GEB member a supplementary amount during the compensation period(s) already approved. The aggregate pool for such supplementary amounts per compensation period cannot exceed 40% of the average of total annual compensation paid or granted to the GEB during the previous three years.

› **Refer to *ubs.com/governance* for more information**

Ernst & Young Ltd
Aeschengraben 27
P.O. Box
CH-4002 Basel

Phone: +41 58 286 86 86
www.ey.com/ch

To the General Meeting of
UBS Group AG, Zurich

Basel, 3 March 2023

Opinion

We have audited the Compensation Report of UBS Group AG (the Company) for the year ended 31 December 2022. The audit was limited to the information on remuneration, loans and advances pursuant to Art. 14-16 of the Ordinance against Excessive Remuneration in Listed Companies Limited by Shares (Verordnung gegen übermässige Vergütungen bei börsenkotierten Aktiengesellschaften, VegüV) in the tables marked "audited" of the Compensation Report: Approved fixed compensation, Total compensation for GEB Members, Remuneration details and additional information for BoD members, Loans granted to GEB members, Loans granted to BoD members and Compensation paid to former BoD and GEB members.

Basis for opinion

We conducted our audit in accordance with Swiss law and Swiss Standards on Auditing (SA-CH). Our responsibilities under those provisions and standards are further described in the "Auditor's responsibilities for the audit of the Compensation Report" section of our report. We are independent of the Company in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion

Other information

The Board of Directors is responsible for the other information. The other information comprises the information included in the annual report, but does not include the tables referenced above in the Compensation Report, the consolidated financial statements, the stand-alone financial statements and our auditor's reports thereon.

Our opinion on the Compensation Report does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the Compensation Report, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the audited financial information in the Compensation Report, or our knowledge obtained in the audit or otherwise appears to be materially misstated.
If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Board of Directors' responsibilities for the Compensation Report

The Board of Directors is responsible for the preparation of a Compensation Report in accordance with the provisions of Swiss law and the Company's articles of incorporation, and for such internal control as the Board of Directors determines is necessary to enable the preparation of a Compensation Report that is free from material misstatement, whether due to fraud or error. The Board of Directors is also responsible for designing the compensation system and defining individual compensation packages.

Auditor's responsibilities for the audit of the Compensation Report

Our objectives are to obtain reasonable assurance about whether the information on remuneration, loans and advances pursuant to Art. 14-16 VegüV is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law and SA-CH will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this Compensation Report.

As part of an audit in accordance with Swiss law and SA-CH, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement in the Compensation Report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.

We communicate with the Board of Directors or its relevant committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

Ernst & Young Ltd

Maurice McCormick
Licensed audit expert
(Auditor in charge)

Eveline Hunziker
Licensed audit expert

Financial statements

Consolidated financial statements

Table of contents

Management's report on internal control over financial reporting

Management's responsibility for internal control over financial reporting

The Board of Directors and management of UBS Group AG (UBS) are responsible for establishing and maintaining adequate internal control over financial reporting. UBS's internal control over financial reporting is designed to provide reasonable assurance regarding the preparation and fair presentation of published financial statements in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB).

UBS's internal control over financial reporting includes those policies and procedures that:
- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation and fair presentation of financial statements, and that receipts and expenditures of the company are being made only in accordance with authorizations of UBS management; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management's assessment of internal control over financial reporting as of 31 December 2022

UBS management has assessed the effectiveness of UBS's internal control over financial reporting as of 31 December 2022 based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control – Integrated Framework (2013 Framework). Based on this assessment, management believes that, as of 31 December 2022, UBS's internal control over financial reporting was effective.

The effectiveness of UBS's internal control over financial reporting as of 31 December 2022 has been audited by Ernst & Young Ltd, UBS's independent registered public accounting firm, as stated in their ***Report of the independent registered public accounting firm on internal control over financial reporting,*** which expresses an unqualified opinion on the effectiveness of UBS's internal control over financial reporting as of 31 December 2022.

Reports of the statutory auditor / independent registered public accounting firm

The accompanying reports of the independent registered public accounting firm on the consolidated financial statements ***Report of the independent registered public accounting firm on the consolidated financial statements*** and internal control over financial reporting ***Report of the independent registered public accounting firm on internal control over financial reporting*** of UBS Group AG are included in our filing on 6 March 2023 with the Securities and Exchange Commission on Form 20-F pursuant to US reporting obligations.

The accompanying statutory auditor's report on the audit of the consolidated financial statements of UBS Group AG ***Statutory auditor's report on the audit of the consolidated financial statements,*** in addition to the aforementioned reports, is included in our Annual Report 2022 available on our website and filed on 6 March 2023 with all other relevant non-US exchanges.

Ernst & Young Ltd
Aeschengraben 27
P.O. Box
4002 Basel

Phone: +41 58 286 86 86
www.ey.com/ch

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of UBS Group AG

Opinion on Internal Control over Financial Reporting

We have audited UBS Group AG and subsidiaries' internal control over financial reporting as of 31 December 2022, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, UBS Group AG and subsidiaries ("the Group") maintained, in all material respects, effective internal control over financial reporting as of 31 December 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Group as of 31 December 2022 and 2021, the related consolidated income statements, statements of comprehensive income, statements of changes in equity and statements of cash flows for each of the three years in the period ended 31 December 2022, and the related notes and our report dated 3 March 2023 expressed an unqualified opinion thereon.

Basis for Opinion

The Group's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Group's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Group in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Ernst & Young Ltd

Ernst & Young Ltd
Basel, 3 March 2023

Building a better working world

Ernst & Young Ltd
Aeschengraben 27
P.O. Box
4002 Basel

Phone: +41 58 286 86 86
www.ey.com/ch

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of UBS Group AG

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of UBS Group AG and subsidiaries ("the Group") as of 31 December 2022 and 2021, the related consolidated income statements, statements of comprehensive income, statements of changes in equity and statements of cash flows for each of the three years in the period ended 31 December 2022, and the related notes to the consolidated financial statements, including the information identified as "audited" as described in Note 1 (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Group at 31 December 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended 31 December 2022, in conformity with the International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Group's internal control over financial reporting as of 31 December 2021, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated 3 March 2022 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Group's Board of Directors. Our responsibility is to express an opinion on the Group's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Group in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Valuation of complex or illiquid instruments at fair value

Description of the Matter

At 31 December 2022, as explained in Notes 1 and 20 to the consolidated financial statements, the Group held financial assets and liabilities measured at fair value of USD 342,166 million and USD 333,381 million, including financial instruments that did not trade in active markets. These instruments are reported within the following accounts: financial assets and liabilities at fair value held for trading, derivative financial instruments, financial assets at fair value not held for trading, debt issued designated at fair value, and other financial liabilities designated at fair value. In determining the fair value of these financial instruments, the Group used valuation techniques, modelling assumptions, and estimates of unobservable market inputs which required significant management judgment.

Auditing management's judgments and assumptions used in the estimation of the fair value of these instruments was complex due to the highly judgmental nature of valuation techniques, key modelling assumptions and significant unobservable inputs. Auditing the valuation of complex or illiquid instruments at fair value included consideration of any incremental risks arising from the impact of current macroeconomic influences on valuation techniques and inputs, such as geopolitics, inflation, and the ongoing COVID-19 pandemic. The valuation techniques that required especially complex judgement were comprised of discounted cash flow and earnings-based valuation techniques. Highly judgmental modelling assumptions result from a range of different models or model calibrations used by market participants. Valuation inputs which were particularly complex and subjective included those with a limited degree of observability and the associated extrapolation, interpolation or calibration of curves using limited and proxy data points. Examples of such inputs included unobservable credit spreads and bond prices, volatility, and correlation.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of the controls over management's financial instruments valuation processes, including controls over market data inputs, model and methodology governance, and valuation adjustments.

We tested the valuation techniques, models and methodologies, and the inputs used in those models, as outlined above, by performing an independent revaluation of certain complex or illiquid financial assets and liabilities with the support of specialists. We used independent models and inputs, and compared inputs to available market data among other procedures. We also independently challenged key judgments in relation to a sample of fair value adjustments.

We also assessed management's disclosures regarding fair value measurement (within Notes 1 and 20 to the consolidated financial statements).

Recognition of deferred tax assets

Description of the Matter

At 31 December 2022, the Group's deferred tax assets ("DTA") were USD 9,389 million (see Note 8 to the consolidated financial statements). DTAs are recognized to the extent it is probable that taxable profits will be available, against which, the applicable deductible temporary differences or the carryforward of unused tax losses within the loss carryforward period can be utilized. There is significant judgment exercised when estimating future taxable income that is not based on the reversal of taxable temporary differences. Management's estimate of future taxable profits is based on its strategic plan that is sensitive to the assumptions made in estimating future taxable income.

Auditing management's assessment of the recognition of the Group's DTAs was complex due to the highly judgmental nature of estimating future taxable profits over the life of underlying tax loss carryforwards. Estimating future profitability is inherently subjective as it is sensitive to future economic, market and other conditions, which are difficult to predict, such as the impact of geopolitics, inflation, interest rates, and the ongoing COVID-19 pandemic. Specifically, some of the more subjective key macroeconomic assumptions used included gross domestic product growth rates, equity market performance, and interest rate expectations.

How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design, and tested the operating effectiveness of management's controls over DTA valuation, which included the assumptions used in developing the strategic plans and estimating future taxable income. We assessed the completeness and accuracy of the data used for the estimations of future taxable income. This included recalculating the outputs of models applied to the recognition process for DTAs. We involved specialists to assist in assessing the key economic assumptions embedded in the strategic plans. We compared key assumptions used to forecast future taxable income to externally available historical and prospective data and assumptions, and assessed the sensitivity of the outcomes using reasonably possible changes in assumptions. We also assessed management's disclosure regarding recognized and unrecognized deferred tax assets (within Note 8 to the consolidated financial statements).

Expected credit losses

Description of the Matter	At 31 December 2022, the Group's allowances and provisions for expected credit losses ("ECL") were USD 1,091 million. As explained in Notes 1, 9 and 19 to the consolidated financial statements, ECL is recognized for financial assets measured at amortized cost, financial assets measured at fair value through other comprehensive income, fee and lease receivables, financial guarantees and irrevocable loan commitments. ECL is also recognized on the undrawn portion of revolving revocable credit lines, which include the Group's credit card limits and master credit facilities. The allowances and provisions for ECL consists of exposures that are in default which are individually evaluated for impairment (stage 3), as well as losses inherent in the loan portfolio that are not specifically identified (stage 1 and stage 2). Management's ECL estimates represent the difference between contractual cash flows and those the Group expects to receive, discounted at the effective interest rate. The method used to calculate ECL is based on a combination of the following principal factors: probability of default ("PD"), loss given default ("LGD") and exposure at default ("EAD").

Auditing management's estimate of the allowances and provisions for ECL was complex due to the highly judgmental nature of forward-looking economic scenarios that form the basis of the ECL calculation, their probability weightings, and the credit risk models used to estimate stage 1 and stage 2 ECL. The geopolitical tensions and macroeconomic developments during 2022, such as the Russian invasion into Ukraine, US/China developments, inflation, including emerging stagflation risks and monetary policy challenges, and continued restrictions in certain locations due to the ongoing COVID-19 pandemic contribute to further uncertainty, and as a consequence additional complexity in estimating ECL. As a result, the ECL estimation requires higher management judgement, specifically within the following two areas: (i) scenario selection, including assumptions about the scenario severity, the possible geopolitical developments and macroeconomic and market developments, and the number of scenarios necessary to sufficiently cover the bandwidth of potential outcomes, as well as related scenario weights and post-model adjustments; and, (ii) credit risk models, since the output from historic data based models may not be indicative of current or future conditions.

Additionally, auditing the measurement of individual ECL for stage 3 was complex due to the high degree of judgment involved in management's process for estimating ECL based on assumptions. These assumptions take into account expected future cash flows from collateral and other credit enhancements or expected payouts from bankruptcy proceedings for unsecured claims and, where applicable, time to realization of collateral and the seniority of claims.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of management's controls over the ECL estimate, including management's choice of forward-looking economic scenarios used to measure ECL and the probability weighting assigned to such scenarios. We evaluated management's methodologies and governance controls for developing and monitoring the economic scenarios used and the probability weightings assigned to them, and related post-model adjustment. Supported by specialists, we assessed the key macroeconomic variables used in the forward-looking scenarios, such as real gross domestic product growth, unemployment rate, interest rates and house price indices, and evaluated the modelled correlation and translation of those macroeconomic factors to the ECL estimate. We further assessed the appropriateness of the post-model adjustments by considering management's governance process, assumptions used and sensitivity analysis.

We also obtained an understanding, evaluated the design and tested the operating effectiveness of controls over credit risk models used in the ECL estimate, including controls over the completeness and accuracy of model input data, calculation logic, and output data used in the overall ECL calculation. With the support of specialists, on a sample basis, we performed an evaluation of management's models and tested the model outcomes by inspecting model documentation, reperforming model calculations, and comparing data used as inputs to management's forecast to external sources, among other procedures.

For the measurement of stage 3, we obtained an understanding, evaluated the design and tested the operating effectiveness of controls over management's process, including an evaluation of the assumptions used by management regarding the future cash flows from debtors' continuing operations and/or the liquidation of collateral. Supported by specialists in certain areas, we additionally tested collateral valuation, cash flow assumptions and exit strategies by performing inquiries of management, inspecting underlying documents, such as loan contracts, financial statements, covenants, budgets and business plans, and by re-performing discounted cash flow calculations among other procedures, on a sample basis.

We also assessed management's disclosures regarding financial assets at amortized cost and other positions in scope of expected credit loss measurement (within Notes 1, 9 and 19 to the consolidated financial statements).

Ernst & Young Ltd

Ernst & Young Ltd

We have served as the Group's auditor since 1998.

Basel, Switzerland

3 March 2023

Ernst & Young Ltd
Aeschengraben 27
P.O. Box
CH-4002 Basel

Phone: +41 58 286 86 86
www.ey.com/ch

To the General Meeting of

UBS Group AG, Zurich

Basel, 3 March 2023

Statutory auditor's report on the audit of the consolidated financial statements

Opinion

We have audited the consolidated financial statements of UBS Group AG and its subsidiaries ("the Group"), which comprise the consolidated balance sheets as of 31 December 2022 and 31 December 2021, and the consolidated income statements, statements of comprehensive income, statements of changes in equity and statements of cash flows for each of the three years in the period ended 31 December 2022, and the related notes to the consolidated financial statements, including the information identified as "audited" as described in Note 1 (collectively referred to as the "consolidated financial statements").

In our opinion, the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2022 and 31 December 2021, and the consolidated financial performance and its consolidated cash flows for each of the three years in the period ended 31 December 2022 in accordance with International Financial Reporting Standards (IFRS) and comply with Swiss law.

Basis for opinion

We conducted our audit in accordance with Swiss law, International Standards on Auditing (ISAs) and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report.

We are independent of the Group in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession, as well as the International Code of Ethics for Professional Accountants (including International Independence Standards) of the International Ethics Standards Board for Accountants (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

Valuation of complex or illiquid instruments at fair value

Area of focus

At 31 December 2022, as explained in Notes 1 and 20 to the consolidated financial statements, the Group held financial assets and liabilities measured at fair value of USD 342,166 million and USD 333,381 million, including financial instruments that did not trade in active markets. These instruments are reported within the following accounts: financial assets and liabilities at fair value held for trading, derivative financial instruments, financial assets at fair value not held for trading, debt issued designated at fair value, and other financial liabilities designated at fair value. In determining the fair value of these financial instruments, the Group used valuation techniques, modelling assumptions, and estimates of unobservable market inputs which required significant management judgment.

Auditing management's judgments and assumptions used in the estimation of the fair value of these instruments was complex due to the highly judgmental nature of valuation techniques, key modelling assumptions and significant unobservable inputs. Auditing the valuation of complex or illiquid instruments at fair value included consideration of any incremental risks arising from the impact of current macroeconomic influences on valuation techniques and inputs, such as geopolitics, inflation, and the ongoing COVID-19 pandemic. The valuation techniques that required especially complex judgement were comprised of discounted cash flow and earnings-based valuation techniques. Highly judgmental modelling assumptions result from a range of different models or model calibrations used by market participants. Valuation inputs which were particularly complex and subjective included those with a limited degree of observability and the associated extrapolation, interpolation or calibration of curves using limited and proxy data points. Examples of such inputs included unobservable credit spreads and bond prices, volatility, and correlation.

Our audit response

We obtained an understanding, evaluated the design and tested the operating effectiveness of the controls over management's financial instruments valuation processes, including controls over market data inputs, model and methodology governance, and valuation adjustments.

We tested the valuation techniques, models and methodologies, and the inputs used in those models, as outlined above, by performing an independent revaluation of certain complex or illiquid financial assets and liabilities with the support of specialists. We used independent models and inputs, and compared inputs to available market data among other procedures. We also independently challenged key judgments in relation to a sample of fair value adjustments.

We also assessed management's disclosures regarding fair value measurement (within Notes 1 and 20 to the consolidated financial statements).

Recognition of deferred tax assets

Area of focus

At 31 December 2022, the Group's deferred tax assets ("DTA") were USD 9,389 million (see Note 8 to the consolidated financial statements). DTAs are recognized to the extent it is probable that taxable profits will be available, against which, the applicable deductible temporary differences or the carryforward of unused tax losses within the loss carryforward period can be utilized. There is significant judgment exercised when estimating future taxable income that is not based on the reversal of taxable temporary differences.

Management's estimate of future taxable profits is based on its strategic plan that is sensitive to the assumptions made in estimating future taxable income.

Auditing management's assessment of the recognition of the Group's DTAs was complex due to the highly judgmental nature of estimating future taxable profits over the life of underlying tax loss carryforwards. Estimating future profitability is inherently subjective as it is sensitive to future economic, market and other conditions, which are difficult to predict, such as the impact of geopolitics, inflation, interest rates, and the ongoing COVID-19 pandemic. Specifically, some of the more subjective key macro-economic assumptions used included gross domestic product growth rates, equity market performance, and interest rate expectations.

Our audit response

We obtained an understanding, evaluated the design, and tested the operating effectiveness of management's controls over DTA valuation, which included the assumptions used in developing the strategic plans and estimating future taxable income.

We assessed the completeness and accuracy of the data used for the estimations of future taxable income. This included recalculating the outputs of models applied to the recognition process for DTAs.

We involved specialists to assist in assessing the key economic assumptions embedded in the strategic plans. We compared key assumptions used to forecast future taxable income to externally available historical and prospective data and assumptions, and assessed the sensitivity of the outcomes using reasonably possible changes in assumptions.

We also assessed management's disclosure regarding recognized and unrecognized deferred tax assets (within Note 8 to the consolidated financial statements).

Expected credit losses

Area of focus

At 31 December 2022, the Group's allowances and provisions for expected credit losses ("ECL") were USD 1,091 million. As explained in Notes 1, 9 and 19 to the consolidated financial statements, ECL is recognized for financial assets measured at amortized cost, financial assets measured at fair value through other comprehensive income, fee and lease receivables, financial guarantees and irrevocable loan commitments. ECL is also recognized on the undrawn portion of revolving revocable credit lines, which include the Group's credit card limits and master credit facilities. The allowances and provisions for ECL consists of exposures that are in default which are individually evaluated for impairment (stage 3), as well as losses inherent in the loan portfolio that are not specifically identified (stage 1 and stage 2). Management's ECL estimates represent the difference between contractual cash flows and those the Group expects to receive, discounted at the effective interest rate. The method used to calculate ECL is based on a combination of the following principal factors: probability of default ("PD"), loss given default ("LGD") and exposure at default ("EAD").

Auditing management's estimate of the allowances and provisions for ECL was complex due to the highly judgmental nature of forward-looking economic scenarios that form the basis of the ECL calculation, their probability weightings, and the credit risk models used to estimate stage 1 and stage 2 ECL. The geopolitical tensions and macroeconomic developments during 2022, such as the Russian invasion into Ukraine, US/China developments, inflation, including emerging stagflation risks and monetary policy challenges, and continued restrictions in certain locations due to the ongoing COVID-19 pandemic contribute to further uncertainty, and as a consequence additional complexity in estimating ECL.As a result, the ECL estimation requires higher management judgement, specifically within the following two areas: (i) scenario selection, including assumptions about the scenario severity, the possible geopolitical developments and macroeconomic and market developments, and the number of scenarios necessary to sufficiently cover the bandwidth of potential outcomes, as well as related scenario weights and post-model adjustments; and, (ii) credit risk models, since the output from historic data based models may not be indicative of current or future conditions.

Additionally, auditing the measurement of individual ECL for stage 3 was complex due to the high degree of judgment involved in management's process for estimating ECL based on assumptions. These assumptions take into account expected future cash flows from collateral and other credit enhancements or expected payouts from bankruptcy proceedings for unsecured claims and, where applicable, time to realization of collateral and the seniority of claims.

Our audit response

We obtained an understanding, evaluated the design and tested the operating effectiveness of management's controls over the ECL estimate, including management's choice of forward-looking economic scenarios used to measure ECL and the probability weighting assigned to such scenarios. We evaluated management's methodologies and governance controls for developing and monitoring the economic scenarios used and the probability weightings assigned to them, and related post-model adjustment. Supported by specialists, we assessed the key macroeconomic variables used in the forward-looking scenarios, such as real gross domestic product growth, unemployment rate, interest rates and house price indices, and evaluated the modelled correlation and translation of those macroeconomic factors to the ECL estimate. We further assessed the appropriateness of the post-model adjustments by considering management's governance process, assumptions used and sensitivity analysis.

We also obtained an understanding, evaluated the design and tested the operating effectiveness of controls over credit risk models used in the ECL estimate, including controls over the completeness and accuracy of model input data, calculation logic, and output data used in the overall ECL calculation. With the support of specialists, on a sample basis, we performed an evaluation of management's models and tested the model outcomes by inspecting model documentation, reperforming model calculations, and comparing data used as inputs to management's forecast to external sources, among other procedures.

For the measurement of stage 3, we obtained an understanding, evaluated the design and tested the operating effectiveness of controls over management's process, including an evaluation of the assumptions used by management regarding the future cash flows from debtors' continuing operations and/or the liquidation of collateral. Supported by specialists in certain areas, we additionally tested collateral valuation, cash flow assumptions and exit strategies by performing inquiries of management, inspecting underlying documents, such as loan contracts, financial statements, covenants, budgets and business plans, and by re-performing discounted cash flow calculations among other procedures, on a sample basis.

We also assessed management's disclosures regarding financial assets at amortized cost and other positions in scope of expected credit loss measurement (within Notes 1, 9 and 19 to the consolidated financial statements).

Other information in the annual report

The Board of Directors is responsible for the other information in the annual report. The other information comprises all information included in the annual report, but does not include the consolidated financial statements, the stand-alone financial statements of UBS Group AG, the compensation report[1], and our auditor's reports thereon.

Our opinions on the consolidated financial statements, the standalone financial statements of UBS Group AG and the compensation report[1] do not cover the other information in the annual report and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information in the annual report and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibility of the Board of Directors for the consolidated financial statements

The Board of Directors is responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRS and the provisions of Swiss law, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law, ISAs and Swiss Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

A further description of our responsibilities for the audit of the consolidated financial statements is located at the website of EXPERTsuisse: http://www.expertsuisse.ch/en/audit-report-for-public-companies. This description forms part of our auditor's report.

[1] Specifically, the following tables in the compensation report: "Share ownership/entitlements of GEB members," "Total of all vested and unvested shares of GEB members," "Number of shares of BoD members," and "Total of all blocked and unblocked shares of BoD Members."

Building a better working world

Report on other legal and regulatory requirements

In accordance with article 728a para. 1 item 3 CO and the Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

Ernst & Young Ltd

Maurice McCormick Licensed audit expert (Auditor in charge)	Robert E. Jacob, Jr. Certified Public Accountant (U.S.)

UBS Group AG consolidated financial statements

Primary financial statements and share information

Audited |

Income statement

		For the year ended		
USD m	Note	31.12.22	31.12.21	31.12.20
Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income	3	11,782	8,533	8,810
Interest expense from financial instruments measured at amortized cost	3	(6,564)	(3,259)	(4,247)
Net interest income from financial instruments measured at fair value through profit or loss and other	3	1,403	1,431	1,299
Net interest income	3	6,621	6,705	5,862
Other net income from financial instruments measured at fair value through profit or loss	3	7,517	5,850	6,960
Fee and commission income	4	20,789	24,372	20,961
Fee and commission expense	4	(1,823)	(1,985)	(1,775)
Net fee and commission income	4	18,966	22,387	19,186
Other income	5	1,459	452	1,076
Total revenues		34,563	35,393	33,084
Credit loss expense / (release)	19	29	(148)	694
Personnel expenses	6	17,680	18,387	17,224
General and administrative expenses	7	5,189	5,553	4,885
Depreciation, amortization and impairment of non-financial assets	11, 12	2,061	2,118	2,126
Operating expenses		24,930	26,058	24,235
Operating profit / (loss) before tax		9,604	9,484	8,155
Tax expense / (benefit)	8	1,942	1,998	1,583
Net profit / (loss)		7,661	7,486	6,572
Net profit / (loss) attributable to non-controlling interests		32	29	15
Net profit / (loss) attributable to shareholders		7,630	7,457	6,557

Earnings per share (USD)

Basic	2.34	2.14	1.83
Diluted	2.25	2.06	1.77

Statement of comprehensive income

USD m	Note	For the year ended 31.12.22	31.12.21	31.12.20
Comprehensive income attributable to shareholders				
Net profit / (loss)		7,630	7,457	6,557
Other comprehensive income that may be reclassified to the income statement				
Foreign currency translation				
Foreign currency translation movements related to net assets of foreign operations, before tax		(894)	(1,076)	2,103
Effective portion of changes in fair value of hedging instruments designated as net investment hedges, before tax		337	498	(936)
Foreign currency translation differences on foreign operations reclassified to the income statement		32	(2)	(7)
Effective portion of changes in fair value of hedging instruments designated as net investment hedges reclassified to the income statement		(4)	10	2
Income tax relating to foreign currency translations, including the effect of net investment hedges		4	35	(67)
Subtotal foreign currency translation, net of tax		(525)	(535)	1,095
Financial assets measured at fair value through other comprehensive income				
Net unrealized gains / (losses), before tax		(440)	(203)	223
Net realized (gains) / losses reclassified to the income statement from equity		1	(9)	(40)
Reclassification of financial assets to Other financial assets measured at amortized cost[1]		449		
Income tax relating to net unrealized gains / (losses)		(3)	55	(48)
Subtotal financial assets measured at fair value through other comprehensive income, net of tax		6	(157)	136
Cash flow hedges of interest rate risk	25			
Effective portion of changes in fair value of derivative instruments designated as cash flow hedges, before tax		(5,758)	(992)	2,012
Net (gains) / losses reclassified to the income statement from equity		(159)	(1,073)	(770)
Income tax relating to cash flow hedges		1,124	390	(231)
Subtotal cash flow hedges, net of tax		(4,793)[2]	(1,675)	1,011
Cost of hedging	25			
Cost of hedging, before tax		45	(32)	(13)
Income tax relating to cost of hedging		0	6	0
Subtotal cost of hedging, net of tax		45	(26)	(13)
Total other comprehensive income that may be reclassified to the income statement, net of tax		(5,267)	(2,393)	2,230
Other comprehensive income that will not be reclassified to the income statement				
Defined benefit plans	26			
Gains / (losses) on defined benefit plans, before tax		(73)	2	(327)
Income tax relating to defined benefit plans		63	(7)	109
Subtotal defined benefit plans, net of tax		(10)	(5)	(218)
Own credit on financial liabilities designated at fair value	20			
Gains / (losses) from own credit on financial liabilities designated at fair value, before tax		867	46	(293)
Income tax relating to own credit on financial liabilities designated at fair value		(71)	0	0
Subtotal own credit on financial liabilities designated at fair value, net of tax		796	46	(293)
Total other comprehensive income that will not be reclassified to the income statement, net of tax		786	42	(511)
Total other comprehensive income		(4,481)	(2,351)	1,719
Total comprehensive income attributable to shareholders		3,149	5,106	8,276
Comprehensive income attributable to non-controlling interests				
Net profit / (loss)		32	29	15
Total other comprehensive income that will not be reclassified to the income statement, net of tax		(14)	(16)	21
Total comprehensive income attributable to non-controlling interests		18	13	36
Total comprehensive income				
Net profit / (loss)		7,661	7,486	6,572
Other comprehensive income		(4,494)	(2,367)	1,740
of which: other comprehensive income that may be reclassified to the income statement		*(5,267)*	*(2,393)*	*2,230*
of which: other comprehensive income that will not be reclassified to the income statement		*772*	*26*	*(490)*
Total comprehensive income		3,167	5,119	8,312

1 Effective 1 April 2022, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost. Refer to Note 1b for more information. 2 Mainly reflects net unrealized losses on US dollar hedging derivatives resulting from significant increases in the relevant US dollar long-term interest rates.

Balance sheet

USD m	Note	31.12.22	31.12.21
Assets			
Cash and balances at central banks		169,445	192,817
Loans and advances to banks	9	14,792	15,480
Receivables from securities financing transactions measured at amortized cost	9, 21	67,814	75,012
Cash collateral receivables on derivative instruments	9, 21	35,032	30,514
Loans and advances to customers	9	387,220	397,761
Other financial assets measured at amortized cost	9, 13a	53,264	26,209
Total financial assets measured at amortized cost		727,568	737,794
Financial assets at fair value held for trading	20	107,866	130,821
of which: assets pledged as collateral that may be sold or repledged by counterparties		*36,742*	*43,397*
Derivative financial instruments	10, 20, 21	150,108	118,142
Brokerage receivables	20	17,576	21,839
Financial assets at fair value not held for trading	20	59,796	60,080
Total financial assets measured at fair value through profit or loss		335,347	330,882
Financial assets measured at fair value through other comprehensive income	19, 20	2,239	8,844
Investments in associates	28b	1,101	1,243
Property, equipment and software	11	12,288	12,888
Goodwill and intangible assets	12	6,267	6,378
Deferred tax assets	8	9,389	8,876
Other non-financial assets	13b	10,166	10,277
Total assets		1,104,364	1,117,182
Liabilities			
Amounts due to banks		11,596	13,101
Payables from securities financing transactions measured at amortized cost	21	4,202	5,533
Cash collateral payables on derivative instruments	21	36,436	31,798
Customer deposits	14	525,051	542,007
Debt issued measured at amortized cost	16	114,621	139,155
Other financial liabilities measured at amortized cost	18a	9,575	9,001
Total financial liabilities measured at amortized cost		701,481	740,595
Financial liabilities at fair value held for trading	20	29,515	31,688
Derivative financial instruments	10, 20, 21	154,906	121,309
Brokerage payables designated at fair value	20	45,085	44,045
Debt issued designated at fair value	15, 20	73,638	73,799
Other financial liabilities designated at fair value	18b, 20	30,237	30,074
Total financial liabilities measured at fair value through profit or loss		333,381	300,916
Provisions	17a	3,243	3,518
Other non-financial liabilities	18c	9,040	11,151
Total liabilities		1,047,146	1,056,180
Equity			
Share capital		304	322
Share premium		13,546	15,928
Treasury shares		(6,874)	(4,675)
Retained earnings		50,004	43,851
Other comprehensive income recognized directly in equity, net of tax		(103)	5,236
Equity attributable to shareholders		56,876	60,662
Equity attributable to non-controlling interests		342	340
Total equity		57,218	61,002
Total liabilities and equity		1,104,364	1,117,182

Statement of changes in equity

USD m	Share capital	Share premium	Treasury shares	Retained earnings
Balance as of 31 December 2019	**338**	**18,064**	**(3,326)**	**34,122**
Acquisition of treasury shares			(1,584)[2]	
Delivery of treasury shares under share-based compensation plans		(628)	719	
Other disposal of treasury shares		(11)	123[2]	
Share-based compensation expensed in the income statement		691		
Tax (expense) / benefit		18		
Dividends		(1,304)[3]		(1,304)[3]
Translation effects recognized directly in retained earnings				(49)
Share of changes in retained earnings of associates and joint ventures				(40)
New consolidations / (deconsolidations) and other increases / (decreases)[4]		(76)		
Total comprehensive income for the year				6,046
of which: net profit / (loss)				*6,557*
of which: OCI, net of tax				*(511)*
Balance as of 31 December 2020	**338**	**16,753**	**(4,068)**	**38,776**
Acquisition of treasury shares			(3,521)[2]	
Delivery of treasury shares under share-based compensation plans		(675)	789	
Other disposal of treasury shares		7	81[2]	
Cancellation of treasury shares related to the 2018–2021 share repurchase program	(16)	(236)	2,044	(1,792)
Share-based compensation expensed in the income statement		643		
Tax (expense) / benefit		(88)		
Dividends		(651)[3]		(651)[3]
Equity classified as obligation to purchase own shares		(7)		
Translation effects recognized directly in retained earnings				18
Share of changes in retained earnings of associates and joint ventures				1
New consolidations / (deconsolidations) and other increases / (decreases)[5]		182		
Total comprehensive income for the year				7,499
of which: net profit / (loss)				*7,457*
of which: OCI, net of tax				*42*
Balance as of 31 December 2021	**322**	**15,928**	**(4,675)**	**43,851**
Acquisition of treasury shares			(6,262)[2]	
Delivery of treasury shares under share-based compensation plans		(763)	879	
Other disposal of treasury shares		(1)	164[2]	
Cancellation of treasury shares related to the 2021 share repurchase program[6]	(18)	(1,502)	3,022	(1,502)
Share-based compensation expensed in the income statement		716		
Tax (expense) / benefit		13		
Dividends		(834)[3]		(834)[3]
Equity classified as obligation to purchase own shares		(15)		
Translation effects recognized directly in retained earnings				69
Share of changes in retained earnings of associates and joint ventures				0
New consolidations / (deconsolidations) and other increases / (decreases)		4		3
Total comprehensive income for the year				8,415
of which: net profit / (loss)				*7,630*
of which: OCI, net of tax				*786*
Balance as of 31 December 2022	304	13,546	(6,874)	50,004

1 Excludes other comprehensive income related to defined benefit plans and own credit, which is recorded directly in Retained earnings. 2 Includes treasury shares acquired and disposed of by the Investment Bank in its capacity as a market-maker with regard to UBS Group AG shares and related derivatives, and to hedge certain issued structured debt instruments. These acquisitions and disposals are reported based on the sum of the net monthly movements. 3 Reflects the payment of an ordinary cash dividend of USD 0.50 (2021: USD 0.37, 2020: USD 0.73) per dividend-bearing share. From 2020 onward, Swiss tax law effective 1 January 2020 requires that Switzerland-domiciled companies with shares listed on a stock exchange pay no more than 50% of dividends from capital contribution reserves, with the remainder required to be paid from retained earnings. 4 Mainly relates to the establishment of a banking partnership with Banco do Brasil. In 2020, UBS issued a 49.99% stake in UBS Brasil Serviços in exchange for exclusive access to Banco do Brasil's corporate clients. Upon completion of the transaction in 2020, equity attributable to non-controlling interests increased by USD 115m, with no material effect on equity attributable to shareholders. 5 Includes the effects related to the launch of UBS's operational partnership entity with Sumitomo Mitsui Trust Holdings, Inc. in 2021. 6 Reflects the cancellation of 177,787,273 shares purchased under UBS's 2021 share repurchase program from its inception in 2021 until 18 February 2022, as approved by shareholders at the 2022 Annual General Meeting. For shares repurchased from 2020 onward, Swiss tax law effective 1 January 2020 requires Switzerland-domiciled companies with shares listed on a Swiss stock exchange to reduce capital contribution reserves by at least 50% of the total capital reduction amount exceeding the nominal value upon cancellation of the shares.

Other comprehensive income recognized directly in equity, net of tax[1]	*of which: foreign currency translation*	*of which: financial assets at fair value through OCI*	*of which: cash flow hedges*	Total equity attributable to shareholders	Non-controlling interests	Total equity
5,303	4,028	14	1,260	54,501	174	54,675
				(1,584)		(1,584)
				90		90
				112		112
				691		691
				18		18
				(2,607)	(6)	(2,613)
49		0	49	0		0
				(40)		(40)
65	65			(12)	115	103
2,230	1,095	136	1,011	8,276	36	8,312
				6,557	15	6,572
2,230	1,095	136	1,011	1,719	21	1,740
7,647	5,188	151	2,321	59,445	319	59,765
				(3,521)		(3,521)
				114		114
				88		88
				0		0
				643		643
				(88)		(88)
				(1,301)	(4)	(1,305)
				(7)		(7)
(18)		0	(18)	0		0
				1		1
				182	12	193
(2,393)	(535)	(157)	(1,675)	5,106	13	5,119
				7,457	29	7,486
(2,393)	(535)	(157)	(1,675)	(2,351)	(16)	(2,367)
5,236	4,653	(7)	628	60,662	340	61,002
				(6,262)		(6,262)
				115		115
				163		163
				0		0
				716		716
				13		13
				(1,668)	(9)	(1,677)
				(15)		(15)
(69)		0	(69)	0		0
				0		0
(3)		(3)		4	(7)	(3)
(5,267)	(525)	6	(4,793)	3,149	18	3,167
				7,630	32	7,661
(5,267)	(525)	6	(4,793)	(4,481)	(14)	(4,494)
(103)	4,128	(4)	(4,234)	56,876	342	57,218

Ordinary share capital

As of 31 December 2022, UBS Group AG had 3,524,635,722 issued shares (31 December 2021: 3,702,422,995 shares) with a nominal value of CHF 0.10 each, leading to a share capital of CHF 352,463,572.20. Shares issued decreased by 177,787,273 shares and share capital decreased by USD 18m in 2022, as the shares acquired under the 2021 share repurchase program from its inception in 2021 until 18 February 2022 were canceled by means of a capital reduction, as approved by shareholders at the 2022 Annual General Meeting (the AGM).

Following revisions to Swiss Corporate Law that are effective from 1 January 2023, the Board of Directors (the BoD) will propose at the 2023 AGM that the shareholders approve the conversion of the share capital currency of UBS Group AG from the Swiss franc to the US dollar. This would align the share capital currency with the financial statement presentation currency of UBS Group AG. If the change is approved, the share capital of UBS Group AG will be slightly reduced to a nominal value per share of USD 0.10 (from CHF 0.10 currently), with the amount of the reduction allocated to the capital contribution reserve (presented as *Share premium* in the consolidated financial statements). Total equity reported for UBS Group AG consolidated will not change.

Conditional share capital

As of 31 December 2022, the following conditional share capital was available to UBS Group AG's BoD.
- A maximum of CHF 38,000,000 represented by up to 380,000,000 fully paid registered shares with a nominal value of CHF 0.10 each, to be issued through the voluntary or mandatory exercise of conversion rights and / or warrants granted in connection with the issuance of bonds or similar financial instruments on national or international capital markets. This conditional capital allowance was approved at the Extraordinary General Meeting (the EGM) held on 26 November 2014, having originally been approved at the AGM of UBS AG on 14 April 2010. The BoD has not made use of such allowance.
- A maximum of CHF 12,170,583 represented by 121,705,830 fully paid registered shares with a nominal value of CHF 0.10 each, to be issued upon exercise of employee options and stock appreciation rights issued to employees and members of the management and of the BoD of UBS Group AG and its subsidiaries. This conditional capital allowance was approved by the shareholders at the same EGM in 2014.

Authorized share capital

UBS Group AG had no authorized capital available to issue on 31 December 2022.

Share repurchase programs

In February 2021, UBS initiated a share repurchase program of up to CHF 4bn. Under this program, UBS repurchased 88m shares in 2022 for a total acquisition cost of USD 1,637m (CHF 1,516m).

The 2021 program was concluded on 29 March 2022 and the 177,787,273 shares repurchased under this program from its inception in 2021 until 18 February 2022 for a total acquisition cost of USD 3,022m (CHF 2,775m) were canceled by means of a capital reduction, as approved by shareholders at the 2022 AGM. UBS intends to cancel the remaining 62,548,000 shares purchased under the 2021 program, subject to shareholder approval at the 2023 AGM.

In March 2022, UBS commenced a new two-year share repurchase program of up to USD 6bn. Under this program, UBS repurchased 234m shares in 2022 for a total acquisition cost of USD 3,944m (CHF 3,808m). UBS also intends to cancel the shares purchased under the 2022 program by means of a capital reduction, pending approval by shareholders at a future AGM.

	As of or for the year ended		
	31.12.22	31.12.21	31.12.20
Shares outstanding			
Shares issued			
Balance at the beginning of the year	3,702,422,995	3,859,055,395	3,859,055,395
Shares canceled	(177,787,273)[1]	(156,632,400)[2]	
Balance at the end of the year	3,524,635,722	3,702,422,995	3,859,055,395
Treasury shares			
Balance at the beginning of the year	302,815,328	307,477,002	243,021,296
Acquisitions	359,378,093	214,270,175	128,372,257
Disposals	(67,497,138)	(62,299,449)	(63,916,551)
Cancellation of second trading line treasury shares	(177,787,273)[1]	(156,632,400)[2]	
Balance at the end of the year	416,909,010	302,815,328	307,477,002
Shares outstanding	3,107,726,712	3,399,607,667	3,551,578,393
Basic and diluted earnings (USD m)			
Net profit / (loss) attributable to shareholders for basic EPS	7,630	7,457	6,557
Less: (profit) / loss on own equity derivative contracts	0	0	(1)
Net profit / (loss) attributable to shareholders for diluted EPS	7,630	7,457	6,556
Weighted average shares outstanding			
Weighted average shares outstanding for basic EPS[3]	3,260,938,561	3,482,963,682	3,583,176,189
Effect of dilutive potential shares resulting from notional employee shares, in-the-money options and warrants outstanding[4]	136,531,654	144,277,693	123,852,137
Weighted average shares outstanding for diluted EPS	3,397,470,215	3,627,241,375	3,707,028,326
Earnings per share (USD)			
Basic	2.34	2.14	1.83
Diluted	2.25	2.06	1.77
Potentially dilutive instruments[5]			
Employee share-based compensation awards	4,182,799	5,886,945	2,536,789
Other equity derivative contracts	1,690,247	6,553,051	11,414,728
Total	5,873,046	12,439,996	13,951,517

1 Reflects the cancellation of shares purchased under UBS's 2021 share repurchase program as approved by shareholders at the 2022 Annual General Meeting (AGM). 2 Reflects the cancellation of shares purchased under UBS's 2018–2021 share repurchase program as approved by shareholders at the 2021 AGM. 3 The weighted average shares outstanding for basic EPS are calculated by taking the number of shares at the beginning of the period, adjusted by the number of shares acquired or issued during the period, multiplied by a time-weighted factor for the period outstanding. As a result, balances are affected by the timing of acquisitions and issuances during the period. 4 The weighted average number of shares for notional employee awards with performance conditions reflects all potentially dilutive shares that are expected to vest under the terms of the awards. 5 Reflects potential shares that could dilute basic earnings per share in the future, but were not dilutive for the periods presented.

Statement of cash flows

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Cash flow from / (used in) operating activities			
Net profit / (loss)	7,661	7,486	6,572
Non-cash items included in net profit and other adjustments:			
Depreciation, amortization and impairment of non-financial assets	2,061	2,118	2,126
Credit loss expense / (release)	29	(148)	694
Share of net profits of associates and joint ventures and impairment related to associates	(32)	(105)	(84)
Deferred tax expense / (benefit)	494	434	352
Net loss / (gain) from investing activities	(1,470)	(230)	(698)
Net loss / (gain) from financing activities	(16,587)	100	3,246
Other net adjustments	5,844	3,802	(8,076)
Net change in operating assets and liabilities:			
Loans and advances to banks and amounts due to banks	(1,088)	2,148	3,586
Securities financing transactions measured at amortized cost	4,443	(2,316)	9,588
Cash collateral on derivative instruments	76	(3,312)	(3,487)
Loans and advances to customers and customer deposits	(5,163)	2,365	18,149
Financial assets and liabilities at fair value held for trading and derivative financial instruments	8,006	(10,516)	11,259
Brokerage receivables and payables	6,019	8,115	(5,199)
Financial assets at fair value not held for trading and other financial assets and liabilities	5,678	19,609	320
Provisions and other non-financial assets and liabilities	257	3,010	(387)
Income taxes paid, net of refunds	(1,582)	(1,134)	(1,002)
Net cash flow from / (used in) operating activities	**14,647**	**31,425**	**36,958**
Cash flow from / (used in) investing activities			
Purchase of subsidiaries, associates and intangible assets	(3)	(1)	(46)
Disposal of subsidiaries, associates and intangible assets	1,730[1]	593	674
Purchase of property, equipment and software	(1,643)	(1,841)	(1,854)
Disposal of property, equipment and software	161	295	366
Purchase of financial assets measured at fair value through other comprehensive income	(4,783)	(5,802)	(6,290)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	4,084	5,052	4,530
Net (purchase) / redemption of debt securities measured at amortized cost	(11,993)	(415)	(4,166)
Net cash flow from / (used in) investing activities	**(12,447)**	**(2,119)**	**(6,785)**

Table continues below.

Table continued from above.

USD m	For the year ended 31.12.22	31.12.21	31.12.20
Cash flow from / (used in) financing activities			
Net short-term debt issued / (repaid)	(12,249)	(3,093)	23,845
Net movements in treasury shares and own equity derivative activity	(6,006)	(3,341)	(1,387)
Distributions paid on UBS shares	(1,668)	(1,301)	(2,607)
Issuance of debt designated at fair value and long-term debt measured at amortized cost	79,115	98,272	80,255
Repayment of debt designated at fair value and long-term debt measured at amortized cost	(67,670)	(79,909)	(87,098)
Net cash flows from other financing activities	(617)	(282)	(575)
Net cash flow from / (used in) financing activities	(9,094)	10,345	12,432
Total cash flow			
Cash and cash equivalents at the beginning of the year	207,875	173,531	119,873
Net cash flow from / (used in) operating, investing and financing activities	(6,895)	39,651	42,605
Effects of exchange rate differences on cash and cash equivalents	(5,659)	(5,307)	11,052
Cash and cash equivalents at the end of the year[2]	195,321	207,875	173,531
of which: cash and balances at central banks[3]	*169,363*	*192,706*	*158,088*
of which: loans and advances to banks	*13,450*	*13,942*	*14,028*
of which: money market paper[4]	*12,508*	*1,227*	*1,415*
Additional information			
Net cash flow from / (used in) operating activities includes:			
Interest received in cash	15,718	11,163	11,915
Interest paid in cash	8,198	4,707	6,320
Dividends on equity investments, investment funds and associates received in cash[5]	1,907	2,531	1,901

1 Includes cash proceeds from the sales of: UBS's shareholding in Mitsubishi Corp.-UBS Realty Inc.; UBS's wholly owned subsidiary UBS Swiss Financial Advisers AG; UBS's US alternative investments administration business; and UBS's domestic wealth management business in Spain. Refer to Note 29 for more information. Also includes dividends received from associates. 2 USD 4,253m, USD 3,408m and USD 3,828m of cash and cash equivalents (mainly reflected in Loans and advances to banks) were restricted as of 31 December 2022, 31 December 2021 and 31 December 2020, respectively. Refer to Note 22 for more information. 3 Includes only balances with an original maturity of three months or less. 4 Money market paper is included in the balance sheet under Financial assets at fair value held for trading (31 December 2022: USD 2m; 31 December 2021: USD 20m; 31 December 2020: USD 117m), Financial assets measured at fair value through other comprehensive income (31 December 2022: USD 0m; 31 December 2021: USD 0m; 31 December 2020: USD 178m), Financial assets at fair value not held for trading (31 December 2022: USD 6,048m; 31 December 2021: USD 1,066m; 31 December 2020: USD 536m), and Other financial assets measured at amortized cost (31 December 2022: USD 6,459m; 31 December 2021: USD 141m; 31 December 2020: USD 584m). 5 Includes dividends received from associates reported within Net cash flow from / (used in) investing activities.

Changes in liabilities arising from financing activities

USD m	Debt issued measured at amortized cost	*of which: short-term*[1]	*of which: long-term*[2]	Debt issued designated at fair value	Over-the-counter debt instruments[3]	Total
Balance as of 1 January 2021	139,232	*46,666*	*92,566*	61,243	2,060	202,535
Cash flows	5,070	*(3,093)*	*8,163*	10,076	124	15,270
Non-cash changes	(5,148)	*(475)*	*(4,673)*	2,480	(56)	(2,724)
of which: foreign currency translation	*(3,175)*	*(475)*	*(2,700)*	*(1,617)*	*(65)*	*(4,857)*
of which: fair value changes				*4,097*	*9*	*4,106*
of which: hedge accounting and other effects	*(1,972)*		*(1,972)*			*(1,972)*
Balance as of 31 December 2021	139,155	*43,098*	*96,057*	73,799	2,128	215,082
Cash flows	(14,333)	*(12,249)*	*(2,084)*	13,782	(253)	(804)
Non-cash changes	(10,201)	*(1,173)*	*(9,028)*	(13,944)	(190)	(24,335)
of which: foreign currency translation	*(3,526)*	*(1,173)*	*(2,353)*	*(1,394)*	*(115)*	*(5,035)*
of which: fair value changes				*(12,550)*	*(75)*	*(12,625)*
of which: hedge accounting and other effects	*(6,675)*		*(6,675)*			*(6,675)*
Balance as of 31 December 2022	114,621	*29,676*	*84,945*	73,638	1,684	189,943

1 Debt with an original contractual maturity of less than one year. 2 Debt with an original maturity greater than or equal to one year. The classification of debt issued into short-term and long-term does not consider any early redemption features. 3 Included in balance sheet line Other financial liabilities designated at fair value.

Notes to the UBS Group AG consolidated financial statements

Note 1 Summary of material accounting policies

The following table provides an overview of information included in this Note.

a) Material accounting policies

This Note describes the material accounting policies applied in the preparation of the consolidated financial statements (the Financial Statements) of UBS Group AG and its subsidiaries (UBS or the Group). On 23 February 2023, the Financial Statements were authorized for issue by the Board of Directors (the BoD).

Basis of accounting

The Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (the IASB), and are presented in US dollars (USD).

Disclosures marked as audited in the "Risk, capital, liquidity and funding, and balance sheet" section of this report form an integral part of the Financial Statements. These disclosures relate to requirements under IFRS 7, *Financial Instruments: Disclosures,* and IAS 1, *Presentation of Financial Statements,* and are not repeated in this section.

The accounting policies described in this Note have been applied consistently in all years presented unless otherwise stated in Note 1b.

Critical accounting estimates and judgments

Preparation of these Financial Statements under IFRS requires management to apply judgment and make estimates and assumptions that affect reported amounts of assets, liabilities, income and expenses, and disclosure of contingent assets and liabilities, and may involve significant uncertainty at the time they are made. Such estimates and assumptions are based on the best available information. UBS regularly reassesses such estimates and assumptions, which encompass historical experience, expectations of the future and other pertinent factors, to determine their continuing relevance based on current conditions, updating them as necessary. Changes in those estimates and assumptions may have a significant effect on the Financial Statements. Furthermore, actual results may differ significantly from UBS's estimates, which could result in significant losses to the Group, beyond what was anticipated or provided for.

The following areas contain estimation uncertainty or require critical judgment and have a significant effect on amounts recognized in the Financial Statements:
- expected credit loss measurement (refer to item 2g in this Note and to Note 19);
- fair value measurement (refer to item 2f in this Note and to Note 20);
- income taxes (refer to item 6 in this Note and to Note 8);
- provisions and contingent liabilities (refer to item 9 in this Note and to Note 17);
- post-employment benefit plans (refer to item 5 in this Note and to Note 26);
- goodwill (refer to item 8 in this Note and to Note 12); and
- consolidation of structured entities (refer to item 1 in this Note and to Note 28).

1) Consolidation

The Financial Statements include the financial statements of the parent company (UBS Group AG) and its subsidiaries, presented as a single economic entity; intercompany transactions and balances have been eliminated. UBS consolidates all entities that it controls, including structured entities (SEs), which is the case when it has: (i) power over the relevant activities of the entity; (ii) exposure to an entity's variable returns; and (iii) the ability to use its power to affect its own returns.

Consideration is given to all facts and circumstances to determine whether the Group has power over another entity, i.e., the current ability to direct the relevant activities of an entity when decisions about those activities need to be made.

Subsidiaries, including SEs, are consolidated from the date when control is gained and deconsolidated from the date when control ceases. Control, or the lack thereof, is reassessed if facts and circumstances indicate that there is a change to one or more elements required to establish that control is present.

Business combinations are accounted for using the acquisition method. The amount of any non-controlling interest is measured at the non-controlling interest's proportionate share of the acquiree's identifiable net assets.

› **Refer to Note 28 for more information**

Critical accounting estimates and judgments

Each individual entity is assessed for consolidation in line with the aforementioned consolidation principles. The assessment of control can be complex and requires the use of significant judgment, in particular in determining whether UBS has power over the entity. As the nature and extent of UBS's involvement is unique for each entity, there is no uniform consolidation outcome by entity. Certain entities within a class may be consolidated while others may not. When carrying out the consolidation assessment, judgment is exercised considering all the relevant facts and circumstances, including the nature and activities of the investee, as well as the substance of voting and similar rights.

› **Refer to Note 28 for more information**

2) Financial instruments

a. Recognition

UBS recognizes financial instruments when it becomes a party to contractual provisions of an instrument. UBS applies settlement date accounting to all standard purchases and sales of non-derivative financial instruments.

In transactions where UBS acts as a transferee, to the extent the financial asset transfer does not qualify for derecognition by the transferor, UBS does not recognize the transferred instrument as its asset.

UBS also acts in a fiduciary capacity, which results in it holding or placing assets on behalf of individuals, trusts, retirement benefit plans and other institutions. Unless these items meet the definition of an asset and the recognition criteria are satisfied, they are not recognized on UBS's balance sheet and the related income is excluded from the Financial Statements.

Client cash balances associated with derivatives clearing and execution services are not recognized on the balance sheet if, through contractual agreement, regulation or practice, UBS neither obtains benefits from nor controls such cash balances.

b. Classification, measurement and presentation

Financial assets

Where the contractual terms of a debt instrument result in cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding, the debt instrument is classified as measured at amortized cost if it is held within a business model that has an objective of holding financial assets to collect contractual cash flows, or at fair value through other comprehensive income (FVOCI) if it is held within a business model with the objective being achieved by both collecting contractual cash flows and selling financial assets.

All other financial assets are measured at fair value through profit or loss (FVTPL), including those held for trading or those managed on a fair value basis, except for derivatives designated in a hedge relationship, in which case hedge accounting requirements apply (refer to item 2j in this Note for more information).

Business model assessment and contractual cash flow characteristics
UBS determines the nature of a business model by considering the way financial assets are managed to achieve a particular business objective.

In assessing whether contractual cash flows are SPPI, the Group considers whether the contractual terms of the financial asset contain a term that could change the timing or amount of contractual cash flows arising over the life of the instrument. This assessment includes contractual cash flows that may vary due to environmental, social and governance (ESG) triggers.

Financial liabilities

Financial liabilities measured at amortized cost
Debt issued measured at amortized cost includes contingent capital instruments containing contractual provisions under which the principal amounts would be written down or converted into equity upon either a specified common equity tier 1 (CET1) ratio breach or a determination by the Swiss Financial Market Supervisory Authority (FINMA) that a viability event has occurred. Such contractual provisions are not derivatives, as the underlying is deemed to be a non-financial variable specific to a party to the contract.

If a debt were to be written down or converted into equity in a future period, it would be partially or fully derecognized, with the difference between its carrying amount and the fair value of any equity issued recognized in the income statement.

A gain or loss is recognized in *Other income* when debt issued is subsequently repurchased for market-making or other activities. A subsequent sale of own bonds in the market is treated as a reissuance of debt.

Financial liabilities measured at fair value through profit or loss
UBS designates certain issued debt instruments as financial liabilities at fair value through profit or loss, on the basis that such financial instruments include non-closely-related embedded derivatives that significantly impact the cash flows of the instrument and / or are managed on a fair value basis (refer to the table below for more information). Financial instruments including embedded derivatives arise predominantly from the issuance of certain structured debt instruments.

Measurement and presentation

After initial recognition, UBS classifies, measures and presents its financial assets and liabilities in accordance with IFRS 9, as described in the table below.

Classification, measurement and presentation of financial assets

Financial assets classification		Significant items included	Measurement and presentation
Measured at amortized cost		This classification includes: – cash and balances at central banks; – loans and advances to banks; – receivables from securities financing transactions; – cash collateral receivables on derivative instruments; – residential and commercial mortgages; – corporate loans; – secured loans, including Lombard loans, and unsecured loans; – loans to financial advisors; and – debt securities held as high-quality liquid assets (HQLA).	Measured at amortized cost using the effective interest method less allowances for expected credit losses (ECL) (refer to items 2d and 2g in this Note for more information). The following items are recognized in the income statement: – interest income, which is accounted for in accordance with item 2d in this Note; – ECL and reversals; and – foreign exchange (FX) translation gains and losses. When a financial asset at amortized cost is derecognized, the gain or loss is recognized in the income statement. For amounts arising from settlement of certain derivatives, see below in this table.
Measured at FVOCI	Debt instruments measured at FVOCI	This classification primarily includes debt securities and certain asset-backed securities held as HQLA.	Measured at fair value, with unrealized gains and losses reported in *Other comprehensive income,* net of applicable income taxes, until such investments are derecognized. Upon derecognition, any accumulated balances in *Other comprehensive income* are reclassified to the income statement and reported within *Other income*. The following items, which are determined on the same basis as for financial assets measured at amortized cost, are recognized in the income statement: – interest income, which is accounted for in accordance with item 2d in this Note; – ECL and reversals; and – FX translation gains and losses.

Classification, measurement and presentation of financial assets

<table>
<tr><th colspan="2">Financial assets classification</th><th>Significant items included</th><th>Measurement and presentation</th></tr>
<tr><td rowspan="2">Measured at FVTPL</td><td>Held for trading</td><td>Financial assets held for trading include:
– all derivatives with a positive replacement value, except those that are designated and effective hedging instruments; and
– other financial assets acquired principally for the purpose of selling or repurchasing in the near term, or that are part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking. Included in this category are debt instruments (including those in the form of securities, money market paper, and traded corporate and bank loans) and equity instruments.</td><td rowspan="2">Measured at fair value, with changes recognized in the income statement.

Derivative assets (including derivatives that are designated and effective hedging instruments) are generally presented as Derivative financial instruments, except those exchange-traded derivatives (ETD) and over-the-counter (OTC)-cleared derivatives that are legally settled on a daily basis or economically net settled on a daily basis, which are presented within Cash collateral receivables on derivative instruments.

Changes in fair value, initial transaction costs, dividends and gains and losses arising on disposal or redemption are recognized in Other net income from financial instruments measured at fair value through profit or loss, except interest income on instruments other than derivatives (refer to item 2d in this Note), interest on derivatives designated as hedging instruments in hedges of interest rate risk and forward points on certain short- and long-duration FX contracts acting as economic hedges, which are reported in Net interest income.

Changes in the fair value of derivatives that are designated and effective hedging instruments are presented either in the income statement or Other comprehensive income, depending on the type of hedge relationship (refer to item 2j in this Note for more information).</td></tr>
<tr><td>Mandatorily measured at FVTPL – Other</td><td>This classification includes financial assets mandatorily measured at FVTPL that are not held for trading, as follows:
– certain structured loans, certain commercial loans, and receivables from securities financing transactions that are managed on a fair value basis;
– loans managed on a fair value basis, including those hedged with credit derivatives;
– certain debt securities held as HQLA and managed on a fair value basis;
– certain investment fund holdings and assets held to hedge delivery obligations related to cash-settled employee compensation plans;
– brokerage receivables, for which contractual cash flows do not meet the SPPI criterion because the aggregate balance is accounted for as a single unit of account, with interest being calculated on the individual components;
– auction rate securities, for which contractual cash flows do not meet the SPPI criterion because interest may be reset at rates that contain leverage;
– equity instruments; and
– assets held under unit-linked investment contracts.</td></tr>
</table>

Classification, measurement and presentation of financial liabilities

<table>
<tr><th colspan="2">Financial liabilities classification</th><th>Significant items included</th><th>Measurement and presentation</th></tr>
<tr><td colspan="2">Measured at amortized cost</td><td>This classification includes:
– demand and time deposits;
– retail savings / deposits;
– sweep deposits;
– payables from securities financing transactions;
– non-structured debt issued;
– subordinated debt;
– commercial paper and certificates of deposit; and
– cash collateral payables on derivative instruments.</td><td>Measured at amortized cost using the effective interest method.

When a financial liability at amortized cost is derecognized, the gain or loss is recognized in the income statement.

Interest Income generated from client deposits derecognized pursuant to certain deposit sweep programs is presented within Net interest income from financial instruments measured at fair value through profit or loss and other.</td></tr>
<tr><td rowspan="2">Measured at FVTPL</td><td>Held for trading</td><td>Financial liabilities held for trading include:
– all derivatives with a negative replacement value (including certain loan commitments), except those that are designated and effective hedging instruments; and
– obligations to deliver financial instruments, such as debt and equity instruments, that UBS has sold to third parties but does not own (short positions).</td><td rowspan="2">Measurement and presentation of financial liabilities classified at FVTPL follow the same principles as for financial assets classified at FVTPL, except that the amount of change in the fair value of a financial liability designated at FVTPL that is attributable to changes in UBS's own credit risk is presented in Other comprehensive income directly within Retained earnings and is never reclassified to the income statement.

Derivative liabilities (including derivatives that are designated and effective hedging instruments) are generally presented as Derivative financial instruments, except those exchange-traded and OTC-cleared derivatives that are legally settled on a daily basis or economically net settled on a daily basis, which are presented within Cash collateral payables on derivative instruments.</td></tr>
<tr><td>Designated at FVTPL</td><td>UBS designates at FVTPL the following financial liabilities:
– issued hybrid debt instruments that primarily include equity-linked, credit-linked and rates-linked bonds or notes;
– issued debt instruments managed on a fair value basis;
– certain payables from securities financing transactions;
– amounts due under unit-linked investment contracts, the cash flows of which are linked to financial assets measured at FVTPL and eliminate an accounting mismatch; and
– brokerage payables, which arise in conjunction with brokerage receivables and are measured at FVTPL to achieve measurement consistency.</td></tr>
</table>

c. Loan commitments and financial guarantees

Loan commitments are arrangements to provide credit under defined terms and conditions. Irrevocable loan commitments are classified as: (i) derivative loan commitments measured at fair value through profit or loss; (ii) loan commitments designated at fair value through profit or loss; or (iii) loan commitments not measured at fair value. Financial guarantee contracts are contracts that require UBS to make specified payments to reimburse the holder for an incurred loss because a specified debtor fails to make payments when due in accordance with the terms of a specified debt instrument.

d. Interest income and expense

Interest income and expense are recognized in the income statement based on the effective interest method. When calculating the effective interest rate (the EIR) for financial instruments (other than credit-impaired financial instruments), UBS estimates future cash flows considering all contractual terms of the instrument, but not expected credit losses, with the EIR applied to the gross carrying amount of the financial asset or the amortized cost of a financial liability. However, when a financial asset becomes credit-impaired after initial recognition, interest income is determined by applying the EIR to the amortized cost of the instrument, which represents the gross carrying amount adjusted for any credit loss allowance.

Upfront fees, including fees on loan commitments not measured at fair value where a loan is expected to be issued, and direct costs are included within the initial measurement of a financial instrument measured at amortized cost or FVOCI and recognized over the expected life of the instrument as part of its EIR.

Fees related to loan commitments where no loan is expected to be issued, as well as loan syndication fees where UBS does not retain a portion of the syndicated loan or where UBS does retain a portion of the syndicated loan at the same effective yield for comparable risk as other participants, are included in *Net fee and commission income* and either recognized over the life of the commitment or when syndication occurs.

› **Refer to item 3 in this Note for more information**

Interest income on financial assets, excluding derivatives, is included in interest income when positive and in interest expense when negative. Similarly, interest expense on financial liabilities, excluding derivatives, is included in interest expense, except when interest rates are negative, in which case it is included in interest income.

› **Refer to item 2b in this Note and Note 3 for more information**

e. Derecognition

Financial assets

UBS derecognizes a transferred financial asset, or a portion of a financial asset, if the purchaser has received substantially all the risks and rewards of the asset or a significant part of the risks and rewards combined with a practical ability to sell or pledge the asset.

Where financial assets have been pledged as collateral or in similar arrangements, they are considered to have been transferred if the counterparty has received the contractual rights to the cash flows of the pledged assets, as may be evidenced by, for example, the counterparty's right to sell or repledge the assets. In transfers where control over the financial asset is retained, UBS continues to recognize the asset to the extent of its continuing involvement, determined by the extent to which it is exposed to changes in the value of the transferred asset following the transfer.

› **Refer to Note 22 for more information**

Financial liabilities

UBS derecognizes a financial liability when it is extinguished, i.e., when the obligation specified in the contract is discharged, canceled or expires. When an existing financial liability is exchanged for a new one from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, the original liability is derecognized and a new liability recognized with any difference in the respective carrying amounts recorded in the income statement.

Certain OTC derivative contracts and most exchange-traded futures and option contracts cleared through central clearing counterparties and exchanges are considered to be settled on a daily basis, as the payment or receipt of variation margin on a daily basis represents legal or economic settlement, which results in derecognition of the associated derivatives.

› **Refer to Note 21 for more information**

f. Fair value of financial instruments

UBS accounts for a significant portion of its assets and liabilities at fair value. Fair value is the price on the measurement date that would be received for the sale of an asset or paid to transfer a liability in an orderly transaction between market participants in the principal market, or in the most advantageous market in the absence of a principal market.

› **Refer to Note 20 for more information**

Critical accounting estimates and judgments

The use of valuation techniques, modeling assumptions and estimates of unobservable market inputs in the fair valuation of financial instruments requires significant judgment and could affect the amount of gain or loss recorded for a particular position. Valuation techniques that rely more heavily on unobservable inputs and sophisticated models inherently require a higher level of judgment and may require adjustment to reflect factors that market participants would consider in estimating fair value, such as close-out costs, which are presented in Note 20d.

UBS's governance framework over fair value measurement is described in Note 20b, and UBS provides a sensitivity analysis of the estimated effects arising from changing significant unobservable inputs in Level 3 financial instruments to reasonably possible alternative assumptions in Note 20f.

› **Refer to Note 20 for more information**

g. Allowances and provisions for expected credit losses

ECL are recognized for financial assets measured at amortized cost, financial assets measured at FVOCI, fee and lease receivables, financial guarantees, and loan commitments not measured at fair value. ECL are also recognized on the undrawn portion of committed unconditionally revocable credit lines, which include UBS's credit card limits and master credit facilities, as UBS is exposed to credit risk because the borrower has the ability to draw down funds before UBS can take credit risk mitigation actions.

Recognition of expected credit losses

ECL are recognized on the following basis.

- Stage 1 instruments: Maximum 12-month ECL are recognized from initial recognition, reflecting the portion of lifetime cash shortfalls that would result if a default occurs in the 12 months after the reporting date, weighted by the risk of a default occurring.
- Stage 2 instruments: Lifetime ECL are recognized if a significant increase in credit risk (an SICR) is observed subsequent to the instrument's initial recognition, reflecting lifetime cash shortfalls that would result from all possible default events over the expected life of a financial instrument, weighted by the risk of a default occurring. When an SICR is no longer observed, the instrument will move back to stage 1.
- Stage 3 instruments: Lifetime ECL are always recognized for credit-impaired financial instruments, as determined by the occurrence of one or more loss events, by estimating expected cash flows based on a chosen recovery strategy. Credit-impaired exposures may include positions for which no allowance has been recognized, for example because they are expected to be fully recoverable through collateral held.
- Changes in lifetime ECL since initial recognition are also recognized for assets that are purchased or originated credit-impaired (POCI). POCI financial instruments include those that are purchased at a deep discount or newly originated with a defaulted counterparty; they remain a separate category until derecognition.

All or part of a financial asset is written off if it is deemed uncollectible or forgiven. Write-offs reduce the principal amount of a claim and are charged against related allowances for credit losses. Recoveries, in part or in full, of amounts previously written off are generally credited to *Credit loss expense / (release)*.

ECL are recognized in the income statement in *Credit loss expense / (release)*. A corresponding ECL allowance is reported as a decrease in the carrying amount of financial assets measured at amortized cost on the balance sheet. For financial assets that are measured at FVOCI, the carrying amount is not reduced, but an accumulated amount is recognized in *Other comprehensive income*. For off-balance sheet financial instruments and other credit lines, provisions for ECL are presented in *Provisions.*

Default and credit impairment

UBS applies a single definition of default for credit risk management purposes, regulatory reporting and ECL, with a counterparty classified as defaulted based on quantitative and qualitative criteria.

› **Refer to "Credit policies for distressed assets" in the "Risk management and control" section of this report for more information**

Measurement of expected credit losses

IFRS 9 ECL reflect an unbiased, probability-weighted estimate based on loss expectations resulting from default events. The method used to calculate ECL applies the following principal factors: probability of default (PD), loss given default (LGD) and exposure at default (EAD). Parameters are generally determined on an individual financial asset level. Based on the materiality of the portfolio, for credit card exposures and personal account overdrafts in Switzerland, a portfolio approach is applied that derives an average PD and LGD for the entire portfolio. PDs and LGDs used in the ECL calculation are point-in-time (PIT)-based for key portfolios and consider both current conditions and expected cyclical changes. For material portfolios, PDs and LGDs are determined for different scenarios, whereas EAD projections are treated as scenario independent.

For the purpose of determining the ECL-relevant parameters, UBS leverages its Basel III advanced internal ratings-based (A-IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models. Adjustments have been made to these models and IFRS 9-related models have been developed that consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based, as opposed to the corresponding Basel III through-the-cycle (TTC) parameters. All models that are relevant for measuring expected credit losses are subject to UBS's model validation and oversight processes.

Probability of default: PD represents the probability of a default over a specified time period. A 12-month PD represents the probability of default determined for the next 12 months and a lifetime PD represents the probability of default over the remaining lifetime of the instrument. PIT PDs are derived from TTC PDs and scenario forecasts. The modeling is region, industry and client segment specific and considers both macroeconomic scenario dependencies and client-idiosyncratic information.

Exposure at default: EAD represents an estimate of the exposure to credit risk at the time of a potential default occurring, considering expected repayments, interest payments and accruals, discounted at the EIR. Future drawdowns on facilities are considered through a credit conversion factor (a CCF) that is reflective of historical drawdown and default patterns and the characteristics of the respective portfolios.

Loss given default: LGD represents an estimate of the loss at the time of a potential default occurring, taking into account expected future cash flows from collateral and other credit enhancements, or expected payouts from bankruptcy proceedings for unsecured claims and, where applicable, time to realization of collateral and the seniority of claims. LGD is commonly expressed as a percentage of EAD.

Estimation of expected credit losses

Number of scenarios and estimation of scenario weights
Determination of probability-weighted ECL requires evaluating a range of diverse and relevant future economic conditions, especially with a view to modeling the non-linear effect of assumptions about macroeconomic factors on the estimate.

To accommodate this requirement, UBS uses different economic scenarios in the ECL calculation. Each scenario is represented by a specific scenario narrative, which is relevant considering the exposure of key portfolios to economic risks, and for which a set of consistent macroeconomic variables is determined. The estimation of the appropriate weights for these scenarios is predominantly judgment-based. The assessment is based on a holistic review of the prevailing economic or political conditions, which may exhibit different levels of uncertainty. It takes into account the impact of changes in the nature and severity of the underlying scenario narratives and the projected economic variables.

The determined weights constitute the probabilities that the respective set of macroeconomic conditions will occur and not that the chosen particular narratives with the related macroeconomic variables will materialize.

Macroeconomic and other factors
The range of macroeconomic, market and other factors that is modeled as part of the scenario determination is wide, and historical information is used to support the identification of the key factors. As the forecast horizon increases, the availability of information decreases, requiring an increase in judgment. For cycle-sensitive PD and LGD determination purposes, UBS projects the relevant economic factors for a period of three years before reverting, over a specified period, to cycle-neutral PD and LGD for longer-term projections.

Factors relevant for ECL calculation vary by type of exposure. Regional and client-segment characteristics are generally taken into account, with specific focus on Switzerland and the US, considering UBS's key ECL-relevant portfolios.

For UBS, the following forward-looking macroeconomic variables represent the most relevant factors for ECL calculation:
– GDP growth rates, given their significant effect on borrowers' performance;
– unemployment rates, given their significant effect on private clients' ability to meet contractual obligations;
– house price indices, given their significant effect on mortgage collateral valuations;
– interest rates, given their significant effect on counterparties' abilities to service debt;
– consumer price indices, given their overall relevance for companies' performance, private clients' purchasing power and economic stability; and
– equity indices, given that they are an important factor in our corporate rating tools.

Scenario generation, review process and governance
A team of economists, which is part of Group Risk Control, develop the forward-looking macroeconomic assumptions with involvement from a broad range of experts.

The scenarios, their weight and the key macroeconomic and other factors are subject to a critical assessment by the IFRS 9 Scenario Sounding Sessions and ECL Management Forum, which include senior management from Group Risk and Group Finance. Important aspects for the review include whether there may be particular credit risk concerns that may not be capable of being addressed systematically and require post-model adjustments for stage allocation and ECL allowance.

The Group Model Governance Committee (the GMGC), as the highest authority under UBS's model governance framework, ratifies the decisions taken by the ECL Management Forum.

› **Refer to Note 19 for more information**

ECL measurement period
The period for which lifetime ECL are determined is based on the maximum contractual period that UBS is exposed to credit risk, taking into account contractual extension, termination and prepayment options. For irrevocable loan commitments and financial guarantee contracts, the measurement period represents the maximum contractual period for which UBS has an obligation to extend credit.

Additionally, some financial instruments include both an on-demand loan and a revocable undrawn commitment, where the contractual cancellation right does not limit UBS's exposure to credit risk to the contractual notice period, as the client has the ability to draw down funds before UBS can take risk-mitigating actions. In such cases UBS is required to estimate the period over which it is exposed to credit risk. This applies to UBS's credit card limits, which do not have a defined contractual maturity date, are callable on demand and where the drawn and undrawn components are managed as one exposure. The exposure arising from UBS's credit card limits is not significant and is managed at a portfolio level, with credit actions triggered when balances are past due. An ECL measurement period of seven years is applied for credit card limits, capped at 12 months for stage 1 balances, as a proxy for the period that UBS is exposed to credit risk.

Customary master credit agreements in the Swiss corporate market also include on-demand loans and revocable undrawn commitments. For smaller commercial facilities, a risk-based monitoring (RbM) approach is in place that highlights negative trends as risk events, at an individual facility level, based on a combination of continuously updated risk indicators. The risk events trigger additional credit reviews by a risk officer, enabling informed credit decisions to be taken. Larger corporate facilities are not subject to RbM, but are reviewed at least annually through a formal credit review. UBS has assessed these credit risk management practices and considers both the RbM approach and formal credit reviews as substantive credit reviews resulting in a re-origination of the given facility. Following this, a 12-month measurement period from the reporting date is used for both types of facilities as an appropriate proxy of the period over which UBS is exposed to credit risk, with 12 months also used as a look-back period for assessing SICR, always from the respective reporting date.

Significant increase in credit risk

Financial instruments subject to ECL are monitored on an ongoing basis. To determine whether the recognition of a maximum 12-month ECL continues to be appropriate, an assessment is made as to whether an SICR has occurred since initial recognition of the financial instrument, applying both quantitative and qualitative factors.

Primarily, UBS assesses changes in an instrument's risk of default on a quantitative basis by comparing the annualized forward-looking and scenario-weighted lifetime PD of an instrument determined at two different dates:
– at the reporting date; and
– at inception of the instrument.

If, based on UBS's quantitative modeling, an increase exceeds a set threshold, an SICR is deemed to have occurred and the instrument is transferred to stage 2 with lifetime ECL recognized.

The threshold applied varies depending on the original credit quality of the borrower, with a higher SICR threshold set for those instruments with a low PD at inception. The SICR assessment based on PD changes is made at an individual financial asset level. A high-level overview of the SICR trigger, which is a multiple of the annualized remaining lifetime PIT PD expressed in rating downgrades, is provided in the "SICR thresholds" table below. The actual SICR thresholds applied are defined on a more granular level by interpolating between the values shown in the table.

SICR thresholds

Internal rating at origination of the instrument	Rating downgrades / SICR trigger
0–3	3
4–8	2
9–13	1

› **Refer to the "Risk management and control" section of this report for more details about UBS's internal grading system**

Irrespective of the SICR assessment based on default probabilities, credit risk is generally deemed to have significantly increased for an instrument if the contractual payments are more than 30 days past due. For certain less material portfolios, specifically the Swiss credit card portfolio, the 30-day past due criterion is used as the primary indicator of an SICR. Where instruments are transferred to stage 2 due to the 30-day past due criterion, a minimum period of six months is applied before a transfer back to stage 1 can be triggered. For instruments in Personal & Corporate Banking and Global Wealth Management Region Switzerland that are between 90 and 180 days past due but have not been reclassified to stage 3, a one-year period is applied before a transfer back to stage 1 can be triggered.

Additionally, based on individual counterparty-specific indicators, external market indicators of credit risk or general economic conditions, counterparties may be moved to a watch list, which is used as a secondary qualitative indicator for an SICR. Exception management is further applied, allowing for individual and collective adjustments on exposures sharing the same credit risk characteristics to take account of specific situations that are not otherwise fully reflected.

In general, the overall SICR determination process does not apply to Lombard loans, securities financing transactions and certain other asset-based lending transactions, because of the risk management practices adopted, including daily monitoring processes with strict margining. If margin calls are not satisfied, a position is closed out and classified as a stage 3 position. In exceptional cases, an individual adjustment and a transfer into stage 2 may be made to take account of specific facts.

Credit risk officers are responsible for the identification of an SICR, which for accounting purposes is in some respects different from internal credit risk management processes. This difference mainly arises because ECL accounting requirements are instrument-specific, such that a borrower can have multiple exposures allocated to different stages, and maturing loans in stage 2 will migrate to stage 1 upon renewal irrespective of the actual credit risk at that time. Under a risk-based approach, a holistic counterparty credit assessment and the absolute level of risk at any given date will determine what risk-mitigating actions may be warranted.

› **Refer to the "Risk management and control" section of this report for more information**

Critical accounting estimates and judgments

The calculation of ECL requires management to apply significant judgment and make estimates and assumptions that can result in significant changes to the timing and amount of ECL recognized.

Determination of a significant increase in credit risk
IFRS 9 does not include a definition of what constitutes an SICR, with UBS's assessment considering qualitative and quantitative criteria. An IFRS 9 ECL Management Forum has been established to review and challenge the SICR results.

Scenarios, scenario weights and macroeconomic variables
ECL reflect an unbiased and probability-weighted amount, which UBS determines by evaluating a range of possible outcomes. Management selects forward-looking scenarios that include relevant macroeconomic variables and management's assumptions around future economic conditions. IFRS 9 Scenario Sounding Sessions, in addition to the IFRS 9 ECL Management Forum, are in place to derive, review and challenge the scenario selection and weights, and to determine whether any additional post-model adjustments are required that may significantly affect ECL.

ECL measurement period
Lifetime ECL are generally determined based upon the contractual maturity of the transaction, which significantly affects ECL. For credit card limits and Swiss callable master credit facilities, judgment is required, as UBS must determine the period over which it is exposed to credit risk. A seven-year period is applied for credit card limits, capped at 12 months for stage 1 positions, and a 12-month period applied for master credit facilities.

Modeling and post-model adjustments
A number of complex models have been developed or modified to calculate ECL, with additional post-model adjustments required which may significantly affect ECL. The models are governed by UBS's model validation controls and approved by the GMGC. The post-model adjustments are approved by the ECL Management Forum and endorsed by the GMGC.

A sensitivity analysis covering key macroeconomic variables, scenario weights and SICR trigger points on ECL measurement is provided in Note 19f.

› **Refer to Note 19 for more information**

h. Restructured and modified financial assets

When payment default is expected, or where default has already occurred, UBS may grant concessions to borrowers in financial difficulties that it would not consider in the normal course of its business, such as preferential interest rates, extension of maturity, modifying the schedule of repayments, debt / equity swap, subordination, etc.

› **Refer to the "Risk management and control" section of this report for more information**

Modifications result in an alteration of future contractual cash flows and can occur within UBS's normal risk tolerance or as part of a credit restructuring where a counterparty is in financial difficulties. The restructuring or modification of a financial asset could lead to a substantial change in the terms and conditions, resulting in the original financial asset being derecognized and a new financial asset being recognized. Where the modification does not result in a derecognition, any difference between the modified contractual cash flows discounted at the original EIR and the existing gross carrying amount of the given financial asset is recognized in the income statement as a modification gain or loss.

i. Offsetting

UBS presents financial assets and liabilities on its balance sheet net if (i) it has a legally enforceable right to set off the recognized amounts and (ii) it intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. Netted positions include, for example, certain derivatives and repurchase and reverse repurchase transactions with various counterparties, exchanges and clearing houses.

In assessing whether UBS intends to either settle on a net basis, or to realize the asset and settle the liability simultaneously, emphasis is placed on the effectiveness of operational settlement mechanics in eliminating substantially all credit and liquidity exposure between the counterparties. This condition precludes offsetting on the balance sheet for substantial amounts of UBS's financial assets and liabilities, even though they may be subject to enforceable netting arrangements. Repurchase arrangements and securities financing transactions are presented net only to the extent that the settlement mechanism eliminates, or results in insignificant, credit and liquidity risk, and processes the receivables and payables in a single settlement process or cycle.

› **Refer to Note 21 for more information**

j. Hedge accounting
The Group applies hedge accounting requirements of IFRS 9 where the criteria for documentation and hedge effectiveness are met. If a hedge relationship no longer meets the criteria for hedge accounting, hedge accounting is discontinued. Voluntary discontinuation of hedge accounting is not permitted under IFRS 9.

Fair value hedges of interest rate risk related to debt instruments and loan assets
The fair value change of the hedged item attributable to a hedged risk is reflected as an adjustment to the carrying amount of the hedged item and recognized in the income statement along with the change in the fair value of the hedging instrument.

Fair value hedges of FX risk related to debt instruments
The fair value change of the hedged item attributable to the hedged risk is reflected in the measurement of the hedged item and recognized in the income statement along with the change in the fair value of the hedging instrument. The foreign currency basis spread of cross-currency swaps designated as hedging derivatives is excluded from the designation and accounted for as a cost of hedging with amounts deferred in *Other comprehensive income* within *Equity*. These amounts are released to the income statement over the term of the hedged item.

Discontinuation of fair value hedges
Discontinuations for reasons other than derecognition of the hedged item result in an adjustment to the carrying amount, which is amortized to the income statement over the remaining life of the hedged item using the effective interest method. If the hedged item is derecognized, the unamortized fair value adjustment or deferred cost of hedging amount is recognized immediately in the income statement as part of any derecognition gain or loss.

Cash flow hedges of forecast transactions
Fair value gains or losses associated with the effective portion of derivatives designated as cash flow hedges for cash flow repricing risk are recognized initially in *Other comprehensive income* within *Equity* and reclassified to *Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income* or *Interest expense from financial instruments measured at amortized cost* in the periods when the hedged forecast cash flows affect profit or loss, including discontinued hedges for which forecast cash flows are expected to occur. If the forecast transactions are no longer expected to occur, the deferred gains or losses are immediately reclassified to the income statement.

Hedges of net investments in foreign operations
Gains or losses on the hedging instrument relating to the effective portion of a hedge are recognized directly in *Other comprehensive income* within *Equity,* while any gains or losses relating to the ineffective and / or undesignated portion (for example, the interest element of a forward contract) are recognized in the income statement. Upon disposal or partial disposal of the foreign operation, the cumulative value of any such gains or losses recognized in *Equity* associated with the entity is reclassified to *Other income*.

Interest Rate Benchmark Reform
UBS continues hedge accounting during the period of uncertainty before existing interest rate benchmarks are replaced with alternative risk-free interest rates. During this period, UBS assumes that the current benchmark rates will continue to exist, such that forecast transactions are considered highly probable and hedge relationships remain, with little or no consequential impact on the financial statements. Upon replacement of existing interest rate benchmarks by alternative risk-free interest rates, UBS applies the requirements of *Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 (Interest Rate Benchmark Reform – Phase 2),* where applicable.

› **Refer to Note 25 for more information**

3) Fee and commission income and expenses

UBS earns fee income from the diverse range of services it provides to its clients. Fee income can be divided into two broad categories: fees earned from services that are provided over a certain period of time, such as management of clients' assets, custody services and certain advisory services; and fees earned from point-in-time services, such as underwriting fees, deal-contingent merger and acquisitions fees, and brokerage fees (e.g., securities and derivatives execution and clearing). UBS recognizes fees earned from PIT services when it has fully provided the service to the client. Where the contract requires services to be provided over time, income is recognized on a systematic basis over the life of the agreement.

Consideration received is allocated to the separately identifiable performance obligations in a contract. Owing to the nature of UBS's business, contracts that include multiple performance obligations are typically those that are considered to include a series of similar performance obligations fulfilled over time with the same pattern of transfer to the client, e.g., management of client assets and custodial services. As a consequence, UBS is not required to apply significant judgment in allocating the consideration received across the various performance obligations.

PIT services are generally for a fixed price or dependent on deal size, e.g., a fixed number of basis points of trade size, where the amount of revenue is known when the performance obligation is met. Fixed-over-time fees are recognized on a straight-line basis over the performance period. Custodial and asset management fees can be variable through reference to the size of the customer portfolio. However, they are generally billed on a monthly or quarterly basis once the customer's portfolio size is known or known with near certainty and therefore also recognized ratably over the performance period. UBS does not recognize performance fees related to management of clients' assets or fees related to contingencies beyond UBS's control until such uncertainties are resolved.

UBS's fees are generally earned from short-term contracts. As a result, UBS's contracts do not include a financing component or result in the recognition of significant receivables or prepayment assets. Furthermore, due to the short-term nature of such contracts, UBS has not capitalized any material costs to obtain or fulfill a contract or generated any significant contract assets or liabilities.

UBS presents expenses primarily in line with their nature in the income statement, differentiating between expenses that are directly attributable to the satisfaction of specific performance obligations associated with the generation of revenues, which are generally presented within *Total revenues* as *Fee and commission expense*, and those that are related to personnel, general and administrative expenses, which are presented within *Operating expenses*. For derivatives execution and clearing services (where UBS acts as an agent), UBS only records its specific fees in the income statement, with fees payable to other parties not recognized as an expense but instead directly offset against the associated income collected from the given client.

› **Refer to Note 4 for more information, including the disaggregation of revenues**

4) Share-based and other deferred compensation plans

UBS recognizes expenses for deferred compensation awards over the period that the employee is required to provide service to become entitled to the award. Where the service period is shortened, for example in the case of employees affected by restructuring programs or mutually agreed termination provisions, recognition of such expense is accelerated to the termination date. Where no future service is required, such as for employees who are eligible for retirement or who have met certain age and length-of-service criteria, the services are presumed to have been received and compensation expense is recognized over the performance year or, in the case of off-cycle awards, immediately on the grant date.

Share-based compensation plans

Share-based compensation expense is measured by reference to the fair value of the equity instruments on the date of grant, taking into account the terms and conditions inherent in the award, including, where relevant, dividend rights, transfer restrictions in effect beyond the vesting date, market conditions, and non-vesting conditions.

For equity-settled awards, fair value is not remeasured unless the terms of the award are modified such that there is an incremental increase in value. Expenses are recognized, on a per-tranche basis, over the service period based on an estimate of the number of instruments expected to vest and are adjusted to reflect the actual outcomes of service or performance conditions.

For equity-settled awards, forfeiture events resulting from a breach of a non-vesting condition (i.e., one that does not relate to a service or performance condition) do not result in any adjustment to the share-based compensation expense.

For cash-settled share-based awards, fair value is remeasured at each reporting date, so that the cumulative expense recognized equals the cash distributed.

Other deferred compensation plans

Compensation expense for other deferred compensation plans is recognized on a per-tranche or straight-line basis, depending on the nature of the plan. The amount recognized is measured based on the present value of the amount expected to be paid under the plan and is remeasured at each reporting date, so that the cumulative expense recognized equals the cash or the fair value of respective financial instruments distributed.

› **Refer to Note 27 for more information**

5) Post-employment benefit plans

Defined benefit plans

Defined benefit plans specify an amount of benefit that an employee will receive, which usually depends on one or more factors, such as age, years of service and compensation. The defined benefit liability recognized in the balance sheet is the present value of the defined benefit obligation, measured using the projected unit credit method, less the fair value of the plan's assets at the balance sheet date, with changes resulting from remeasurements recorded immediately in *Other comprehensive income*. If the fair value of the plan's assets is higher than the present value of the defined benefit obligation, the recognition of the resulting net asset is limited to the present value of economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. Calculation of the net defined benefit obligation or asset takes into account the specific features of each plan, including risk sharing between employee and employer, and is calculated periodically by independent qualified actuaries.

Critical accounting estimates and judgments

The net defined benefit liability or asset at the balance sheet date and the related personnel expense depend on the expected future benefits to be provided, determined using a number of economic and demographic assumptions. A range of assumptions could be applied, and different assumptions could significantly alter the defined benefit liability or asset and pension expense recognized. The most significant assumptions include life expectancy, discount rate, expected salary increases, pension increases and interest credits on retirement savings account balances. Sensitivity analysis for reasonable possible movements in each significant assumption for UBS's post-employment obligations is provided in Note 26.

› **Refer to Note 26 for more information**

Defined contribution plans

A defined contribution plan pays fixed contributions into a separate entity from which post-employment and other benefits are paid. UBS has no legal or constructive obligation to pay further amounts if the plan does not hold sufficient assets to pay employees the benefits relating to employee service in the current and prior periods. Compensation expense is recognized when the employees have rendered services in exchange for contributions. This is generally in the year of contribution. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

6) Income taxes

UBS is subject to the income tax laws of Switzerland and those of the non-Swiss jurisdictions in which UBS has business operations.

The Group's provision for income taxes is composed of current and deferred taxes. Current income taxes represent taxes to be paid or refunded for the current period or previous periods.

Deferred tax assets (DTAs) and deferred tax liabilities (DTLs) are recognized for temporary differences between the carrying amounts and tax bases of assets and liabilities that will result in deductible or taxable amounts, respectively in future periods. DTAs may also arise from other sources, including unused tax losses and unused tax credits. DTAs and DTLs are measured using the applicable tax rates and laws that have been enacted or substantively enacted by the end of the reporting period and that will be in effect when such differences are expected to reverse.

DTAs are recognized only to the extent it is probable that sufficient taxable profits will be available against which these differences can be used. When an entity or tax group has a history of recent losses, DTAs are only recognized to the extent there are sufficient taxable temporary differences or there is convincing other evidence that sufficient taxable profit will be available against which the unused tax losses can be utilized.

Deferred and current tax assets and liabilities are offset when: (i) they arise in the same tax reporting group; (ii) they relate to the same tax authority; (iii) the legal right to offset exists; and (iv) with respect to current taxes they are intended to be settled net or realized simultaneously.

Current and deferred taxes are recognized as income tax benefit or expense in the income statement, except for current and deferred taxes recognized in relation to: (i) the acquisition of a subsidiary (for which such amounts would affect the amount of goodwill arising from the acquisition); (ii) gains and losses on the sale of treasury shares (for which the tax effects are recognized directly in *Equity*); (iii) unrealized gains or losses on financial instruments that are classified at FVOCI; (iv) changes in fair value of derivative instruments designated as cash flow hedges; (v) remeasurements of defined benefit plans; or (vi) certain foreign currency translations of foreign operations. Amounts relating to points (iii) through (vi) above are recognized in *Other comprehensive income* within *Equity*.

UBS reflects the potential effect of uncertain tax positions for which acceptance by the relevant tax authority is not considered probable by adjusting current or deferred taxes, as applicable, using either the most likely amount or expected value methods, depending on which method is deemed a better predictor of the basis on which, and extent to which, the uncertainty will be resolved.

Critical accounting estimates and judgments

Tax laws are complex, and judgment and interpretations about the application of such laws are required when accounting for income taxes. UBS considers the performance of its businesses and the accuracy of historical forecasts and other factors when evaluating the recoverability of its DTAs, including the remaining tax loss carry-forward period, and its assessment of expected future taxable profits in the forecast period used for recognizing DTAs. Estimating future profitability and business plan forecasts is inherently subjective and is particularly sensitive to future economic, market and other conditions.

Forecasts are reviewed annually, but adjustments may be made at other times, if required. If recent losses have been incurred, convincing evidence is required to prove there is sufficient future profitability given that the value of UBS's DTAs may be affected, with effects primarily recognized through the income statement.

In addition, judgment is required to assess the expected value of uncertain tax positions and the related probabilities, including interpretation of tax laws, the resolution of any income tax-related appeals and litigation.

› **Refer to Note 8 for more information**

7) Property, equipment and software

Property, equipment and software is measured at cost less accumulated depreciation and impairment losses. Software development costs are capitalized only when the costs can be measured reliably and it is probable that future economic benefits will arise. Depreciation of property, equipment and software begins when they are available for use and is calculated on a straight line basis over an asset's estimated useful life.

Property, equipment and software are generally tested for impairment at the appropriate cash-generating unit level, alongside goodwill and intangible assets as described in item 8 in this Note. An impairment charge is recognized for such assets if the recoverable amount is below its carrying amount. The recoverable amounts of such assets, other than property that has a market price, are generally determined using a replacement cost approach that reflects the amount that would be currently required by a market participant to replace the service capacity of the asset. If such assets are no longer used, they are tested individually for impairment.

› **Refer to Note 11 for more information**

8) Goodwill

Goodwill represents the excess of the consideration over the fair value of identifiable assets, liabilities and contingent liabilities acquired that arises in a business combination. Goodwill is not amortized, but is assessed for impairment at the end of each reporting period, or when indicators of impairment exist. UBS tests goodwill for impairment annually, irrespective of whether there is any indication of impairment.

An impairment charge is recognized in the income statement if the carrying amount exceeds the recoverable amount of a cash-generating unit.

Critical accounting estimates and judgments

UBS's methodology for goodwill impairment testing is based on a model that is most sensitive to the following key assumptions: (i) forecasts of earnings available to shareholders in years one to three; (ii) changes in the discount rates; and (iii) changes in the long-term growth rate.

Earnings available to shareholders are estimated on the basis of forecast results, which are part of the business plan approved by the BoD. The discount rates and growth rates are determined using external information, and also considering inputs from both internal and external analysts and the view of management.

The key assumptions used to determine the recoverable amounts of each cash-generating unit are tested for sensitivity by applying reasonably possible changes to those assumptions.

› **Refer to Notes 2 and 12 for more information**

9) Provisions and contingent liabilities

Provisions are liabilities of uncertain timing or amount, and are generally recognized in accordance with IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*, when: (i) UBS has a present obligation as a result of a past event; (ii) it is probable that an outflow of resources will be required to settle the obligation; and (iii) a reliable estimate of the amount of the obligation can be made.

The majority of UBS's provisions relate to litigation, regulatory and similar matters, restructuring, and employee benefits. Restructuring provisions are generally recognized as a consequence of management agreeing to materially change the scope of the business or the manner in which it is conducted, including changes in management structures. Provisions for employee benefits relate mainly to service anniversaries and sabbatical leave, and are recognized in accordance with measurement principles set out in item 4 in this Note. In addition, UBS presents expected credit loss allowances within *Provisions* if they relate to a loan commitment, financial guarantee contract or a revolving revocable credit line.

IAS 37 provisions are measured considering the best estimate of the consideration required to settle the present obligation at the balance sheet date.

When conditions required to recognize a provision are not met, a contingent liability is disclosed, unless the likelihood of an outflow of resources is remote. Contingent liabilities are also disclosed for possible obligations that arise from past events, the existence of which will be confirmed only by uncertain future events not wholly within the control of UBS.

Critical accounting estimates and judgments

Recognition of provisions often involves significant judgment in assessing the existence of an obligation that results from past events and in estimating the probability, timing and amount of any outflows of resources. This is particularly the case for litigation, regulatory and similar matters, which, due to their nature, are subject to many uncertainties, making their outcome difficult to predict.

The amount of any provision recognized is sensitive to the assumptions used and there could be a wide range of possible outcomes for any particular matter.

Management regularly reviews all the available information regarding such matters, including legal advice, to assess whether the recognition criteria for provisions have been satisfied and to determine the timing and amount of any potential outflows.

› **Refer to Note 17 for more information**

10) Foreign currency translation

Transactions denominated in a foreign currency are translated into the functional currency of the reporting entity at the spot exchange rate on the date of the transaction. At the balance sheet date, all monetary assets, including those at FVOCI, and monetary liabilities denominated in foreign currency are translated into the functional currency using the closing exchange rate. Translation differences are reported in *Other net income from financial instruments measured at fair value through profit or loss*.

Non-monetary items measured at historical cost are translated at the exchange rate on the date of the transaction.

Upon consolidation, assets and liabilities of foreign operations are translated into US dollars, UBS's presentation currency, at the closing exchange rate on the balance sheet date, and income and expense items and other comprehensive income are translated at the average rate for the period. The resulting foreign currency translation differences are recognized in *Equity* and reclassified to the income statement when UBS disposes of, partially or in its entirety, the foreign operation and UBS no longer controls the foreign operation.

Share capital issued, share premium and treasury shares held are translated at the historic average rate, with the difference between the historic average rate and the spot rate realized upon repayment of share capital or disposal of treasury shares reported as *Share premium*. Cumulative amounts recognized in *Other comprehensive income* in respect of cash flow hedges and financial assets measured at FVOCI are translated at the closing exchange rate as of the balance sheet dates, with any translation effects adjusted through *Retained earnings*.

› **Refer to Note 32 for more information**

11) Equity, treasury shares and contracts on UBS Group AG shares

Proceeds from the issuance of shares are recognized in *Share capital* for the nominal value, with the balance presented in *Share premium*.

UBS Group AG shares held (treasury shares)

UBS Group AG shares held by the Group, including those purchased as part of market-making activities, are presented in *Equity* as *Treasury shares* at their acquisition cost and are deducted from *Equity* until they are canceled or reissued. The difference between the proceeds from sales of treasury shares and their weighted average cost (net of tax, if any) is reported as *Share premium*.

Contracts on UBS Group AG shares

Contracts involving UBS Group AG shares that require net cash settlement, or provide the counterparty or UBS with a settlement option that includes a choice of settling net in cash, are classified as derivatives held for trading.

b) Changes in accounting policies, comparability and other adjustments

Changes to the presentation of the financial statements

During 2022, UBS made several changes to simplify the presentation of the income statement alongside other primary financial statements and disclosure notes, and to align them with management information. In particular, *Total operating income* has been renamed *Total revenues* and excludes *Credit loss expense / (release)*, which is now separately presented below *Total revenues*.

Reclassification of a portfolio from *Financial assets measured at fair value through other comprehensive income* to *Other financial assets measured at amortized cost*

Effective from 1 April 2022, UBS has reclassified a portfolio of financial assets from *Financial assets measured at fair value through other comprehensive income* with a fair value of USD 6.9bn (the Portfolio) to *Other financial assets measured at amortized cost*, in line with the principles in IFRS 9, *Financial Instruments*, which require a reclassification when an entity changes its business model for managing financial assets.

The Portfolio's cumulative fair value losses of USD 449m pre-tax and USD 333m post-tax, previously recognized in *Other comprehensive income*, have been removed from equity and adjusted against the value of the assets on the reclassification date, so that the Portfolio is measured as if the assets had always been classified at amortized cost, with a value of USD 7.4bn as on 1 April 2022. The reclassification had no effect on the income statement.

The reclassified Portfolio is made up of high-quality liquid assets, primarily US government treasuries and US government agency mortgage-backed securities, held and separately managed by UBS Bank USA (BUSA).

The accounting reclassification has arisen as a direct result of the transformation of UBS's Global Wealth Management Americas business, which has significantly impacted BUSA. This includes initiatives approved by the Group Executive Board to significantly grow and extend the business, as disclosed on 1 February 2022 during UBS's fourth quarter 2021 earnings presentation. Over the two years preceding the reclassification date, BUSA's deposit base grew by more than 100% generating substantial cash balances, with a number of new products being launched, including new deposit types that are longer in duration, additional lending and a broader range of customer segments targeted.

Following the commencement of these activities and the announcement made in the first quarter of 2022, the Portfolio is no longer held in a business model to collect the contractual cash flows and sell the assets, but is instead solely held to collect the contractual cash flows until the assets mature, requiring a reclassification of the Portfolio in line with IFRS 9 with effect from 1 April 2022.

The fair value of the Portfolio as on 31 December 2022 was USD 5.8bn. A pre-tax fair value loss of USD 981m would have been recognized in *Other comprehensive income* during 2022 if the Portfolio had not been reclassified.

› **Refer to the Statement of changes in equity and Note 20 for more information about the effects from the reclassification of the Portfolio**

Accounting for obligations to safeguard crypto-assets an entity holds for platform users (SAB 121)

In March 2022, the US Security and Exchange Commission (the SEC) issued Staff Accounting Bulletin (SAB) 121, "Accounting for obligations to safeguard crypto-assets an entity holds for platform users." SAB 121 adds interpretive guidance requiring SEC registrants, including foreign private issuers that apply IFRS, to recognize a liability on their balance sheets to reflect the obligation to safeguard any digital asset that is issued or transferred using distributed ledger or blockchain technology and held for their platform users, along with a corresponding asset. The guidance is effective for UBS for annual reporting from 2022 onwards. Amounts that would be recognized as liabilities, with corresponding assets, under this guidance are not material to UBS.

c) International Financial Reporting Standards and Interpretations to be adopted in 2023 and later and other changes

IFRS 17, *Insurance Contracts*

In May 2017, the IASB issued IFRS 17, *Insurance Contracts*, which sets out the accounting requirements for contractual rights and obligations that arise from insurance contracts issued and reinsurance contracts held. IFRS 17 is effective from 1 January 2023. Adoption on 1 January 2023 will have no effect on the Group's financial statements. UBS does not provide insurance services in any market.

Other amendments to IFRS

The IASB has issued a number of minor amendments to IFRS, effective from 1 January 2023 and in later years. These amendments are not expected to have a significant effect on the Group when they are adopted.

Note 2a Segment reporting

UBS's businesses are organized globally into four business divisions: Global Wealth Management, Personal & Corporate Banking, Asset Management and the Investment Bank. All four business divisions are supported by Group Functions and qualify as reportable segments for the purpose of segment reporting. Together with Group Functions, the four business divisions reflect the management structure of the Group.

- **Global Wealth Management** provides financial services, advice and solutions to private wealth clients. Its offering ranges from investment management to estate planning and corporate finance advice, in addition to specific wealth management and banking products and services.
- **Personal & Corporate Banking** serves its private, corporate, and institutional clients' needs, from banking to retirement, financing, investments and strategic transactions, in Switzerland, through its branch network and digital channels.
- **Asset Management** is a global, large-scale and diversified asset manager. It offers investment capabilities and styles across all major traditional and alternative asset classes, as well as advisory support to institutions, wholesale intermediaries and wealth management clients.
- The **Investment Bank** provides a range of services to institutional, corporate and wealth management clients globally, to help them raise capital, grow their businesses, invest and manage risks. Its offering includes research, advisory services, facilitating clients raising debt and equity from the public and private markets and capital markets, cash and derivatives trading across equities and fixed income, and financing.
- **Group Functions** is made up of the following major areas: Group Services (which consists of Chief Digital and Information Office, Communications & Branding, Compliance, Finance, Group Sustainability and Impact, Human Resources, Group Legal, Regulatory & Governance, and Risk Control), Group Treasury and Non-core and Legacy Portfolio.

Financial information about the four business divisions and Group Functions is presented separately in internal management reports to the Group Executive Board (the GEB), which is considered the "chief operating decision maker" pursuant to IFRS 8, *Operating Segments*.

UBS's internal accounting policies, which include management accounting policies and service level agreements, determine the revenues and expenses directly attributable to each reportable segment. Transactions between the reportable segments are carried out at internally agreed rates and are reflected in the operating results of the reportable segments. Revenue-sharing agreements are used to allocate external client revenues to reportable segments where several reportable segments are involved in the value creation chain. Total intersegment revenues for the Group are immaterial, as the majority of the revenues are allocated across the segments by means of revenue-sharing agreements. Interest income earned from managing UBS's consolidated equity is allocated to the reportable segments based on average attributed equity and currency composition. Assets and liabilities of the reportable segments are funded through and invested with Group Functions, and the net interest margin is reflected in the results of each reportable segment.

Segment assets are based on a third-party view and do not include intercompany balances. This view is in line with internal reporting to the GEB. If one operating segment is involved in an external transaction together with another operating segment or Group Functions, additional criteria are considered to determine the segment that will report the associated assets. This will include a consideration of which segment's business needs are being addressed by the transaction and which segment is providing the funding and / or resources. Allocation of liabilities follows the same principles.

Non-current assets disclosed for segment reporting purposes represent assets that are expected to be recovered more than 12 months after the reporting date, excluding financial instruments, deferred tax assets and post-employment benefits.

Note 2a Segment reporting (continued)

USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	UBS
For the year ended 31 December 2022						
Net interest income	5,273	2,191	(19)	(242)	(584)	6,621
Non-interest income	13,694	2,111	2,980[1]	8,958	199	27,942
Total revenues	18,967	4,302	2,961	8,717	(385)	34,563
Credit loss expense / (release)	0	39	0	(12)	3	29
Operating expenses	13,989	2,452	1,564	6,832	92	24,930
Operating profit / (loss) before tax	**4,977**	**1,812**	**1,397**	**1,897**	**(480)**	**9,604**
Tax expense / (benefit)						1,942
Net profit / (loss)						**7,661**
Additional information						
Total assets	388,530	235,226	17,348	391,320	71,940	1,104,364
Additions to non-current assets	42	13	1	34	1,970	2,060

USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	UBS
For the year ended 31 December 2021						
Net interest income	4,244	2,120	(15)	481	(127)	6,705
Non-interest income	15,175	2,143	2,632	8,972	(233)	28,689
Total revenues	19,419	4,263	2,617	9,454	(359)	35,393
Credit loss expense / (release)	(29)	(86)	1	(34)	0	(148)
Operating expenses	14,665	2,618	1,586	6,858	330	26,058
Operating profit / (loss) before tax	**4,783**	**1,731**	**1,030**	**2,630**	**(689)**	**9,484**
Tax expense / (benefit)						1,998
Net profit / (loss)						**7,486**
Additional information						
Total assets[2]	395,235	225,370	25,639	346,431	124,507	1,117,182
Additions to non-current assets	56	16	1	30	1,989	2,091

USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	UBS
For the year ended 31 December 2020						
Net interest income	4,027	2,049	(17)	284	(481)	5,862
Non-interest income[3]	13,107	1,858	2,993	9,235	30	27,222
Total revenues	17,134	3,908	2,975	9,519	(452)	33,084
Credit loss expense / (release)	88	257	2	305	42	694
Operating expenses	13,026	2,392	1,519	6,732	567	24,235
Operating profit / (loss) before tax	**4,019**	**1,259**	**1,455**	**2,482**	**(1,060)**	**8,155**
Tax expense / (benefit)						1,583
Net profit / (loss)						**6,572**
Additional information						
Total assets	367,714	231,657	28,589	369,683	128,122	1,125,765
Additions to non-current assets	5	12	385	150	2,294	2,847

1 Includes an USD 848m gain in Asset Management related to the sale of UBS's shareholding in Mitsubishi Corp.-UBS Realty Inc. 2 During 2022, UBS refined the methodology applied to allocate balance sheet resources from Group Functions to the business divisions, with prospective effect. If the new methodology had been applied as of 31 December 2021, balance sheet assets allocated to business divisions would have been USD 26bn higher, of which USD 14bn related to the Investment Bank. 3 Includes a USD 631m net gain on the sale of a majority stake in Fondcenter AG (now Clearstream Fund Centre AG), of which USD 571m was recognized in Asset Management and USD 60m was recognized in Global Wealth Management.

Note 2b Segment reporting by geographic location

The operating regions shown in the table below correspond to the regional management structure of the Group. The allocation of total revenues to these regions reflects, and is consistent with, the basis on which the business is managed and its performance is evaluated. These allocations involve assumptions and judgments that management considers to be reasonable, and may be refined to reflect changes in estimates or management structure. The main principles of the allocation methodology are that client revenues are attributed to the domicile of the given client and trading and portfolio management revenues are attributed to the country where the risk is managed. This revenue attribution is consistent with the mandate of the regional Presidents. Certain revenues, such as those related to Non-core and Legacy Portfolio in Group Functions, are managed at a Group level. These revenues are included in the *Global* line.

The geographic analysis of non-current assets is based on the location of the entity in which the given assets are recorded.

For the year ended 31 December 2022

	Total revenues[1]		Total non-current assets	
	USD bn	Share %	USD bn	Share %
Americas[2]	13.8	40	8.9	46
Asia Pacific	5.6	16	1.5	8
Europe, Middle East and Africa (excluding Switzerland)	7.0	20	2.9	15
Switzerland	7.7	22	6.3	32
Global	0.5	1	0.0	0
Total	34.6	100	19.7	100

For the year ended 31 December 2021

	Total revenues[1]		Total non-current assets	
	USD bn	Share %	USD bn	Share %
Americas[2]	14.5	41	9.0	44
Asia Pacific	6.5	18	1.5	7
Europe, Middle East and Africa (excluding Switzerland)	7.0	20	2.9	14
Switzerland	7.8	22	7.1	35
Global	(0.3)	(1)	0.0	0
Total	**35.4**	**100**	**20.5**	**100**

For the year ended 31 December 2020

	Total revenues[1]		Total non-current assets	
	USD bn	Share %	USD bn	Share %
Americas[2]	13.2	40	9.0	42
Asia Pacific	6.1	18	1.5	7
Europe, Middle East and Africa (excluding Switzerland)	6.5	20	3.0	14
Switzerland	7.1	22	7.6	36
Global	0.1	0	0.0	0
Total	**33.1**	**100**	**21.1**	**100**

1 During 2022, UBS changed the presentation of its Income statement. Total operating income was renamed Total revenues and excludes Credit loss expense / (release). Note 2b, including prior-period information, has been updated to reflect the new presentation structure, with the disclosure of Total revenues instead of Total operating income. Refer to Note 1b for more information. 2 Predominantly related to the USA.

Note 3 Net interest income and other net income from financial instruments measured at fair value through profit or loss

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Net interest income from financial instruments measured at fair value through profit or loss and other	1,403	1,431	1,299
Other net income from financial instruments measured at fair value through profit or loss	7,517	5,850	6,960
of which: net gains / (losses) from financial liabilities designated at fair value [1]	*17,037*	*(6,582)*	*1,509*
Total net income from financial instruments measured at fair value through profit or loss and other	**8,920**	**7,281**	**8,259**
Net interest income			
Interest income from loans and deposits[2]	9,612	6,488	6,690
Interest income from securities financing transactions measured at amortized cost [3]	1,378	513	862
Interest income from other financial instruments measured at amortized cost	545	284	335
Interest income from debt instruments measured at fair value through other comprehensive income	74	115	101
Interest income from derivative instruments designated as cash flow hedges	173	1,133	822
Total interest income from financial instruments measured at amortized cost and fair value through other comprehensive income	**11,782**	**8,533**	**8,810**
Interest expense on loans and deposits[4]	2,579	523	1,031
Interest expense on securities financing transactions measured at amortized cost [5]	1,089	1,102	870
Interest expense on debt issued	2,803	1,533	2,237
Interest expense on lease liabilities	92	102	110
Total interest expense from financial instruments measured at amortized cost	**6,564**	**3,259**	**4,247**
Total net interest income from financial instruments measured at amortized cost and fair value through other comprehensive income	**5,218**	**5,274**	**4,563**
Total net interest income from financial instruments measured at fair value through profit or loss and other	**1,403**	**1,431**	**1,299**
Total net interest income	**6,621**	**6,705**	**5,862**

1 Excludes fair value changes of hedges related to financial liabilities designated at fair value and foreign currency translation effects arising from translating foreign currency transactions into the respective functional currency, both of which are reported within Other net income from financial instruments measured at fair value through profit or loss. 2022 included net gains of USD 4,112m (net losses of USD 2,068m and USD 72m in 2021 and 2020, respectively), driven by financial liabilities related to unit-linked investment contracts, which are designated at fair value through profit or loss. This was offset by net losses of USD 4,112m (net gains of USD 2,068m and USD 72m in 2021 and 2020, respectively), related to financial assets for unit-linked investment contracts that are mandatorily measured at fair value through profit or loss not held for trading. 2 Consists of interest income from cash and balances at central banks, loans and advances to banks and customers, and cash collateral receivables on derivative instruments, as well as negative interest on amounts due to banks, customer deposits, and cash collateral payables on derivative instruments. 3 Includes negative interest, including fees, on payables from securities financing transactions measured at amortized cost. 4 Consists of interest expense on amounts due to banks, cash collateral payables on derivative instruments, and customer deposits, as well as negative interest on cash and balances at central banks, loans and advances to banks, and cash collateral receivables on derivative instruments. 5 Includes negative interest, including fees, on receivables from securities financing transactions measured at amortized cost.

Note 4 Net fee and commission income

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Underwriting fees	579	1,463	1,085
M&A and corporate finance fees	804	1,102	736
Brokerage fees	3,484	4,382	4,132
Investment fund fees	4,942	5,790	5,289
Portfolio management and related services	9,059	9,762	8,009
Other	1,920	1,874	1,710
Total fee and commission income[1]	**20,789**	**24,372**	**20,961**
of which: recurring	*14,229*	*15,410*	*13,009*
of which: transaction-based	*6,492*	*8,692*	*7,491*
of which: performance-based	*68*	*269*	*461*
Fee and commission expense	**1,823**	**1,985**	**1,775**
Net fee and commission income	**18,966**	**22,387**	**19,186**

1 For the year ended 31 December 2022, reflects third-party fee and commission income of USD 12,990m for Global Wealth Management, USD 1,654m for Personal & Corporate Banking, USD 2,840m for Asset Management, USD 3,296m for the Investment Bank and USD 10m for Group Functions (for the year ended 31 December 2021: USD 14,545m for Global Wealth Management, USD 1,644m for Personal & Corporate Banking, USD 3,337m for Asset Management, USD 4,814m for the Investment Bank and USD 33m for Group Functions; for the year ended 31 December 2020: USD 12,475m for Global Wealth Management, USD 1,426m for Personal & Corporate Banking, USD 3,129m for Asset Management, USD 3,882m for the Investment Bank and USD 49m for Group Functions).

Note 5 Other income

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Associates, joint ventures and subsidiaries			
Net gains / (losses) from acquisitions and disposals of subsidiaries[1]	148	(11)	635[2]
Net gains / (losses) from disposals of investments in associates and joint ventures	844[3]	41	0
Share of net profits of associates and joint ventures	32	105	84
Total	1,024	135	719
Net gains / (losses) from disposals of financial assets measured at fair value through other comprehensive income	(1)	9	40
Income from properties[4]	20	23	26
Net gains / (losses) from properties held for sale	24	100[5]	76[6]
Other	391[7]	185[8]	216[9]
Total other income	1,459	452	1,076

1 Includes foreign exchange gains / (losses) reclassified from other comprehensive income related to the disposal or closure of foreign operations. Refer to Note 29 for more information about UBS's acquisitions and disposals of subsidiaries and businesses. 2 Includes a USD 631m net gain on the sale of a majority stake in Fondcenter AG (now Clearstream Fund Centre AG). 3 Includes an USD 848m gain related to the sale of UBS's shareholding in Mitsubishi Corp.-UBS Realty Inc. Refer to Note 28b for more information. 4 Includes rent received from third parties. 5 Mainly relates to the sale of a property in Basel. 6 Includes net gains of USD 140m arising from sale-and-leaseback transactions, primarily related to a property in Geneva, partly offset by remeasurement losses relating to properties that were reclassified as held for sale. 7 Mainly relates to a portion of the total USD 133m gain on the sale of UBS's domestic wealth management business in Spain of USD 111m (with the remaining amount disclosed within Net gains / (losses) from acquisitions and disposals of subsidiaries), income of USD 111m related to a legacy litigation settlement and a legacy bankruptcy claim, as well as gains of USD 98m related to the repurchase of UBS's own debt instruments (compared with losses of USD 60m in 2021). 8 Includes a gain of USD 100m from the sale of UBS's domestic wealth management business in Austria. 9 Includes a USD 215m gain on the sale of intellectual property rights associated with the Bloomberg Commodity Index family.

Note 6 Personnel expenses

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Salaries[1]	7,045	7,339	7,023
Variable compensation[2]	7,954	8,280	7,520
of which: performance awards	*3,205*	*3,190*	*3,209*[3]
of which: financial advisors[4]	*4,508*	*4,860*	*4,091*
of which: other	*241*	*229*	*220*
Contractors	323	381	375
Social security	944	978	899[3]
Post-employment benefit plans[5]	794	833	845
of which: defined benefit plans	*437*	*470*	*502*
of which: defined contribution plans	*357*	*363*	*343*
Other personnel expenses	621	576	561[3]
Total personnel expenses	17,680	18,387	17,224

1 Includes role-based allowances. 2 Refer to Note 27 for more information. 3 During 2020, UBS modified the conditions for continued vesting of certain outstanding deferred compensation awards for qualifying employees, resulting in an expense of approximately USD 280m, of which USD 240m is disclosed within Variable compensation – performance awards, USD 20m within Social security and USD 20m within Other personnel expenses. 4 Consists of cash and deferred compensation awards and is based on compensable revenues and firm tenure using a formulaic approach. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 5 Refer to Note 26 for more information. Includes curtailment gains of USD 20m for the year ended 31 December 2022 (for the year ended 31 December 2021: USD 80m; for the year ended 31 December 2020: USD 0m), which represent a reduction in the defined benefit obligation related to the Swiss pension plan resulting from a decrease in headcount following restructuring activities.

Note 7 General and administrative expenses

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Outsourcing costs	896	893	951
Technology costs	1,146	1,055	949
Consulting, legal and audit fees	592	540	646
Real estate and logistics costs	605	634	671
Market data services	419	417	413
Marketing and communication	265	242	217
Travel and entertainment	172	72	84
Litigation, regulatory and similar matters[1]	348	911	197
Other	746	788	757
Total general and administrative expenses	5,189	5,553	4,885

1 Reflects the net increase in provisions for litigation, regulatory and similar matters recognized in the income statement. Refer to Note 17 for more information.

Note 8 Income taxes

USD m	For the year ended 31.12.22	31.12.21	31.12.20
Tax expense / (benefit)			
Swiss			
Current	730	680	482
Deferred	(15)	34	116
Total Swiss	715	714	598
Non-Swiss			
Current	718	884	749
Deferred	509	400	236
Total non-Swiss	1,227	1,284	985
Total income tax expense / (benefit) recognized in the income statement	1,942	1,998	1,583

Income tax recognized in the income statement

The Swiss current tax expenses related to taxable profits of UBS Switzerland AG and other Swiss entities.

The non-Swiss current tax expenses related to taxable profits of non-Swiss subsidiaries and branches. The non-Swiss deferred tax expenses include expenses of USD 678m that primarily related to the amortization of deferred tax assets (DTAs) previously recognized in relation to tax losses carried forward and deductible temporary differences of UBS Americas Inc., which were partly offset by a benefit of USD 169m in respect of net upward revaluations of DTAs for certain entities, primarily in connection with our business planning process.

The effective tax rate for the year of 20.2% is lower than our projected rate for the year of 24%, primarily as a result of the aforementioned deferred tax benefit of USD 169m in respect of net upward revaluations of DTAs and because no tax expenses were recognized in respect of pre-tax gains from dispositions of UBS subsidiaries in 2022.

› **Refer to Note 29 for more information about disposals of subsidiaries**

USD m	For the year ended 31.12.22	31.12.21	31.12.20
Operating profit / (loss) before tax	9,604	9,484	8,155
of which: Swiss	*4,425*	*3,334*	*3,403*
of which: non-Swiss	*5,178*	*6,150*	*4,752*
Income taxes at Swiss tax rate of 18% for 2022, 18.5% for 2021 and 19.5% for 2020	1,729	1,755	1,590
Increase / (decrease) resulting from:			
Non-Swiss tax rates differing from Swiss tax rate	284	234	110
Tax effects of losses not recognized	74	124	144
Previously unrecognized tax losses now utilized	(217)	(179)	(212)
Non-taxable and lower-taxed income	(335)	(278)	(394)
Non-deductible expenses and additional taxable income	429	510	385
Adjustments related to prior years, current tax	(41)	(40)	(67)
Adjustments related to prior years, deferred tax	13	(10)	12
Change in deferred tax recognition	(217)	(342)	(381)
Adjustments to deferred tax balances arising from changes in tax rates	0	(5)	234
Other items	222	231	161
Income tax expense / (benefit)	1,942	1,998	1,583

Note 8 Income taxes (continued)

The components of operating profit before tax, and the differences between income tax expense reflected in the financial statements and the amounts calculated at the Swiss tax rate, are provided in the table above and explained below.

Component	Description
Non-Swiss tax rates differing from the Swiss tax rate	To the extent that Group profits or losses arise outside Switzerland, the applicable local tax rate may differ from the Swiss tax rate. This item reflects, for such profits, an adjustment from the tax expense that would arise at the Swiss tax rate to the tax expense that would arise at the applicable local tax rate. Similarly, it reflects, for such losses, an adjustment from the tax benefit that would arise at the Swiss tax rate to the tax benefit that would arise at the applicable local tax rate.
Tax effects of losses not recognized	This item relates to tax losses of entities arising in the year that are not recognized as DTAs and where no tax benefit arises in relation to those losses. Therefore, the tax benefit calculated by applying the local tax rate to those losses as described above is reversed.
Previously unrecognized tax losses now utilized	This item relates to taxable profits of the year that are offset by tax losses of previous years for which no DTAs were previously recorded. Consequently, no current tax or deferred tax expense arises in relation to those taxable profits and the tax expense calculated by applying the local tax rate on those profits is reversed.
Non-taxable and lower-taxed income	This item relates to tax deductions for the year in respect of permanent differences. These include deductions in respect of profits that are either not taxable or are taxable at a lower rate of tax than the local tax rate. They also include deductions made for tax purposes, which are not reflected in the accounts.
Non-deductible expenses and additional taxable income	This item relates to additional taxable income for the year in respect of permanent differences. These include income that is recognized for tax purposes by an entity but is not included in its profit that is reported in the financial statements, as well as expenses for the year that are non-deductible (e.g., client entertainment costs are not deductible in certain locations).
Adjustments related to prior years, current tax	This item relates to adjustments to current tax expense for prior years (e.g., if the tax payable for a year is agreed with the tax authorities in an amount that differs from the amount previously reflected in the financial statements).
Adjustments related to prior years, deferred tax	This item relates to adjustments to deferred tax positions recognized in prior years (e.g., if a tax loss for a year is fully recognized and the amount of the tax loss agreed with the tax authorities is expected to differ from the amount previously recognized as DTAs in the accounts).
Change in deferred tax recognition	This item relates to changes in DTAs, including changes in DTAs previously recognized resulting from reassessments of expected future taxable profits. It also includes changes in temporary differences in the year, for which deferred tax is not recognized.
Adjustments to deferred tax balances arising from changes in tax rates	This item relates to remeasurements of DTAs and liabilities recognized due to changes in tax rates. These have the effect of changing the future tax saving that is expected from tax losses or deductible tax differences and therefore the amount of DTAs recognized or, alternatively, changing the tax cost of additional taxable income from taxable temporary differences and therefore the deferred tax liability.
Other items	Other items include other differences between profits or losses at the local tax rate and the actual local tax expense or benefit, including movements in provisions for uncertain positions in relation to the current year and other items.

Income tax recognized directly in equity

A net tax benefit of USD 1,116m was recognized in *Other comprehensive income* (2021: net benefit of USD 479m) and a net tax benefit of USD 13m was recognized in *Share premium* (2021: net expense of USD 88m).

Note 8 Income taxes (continued)

Deferred tax assets and liabilities

The Group has gross DTAs, valuation allowances and recognized DTAs related to tax loss carry-forwards and deductible temporary differences, as well as deferred tax liabilities in respect of taxable temporary differences, as shown in the table below. The valuation allowances reflect DTAs that were not recognized because, as of the last remeasurement period, management did not consider it probable that there would be sufficient future taxable profits available to utilize the related tax loss carry-forwards and deductible temporary differences.

The recognition of DTAs is supported by forecasts of taxable profits for the entities concerned. In addition, tax planning opportunities are available that would result in additional future taxable income and these would be utilized, if necessary.

Deferred tax liabilities are recognized in respect of investments in subsidiaries, branches and associates, and interests in joint arrangements, except to the extent that the Group can control the timing of the reversal of the associated taxable temporary difference and it is probable that such will not reverse in the foreseeable future. However, as of 31 December 2022, this exception was not considered to apply to any taxable temporary differences.

USD m	31.12.22			31.12.21		
Deferred tax assets[1]	Gross	Valuation allowance	Recognized	Gross	Valuation allowance	Recognized
Tax loss carry-forwards	12,708	(8,720)	3,988	13,636	(9,193)	4,443
Temporary differences	5,814	(414)	5,400	5,133	(700)	4,433
of which: related to real estate costs capitalized for US tax purposes	*2,485*	*0*	*2,485*	*2,272*	*0*	*2,272*
of which: related to compensation and benefits	*1,194*	*(175)*	*1,018*	*1,222*	*(209)*	*1,013*
of which: related to cash flow hedges	*947*	*0*	*947*	*3*	*0*	*3*
of which: other	*1,188*	*(238)*	*950*	*1,636*	*(491)*	*1,145*
Total deferred tax assets	18,522	(9,134)	9,389[2]	18,769	(9,893)	8,876[2]
of which: related to the US			*8,294*			*8,521*
of which: related to other locations			*1,095*			*355*
Deferred tax liabilities						
Cash flow hedges			0			118
Other			236			183
Total deferred tax liabilities			236			300

1 After offset of DTLs, as applicable. 2 As of 31 December 2022, the Group recognized DTAs of USD 471m (31 December 2021: USD 77m) in respect of entities that incurred losses in either the current or preceding year.

In general, US federal tax losses incurred prior to 31 December 2017 can be carried forward for 20 years. US federal tax losses incurred after that date can be carried forward indefinitely, although the utilization of such losses is limited to 80% of the entity's future year taxable profits. UK tax losses can also be carried forward indefinitely; they can shelter up to either 25% or 50% of future year taxable profits, depending on when the tax losses arose. The amounts of US tax loss carry-forwards that are included in the table below are based on their amount for federal tax purposes rather than for state and local tax purposes.

Unrecognized tax loss carry-forwards

USD m	31.12.22	31.12.21
Within 1 year	231	141
From 2 to 5 years	2,184	1,026
From 6 to 10 years	11,106	13,283
From 11 to 20 years	1,610	2,093
No expiry	16,960	18,147
Total	32,091	34,690
of which: related to the US[1]	*13,350*	*14,870*
of which: related to the UK	*14,332*	*14,909*
of which: related to other locations	*4,409*	*4,911*

1 Related to UBS AG's US branch.

Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement

The tables below provide information about financial instruments and certain credit lines that are subject to expected credit loss (ECL) requirements. UBS's ECL disclosure segments, or "ECL segments" are aggregated portfolios based on shared risk characteristics and on the same or similar rating methods applied. The key segments are presented in the table below.

› Refer to Note 19 for more information about expected credit loss measurement

Segment	Segment description	Description of credit risk sensitivity	Business division
Private clients with mortgages	Lending to private clients secured by owner-occupied real estate and personal account overdrafts of those clients	Sensitive to the interest rate environment, unemployment levels, real estate collateral values and other regional aspects	– Personal & Corporate Banking – Global Wealth Management
Real estate financing	Rental or income-producing real estate financing to private and corporate clients secured by real estate	Sensitive to unemployment levels, the interest rate environment, real estate collateral values and other regional aspects	– Personal & Corporate Banking – Global Wealth Management – Investment Bank
Large corporate clients	Lending to large corporate and multi-national clients	Sensitive to GDP developments, unemployment levels, seasonality, business cycles and collateral values (diverse collateral, including real estate and other collateral types)	– Personal & Corporate Banking – Investment Bank
SME clients	Lending to small and medium-sized corporate clients	Sensitive to GDP developments, unemployment levels, the interest rate environment and, to some extent, seasonality, business cycles and collateral values (diverse collateral, including real estate and other collateral types)	– Personal & Corporate Banking
Lombard	Loans secured by pledges of marketable securities, guarantees and other forms of collateral (including concentration in hedge funds, private equity and unlisted equities), as well as unsecured recourse lending	Sensitive to equity and debt markets (e.g., changes in collateral values)	– Global Wealth Management
Credit cards	Credit card solutions in Switzerland and the US	Sensitive to unemployment levels	– Personal & Corporate Banking – Global Wealth Management
Commodity trade finance	Working capital financing of commodity traders, generally extended on a self-liquidating transactional basis	Sensitive primarily to the strength of individual transaction structures and collateral values (price volatility of commodities), as the primary source for debt service is directly linked to the shipments financed	– Personal & Corporate Banking
Financial intermediaries and hedge funds	Lending to financial institutions and pension funds, including exposures to broker-dealers and clearing houses	Sensitive to GDP development, the interest rate environment, price and volatility risks in financial markets, and regulatory and political risk	– Personal & Corporate Banking – Investment Bank

› Refer to Note 19f for more details regarding sensitivity

Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement (continued)

The tables below provide ECL exposure and ECL allowance and provision information about financial instruments and certain non-financial instruments that are subject to ECLs.

USD m	31.12.22							
	Carrying amount[1]				ECL allowances			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	169,445	169,402	44	0	(12)	0	(12)	0
Loans and advances to banks	14,792	14,792	1	0	(6)	(5)	(1)	0
Receivables from securities financing transactions measured at amortized cost	67,814	67,814	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	35,032	35,032	0	0	0	0	0	0
Loans and advances to customers	387,220	370,095	15,587	1,538	(783)	(129)	(180)	(474)
of which: Private clients with mortgages	*156,930*	*147,651*	*8,579*	*699*	*(161)*	*(27)*	*(107)*	*(28)*
of which: Real estate financing	*46,470*	*43,112*	*3,349*	*9*	*(41)*	*(17)*	*(23)*	*0*
of which: Large corporate clients	*12,226*	*10,733*	*1,189*	*303*	*(130)*	*(24)*	*(14)*	*(92)*
of which: SME clients	*13,903*	*12,211*	*1,342*	*351*	*(251)*	*(26)*	*(22)*	*(203)*
of which: Lombard	*132,287*	*132,196*	*0*	*91*	*(26)*	*(9)*	*0*	*(17)*
of which: Credit cards	*1,834*	*1,420*	*382*	*31*	*(36)*	*(7)*	*(10)*	*(19)*
of which: Commodity trade finance	*3,272*	*3,261*	*0*	*11*	*(96)*	*(6)*	*0*	*(90)*
Other financial assets measured at amortized cost	53,264	52,704	413	147	(86)	(17)	(6)	(63)
of which: Loans to financial advisors	*2,611*	*2,357*	*128*	*126*	*(59)*	*(7)*	*(2)*	*(51)*
Total financial assets measured at amortized cost	**727,568**	**709,839**	**16,044**	**1,685**	**(889)**	**(154)**	**(199)**	**(537)**
Financial assets measured at fair value through other comprehensive income	**2,239**	**2,239**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets within the scope of ECL requirements	**729,807**	**712,078**	**16,044**	**1,685**	**(889)**	**(154)**	**(199)**	**(537)**

	Total exposure				ECL provisions			
Off-balance sheet (within the scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	22,167	19,805	2,254	108	(48)	(13)	(9)	(26)
of which: Large corporate clients	*3,663*	*2,883*	*721*	*58*	*(26)*	*(2)*	*(3)*	*(21)*
of which: SME clients	*1,337*	*1,124*	*164*	*49*	*(5)*	*(1)*	*(1)*	*(3)*
of which: Financial intermediaries and hedge funds	*11,833*	*10,513*	*1,320*	*0*	*(12)*	*(8)*	*(4)*	*0*
of which: Lombard	*2,376*	*2,376*	*0*	*1*	*(1)*	*0*	*0*	*(1)*
of which: Commodity trade finance	*2,121*	*2,121*	*0*	*0*	*(1)*	*(1)*	*0*	*0*
Irrevocable loan commitments	39,996	37,531	2,341	124	(111)	(59)	(52)	0
of which: Large corporate clients	*23,611*	*21,488*	*2,024*	*99*	*(93)*	*(49)*	*(45)*	*0*
Forward starting reverse repurchase and securities borrowing agreements	3,801	3,801	0	0	0	0	0	0
Committed unconditionally revocable credit lines	41,390	39,521	1,833	36	(40)	(32)	(8)	0
of which: Real estate financing	*8,711*	*8,528*	*183*	*0*	*(6)*	*(6)*	*0*	*0*
of which: Large corporate clients	*4,578*	*4,304*	*268*	*5*	*(4)*	*(1)*	*(2)*	*0*
of which: SME clients	*4,723*	*4,442*	*256*	*26*	*(19)*	*(16)*	*(3)*	*0*
of which: Lombard	*7,855*	*7,854*	*0*	*1*	*0*	*0*	*0*	*0*
of which: Credit cards	*9,390*	*8,900*	*487*	*3*	*(7)*	*(5)*	*(2)*	*0*
of which: Commodity trade finance	*327*	*327*	*0*	*0*	*0*	*0*	*0*	*0*
Irrevocable committed prolongation of existing loans	4,696	4,600	94	2	(2)	(2)	0	0
Total off-balance sheet financial instruments and credit lines	**112,050**	**105,258**	**6,522**	**270**	**(201)**	**(106)**	**(69)**	**(26)**
Total allowances and provisions					**(1,091)**	**(259)**	**(267)**	**(564)**

1 The carrying amount of financial assets measured at amortized cost represents the total gross exposure net of the respective ECL allowances.

Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement (continued)

USD m	31.12.21							
	Carrying amount[1]				ECL allowances			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	192,817	192,817	0	0	0	0	0	0
Loans and advances to banks	15,480	15,453	26	1	(8)	(7)	(1)	0
Receivables from securities financing transactions measured at amortized cost	75,012	75,012	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	30,514	30,514	0	0	0	0	0	0
Loans and advances to customers	397,761	380,564	15,620	1,577	(850)	(126)	(152)	(572)
of which: Private clients with mortgages	*152,479*	*143,505*	*8,262*	*711*	*(132)*	*(28)*	*(71)*	*(33)*
of which: Real estate financing	*43,945*	*40,463*	*3,472*	*9*	*(60)*	*(19)*	*(40)*	*0*
of which: Large corporate clients	*13,990*	*12,643*	*1,037*	*310*	*(170)*	*(22)*	*(16)*	*(133)*
of which: SME clients	*14,004*	*12,076*	*1,492*	*436*	*(259)*	*(19)*	*(15)*	*(225)*
of which: Lombard	*149,283*	*149,255*	*0*	*27*	*(33)*	*(6)*	*0*	*(28)*
of which: Credit cards	*1,716*	*1,345*	*342*	*29*	*(36)*	*(10)*	*(9)*	*(17)*
of which: Commodity trade finance	*3,813*	*3,799*	*7*	*7*	*(114)*	*(6)*	*0*	*(108)*
Other financial assets measured at amortized cost	26,209	25,718	302	189	(109)	(27)	(7)	(76)
of which: Loans to financial advisors	*2,453*	*2,184*	*106*	*163*	*(86)*	*(19)*	*(3)*	*(63)*
Total financial assets measured at amortized cost	**737,794**	**720,079**	**15,948**	**1,767**	**(969)**	**(161)**	**(160)**	**(647)**
Financial assets measured at fair value through other comprehensive income	**8,844**	**8,844**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets within the scope of ECL requirements	**746,638**	**728,923**	**15,948**	**1,767**	**(969)**	**(161)**	**(160)**	**(647)**

	Total exposure				ECL provisions			
Off-balance sheet (within the scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	20,972	19,695	1,127	150	(41)	(18)	(8)	(15)
of which: Large corporate clients	*3,464*	*2,567*	*793*	*104*	*(6)*	*(3)*	*(3)*	*0*
of which: SME clients	*1,353*	*1,143*	*164*	*46*	*(8)*	*(1)*	*(1)*	*(7)*
of which: Financial intermediaries and hedge funds	*9,575*	*9,491*	*84*	*0*	*(17)*	*(13)*	*(4)*	*0*
of which: Lombard	*2,454*	*2,454*	*0*	*0*	*(1)*	*0*	*0*	*(1)*
of which: Commodity trade finance	*3,137*	*3,137*	*0*	*0*	*(1)*	*(1)*	*0*	*0*
Irrevocable loan commitments	39,478	37,097	2,335	46	(114)	(72)	(42)	0
of which: Large corporate clients	*23,922*	*21,811*	*2,102*	*9*	*(100)*	*(66)*	*(34)*	*0*
Forward starting reverse repurchase and securities borrowing agreements	1,444	1,444	0	0	0	0	0	0
Committed unconditionally revocable credit lines	40,778	38,207	2,508	63	(38)	(28)	(10)	0
of which: Real estate financing	*7,328*	*7,046*	*281*	*0*	*(5)*	*(4)*	*(1)*	*0*
of which: Large corporate clients	*5,358*	*4,599*	*736*	*23*	*(7)*	*(4)*	*(3)*	*0*
of which: SME clients	*5,160*	*4,736*	*389*	*35*	*(15)*	*(11)*	*(3)*	*0*
of which: Lombard	*8,670*	*8,670*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Credit cards	*9,466*	*9,000*	*462*	*4*	*(6)*	*(5)*	*(2)*	*0*
of which: Commodity trade finance	*117*	*117*	*0*	*0*	*0*	*0*	*0*	*0*
Irrevocable committed prolongation of existing loans	5,611	5,527	36	48	(3)	(3)	0	0
Total off-balance sheet financial instruments and credit lines	**108,284**	**101,971**	**6,006**	**307**	**(196)**	**(121)**	**(60)**	**(15)**
Total allowances and provisions					**(1,165)**	**(282)**	**(220)**	**(662)**

1 The carrying amount of financial assets measured at amortized cost represents the total gross exposure net of the respective ECL allowances.

Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement (continued)

Coverage ratios are calculated for the core loan portfolio by taking ECL allowances and provisions divided by the gross carrying amount of the exposures. Core loan exposure is defined as the sum of *Loans and advances to customers* and *Loans to financial advisors*.

These ratios are influenced by the following key factors:
- Lombard loans are generally secured with marketable securities in portfolios that are, as a rule, highly diversified, with strict lending policies that are intended to ensure that credit risk is minimal under most circumstances;
- mortgage loans to private clients and real estate financing are controlled by conservative eligibility criteria, including low loan-to-value ratios and strong debt service capabilities;
- the amount of unsecured retail lending (including credit cards) is insignificant;
- lending in Switzerland includes government-backed COVID-19 loans;
- contractual maturities in the loan portfolio, which are a factor in the calculation of ECLs, are generally short, with Lombard lending typically having average contractual maturities of 12 months or less, real estate lending generally between two and three years in Switzerland, with long dated maturities in the US, and corporate lending between one and two years with related loan commitments up to four years; and
- write-offs of ECL allowances against the gross loan balances when all or part of a financial asset is deemed uncollectible or forgiven, reduces the coverage ratios.

The total combined on- and off-balance sheet coverage ratio was at 21 basis points as of 31 December 2022, 1 basis point lower than on 31 December 2021. The combined stage 1 and 2 ratio of 10 basis points was unchanged compared with 31 December 2021; the stage 3 ratio was 22%, 2 percentage points lower than as of 31 December 2021.

	31.12.22								
	Gross carrying amount (USD m)				ECL coverage (bps)				
On-balance sheet	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 1&2	Stage 3
Private clients with mortgages	157,091	147,678	8,686	727	10	2	123	9	381
Real estate financing	46,511	43,129	3,372	9	9	4	70	9	232
Total real estate lending	203,602	190,807	12,059	736	10	2	108	9	379
Large corporate clients	12,356	10,757	1,204	395	105	22	120	32	2,325
SME clients	14,154	12,237	1,364	553	177	22	161	36	3,664
Total corporate lending	26,510	22,994	2,567	949	144	22	142	34	3,106
Lombard	132,313	132,205	0	108	2	1	0	1	1,580
Credit cards	1,869	1,427	393	50	190	46	256	91	3,779
Commodity trade finance	3,367	3,266	0	101	285	18	0	18	8,901
Other loans and advances to customers	20,342	19,525	748	68	21	7	38	8	3,769
Loans to financial advisors	2,670	2,364	130	176	221	28	124	33	2,870
Total other lending	160,561	158,787	1,270	503	16	3	114	4	4,016
Total[1]	**390,672**	**372,588**	**15,896**	**2,188**	**22**	**4**	**114**	**8**	**2,398**

	Gross exposure (USD m)				ECL coverage (bps)				
Off-balance sheet	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 1&2	Stage 3
Private clients with mortgages	6,535	6,296	236	3	5	4	18	4	1,183
Real estate financing	10,054	9,779	275	0	6	7	0	6	0
Total real estate lending	16,589	16,075	511	3	6	6	2	6	1,288
Large corporate clients	32,126	28,950	3,013	163	38	18	165	32	1,263
SME clients	7,122	6,525	499	98	47	30	214	43	304
Total corporate lending	39,247	35,475	3,513	260	40	20	172	34	903
Lombard	12,919	12,918	0	1	2	1	0	1	0
Credit cards	9,390	8,900	487	3	7	5	36	7	0
Commodity trade finance	2,459	2,459	0	0	3	3	0	3	0
Financial intermediaries and hedge funds	15,841	14,177	1,664	0	9	7	25	9	0
Other off-balance sheet commitments	11,803	11,454	346	3	11	8	68	9	0
Total other lending	52,412	49,907	2,498	7	7	5	33	6	0
Total[2]	**108,249**	**101,457**	**6,522**	**270**	**19**	**10**	**106**	**16**	**980**
Total on- and off-balance sheet[3]	**498,921**	**474,045**	**22,418**	**2,458**	**21**	**5**	**112**	**10**	**2,242**

1 Includes Loans and advances to customers and Loans to financial advisors which are presented on the balance sheet line Other assets measured at amortized cost. 2 Excludes Forward starting reverse repurchase and securities borrowing agreements. 3 Includes on-balance-sheet exposure, gross and off-balance-sheet exposure (notional) and the related ECL coverage ratio.

Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement (continued)

	31.12.21								
	Gross carrying amount (USD m)				ECL coverage (bps)				
On-balance sheet	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 1&2	Stage 3
Private clients with mortgages	152,610	143,533	8,333	744	9	2	85	6	446
Real estate financing	44,004	40,483	3,512	10	14	5	114	14	231
Total real estate lending	196,615	184,016	11,845	754	10	3	94	8	443
Large corporate clients	14,161	12,665	1,053	443	120	18	148	28	2,997
SME clients	14,263	12,095	1,507	661	182	16	103	25	3,402
Total corporate lending	28,424	24,760	2,560	1,104	151	17	121	26	3,240
Lombard	149,316	149,261	0	55	2	0	0	0	5,026
Credit cards	1,752	1,355	351	46	204	72	255	109	3,735
Commodity trade finance	3,927	3,805	7	115	290	15	3	15	9,388
Other loans and advances to customers	18,578	17,493	1,010	75	25	9	15	10	3,730
Loans to financial advisors	2,539	2,203	109	226	338	88	303	99	2,791
Total other lending	176,111	174,117	1,477	517	18	3	93	4	4,718
Total[1]	**401,150**	**382,893**	**15,882**	**2,374**	**23**	**4**	**98**	**8**	**2,673**

	Gross exposure (USD m)				ECL coverage (bps)				
Off-balance sheet	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 1&2	Stage 3
Private clients with mortgages	9,123	8,798	276	49	3	3	9	3	15
Real estate financing	8,766	8,481	285	0	9	7	88	9	0
Total real estate lending	17,889	17,278	562	49	6	5	49	6	15
Large corporate clients	32,748	28,981	3,630	136	34	25	110	35	1
SME clients	8,077	7,276	688	114	38	19	151	30	585
Total corporate lending	40,826	36,258	4,318	250	35	24	117	34	266
Lombard	14,438	14,438	0	0	1	0	0	0	0
Credit cards	9,466	9,000	462	4	7	5	34	7	0
Commodity trade finance	3,262	3,262	0	0	4	4	0	4	0
Financial intermediaries and hedge funds	12,153	11,784	369	0	15	12	120	15	0
Other off-balance sheet commitments	8,806	8,507	296	4	15	6	30	7	0
Total other lending	48,126	46,991	1,127	8	9	5	61	7	0
Total[2]	**106,840**	**100,527**	**6,006**	**307**	**18**	**12**	**100**	**17**	**486**
Total on- and off-balance sheet[3]	**507,990**	**483,420**	**21,888**	**2,681**	**22**	**6**	**99**	**10**	**2,423**

1 Includes Loans and advances to customers and Loans to financial advisors which are presented on the balance sheet line Other assets measured at amortized cost. 2 Excludes Forward starting reverse repurchase and securities borrowing agreements. 3 Includes on-balance-sheet exposure, gross and off-balance-sheet exposure (notional) and the related ECL coverage ratio.

Note 10 Derivative instruments

Overview

Over-the-counter (OTC) derivative contracts are usually traded under a standardized International Swaps and Derivatives Association (ISDA) master agreement or other recognized local industry-standard master agreements between UBS and its counterparties. Terms are negotiated directly with counterparties and the contracts have industry-standard settlement mechanisms prescribed by ISDA or similar industry-standard solutions. Other OTC derivatives are cleared through clearing houses, in particular interest rate swaps with LCH, where a settled-to-market method has been generally adopted, under which cash collateral exchanged on a daily basis is considered to legally settle the market value of the derivatives. Regulators in various jurisdictions have introduced rules requiring the payment and collection of initial and variation margins on certain OTC derivative contracts, which may have a bearing on price and other relevant terms.

Exchange-traded derivatives (ETD) are standardized in terms of their amounts and settlement dates, and are bought and sold on regulated exchanges. Exchanges offer the benefits of pricing transparency, standardized daily settlement of changes in value and, consequently, reduced credit risk.

Most of the Group's derivative transactions relate to sales and market-making activity. Sales activities include the structuring and marketing of derivative products to customers to enable them to take, transfer, modify or reduce current or expected risks. Market-making aims to directly support the facilitation and execution of client activity, and involves quoting bid and offer prices to other market participants with the aim of generating revenues based on spread and volume. The Group also uses various derivative instruments for hedging purposes.

› **Refer to Notes 15 and 20 for more information about derivative instruments**
› **Refer to Note 25 for more information about derivatives designated in hedge accounting relationships**

Risks of derivative instruments

The derivative financial assets shown on the balance sheet can be an important component of the Group's credit exposure; however, the positive replacement values related to a respective counterparty are rarely an adequate reflection of the Group's credit exposure in its derivatives business with that counterparty. This is generally the case because, on the one hand, replacement values can increase over time (potential future exposure), while, on the other hand, exposure may be mitigated by entering into master netting agreements and bilateral collateral arrangements. Both the exposure measures used internally by the Group to control credit risk and the capital requirements imposed by regulators reflect these additional factors.

› **Refer to Note 21 for more information about derivative financial assets and liabilities after consideration of netting potential permitted under enforceable netting arrangements**

› **Refer to the "Risk management and control" section of this report for more information about the risks arising from derivative instruments**

Derivative instruments

	31.12.22					31.12.21				
USD bn	Derivative financial assets	Notional amounts related to derivative financial assets[2,3]	Derivative financial liabilities	Notional amounts related to derivative financial liabilities[2,3]	Other notional amounts[2,4]	Derivative financial assets	Notional amounts related to derivative financial assets[2,3]	Derivative financial liabilities	Notional amounts related to derivative financial liabilities[2,3]	Other notional amounts[2,4]
Interest rate contracts	39.8	1,057.4	37.5	1,022.9	11,255.4	33.2	991.2	28.7	943.1	8,675.1
of which: forwards (OTC)[1]	*0.2*	*37.7*	*0.0*	*34.6*	*792.7*	*0.1*	*29.4*	*0.2*	*28.6*	*443.6*
of which: swaps (OTC)	*25.2*	*326.1*	*19.8*	*281.0*	*9,728.6*	*26.4*	*394.3*	*19.2*	*344.1*	*7,549.4*
of which: options (OTC)	*14.2*	*687.5*	*17.5*	*705.0*		*6.6*	*545.2*	*9.2*	*553.6*	
of which: futures (ETD)					*606.3*					*525.0*
of which: options (ETD)	*0.0*	*6.1*	*0.0*	*2.2*	*127.7*	*0.0*	*22.4*	*0.0*	*16.8*	*157.1*
Credit derivative contracts	1.0	36.8	1.2	37.1		1.4	44.7	1.8	46.3	
of which: credit default swaps (OTC)	*0.9*	*34.2*	*1.0*	*36.8*		*1.3*	*39.4*	*1.6*	*44.1*	
of which: total return swaps (OTC)	*0.1*	*0.9*	*0.2*	*0.3*		*0.1*	*1.3*	*0.2*	*1.7*	
Foreign exchange contracts	85.5	3,087.1	88.5	2,992.7	40.1	53.3	3,030.8	54.1	2,938.8	1.2
of which: forwards (OTC)	*26.5*	*853.4*	*28.6*	*910.2*		*23.8*	*1,008.9*	*23.8*	*1,043.2*	
of which: swaps (OTC)	*49.6*	*1,679.3*	*50.4*	*1,553.7*	*38.4*	*24.3*	*1,606.3*	*24.9*	*1,480.3*	
of which: options (OTC)	*9.3*	*551.6*	*9.2*	*521.6*		*5.2*	*412.6*	*5.3*	*408.6*	
Equity contracts	22.2	384.5	26.1	501.3	63.4	28.2	456.9	34.9	603.9	80.1
of which: swaps (OTC)	*5.3*	*95.5*	*6.6*	*122.0*		*4.7*	*105.7*	*9.3*	*154.8*	
of which: options (OTC)	*2.8*	*51.6*	*4.4*	*89.0*		*4.6*	*61.4*	*6.5*	*102.3*	
of which: futures (ETD)					*52.2*					*71.2*
of which: options (ETD)	*9.0*	*237.0*	*8.1*	*289.7*	*11.2*	*10.2*	*289.6*	*9.8*	*346.3*	*8.8*
of which: client-cleared transactions (ETD)	*5.1*		*7.0*			*8.6*		*9.4*		
Commodity contracts	1.4	68.1	1.4	64.2	17.6	1.6	57.8	1.6	56.4	14.7
of which: swaps (OTC)	*0.5*	*19.3*	*0.7*	*19.3*		*0.5*	*19.9*	*0.8*	*25.4*	
of which: options (OTC)	*0.4*	*15.8*	*0.3*	*13.3*		*0.4*	*14.0*	*0.2*	*10.4*	
of which: futures (ETD)					*16.4*					*13.9*
of which: forwards (ETD)	*0.0*	*24.5*	*0.0*	*23.2*		*0.0*	*18.1*	*0.0*	*15.2*	
of which: client-cleared transactions (ETD)	*0.2*		*0.3*			*0.6*		*0.4*		
Loan commitments measured at FVTPL (OTC)	0.0	0.9	0.0	3.7		0.0	0.8	0.0	8.2	
Unsettled purchases of non-derivative financial instruments[5]	0.1	12.1	0.1	9.4		0.1	13.3	0.2	10.6	
Unsettled sales of non-derivative financial instruments[5]	0.1	13.0	0.0	10.7		0.2	18.2	0.1	9.4	
Total derivative instruments, based on IFRS netting[6]	150.1	4,659.9	154.9	4,641.9	11,376.5	118.1	4,613.8	121.3	4,616.6	8,771.1

1 Includes certain forward starting repurchase and reverse repurchase agreements that are classified as measured at fair value through profit or loss and are recognized within derivative instruments. 2 In cases where derivative financial instruments are presented on a net basis on the balance sheet, the respective notional amounts of the netted derivative financial instruments are still presented on a gross basis. 3 Notional amounts of client-cleared ETD and OTC transactions through central clearing counterparties are not disclosed, as they have significantly different risk profile. 4 Other notional amounts relate to derivatives that are cleared through either a central counterparty or an exchange. The fair value of these derivatives is presented on the balance sheet net of the corresponding cash margin under Cash collateral receivables on derivative instruments and Cash collateral payables on derivative instruments and was not material for any of the periods presented. 5 Changes in the fair value of purchased and sold non-derivative financial instruments between trade date and settlement date are recognized as derivative financial instruments. 6 Derivative financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of the entity and all of the counterparties, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. Refer to Note 21 for more information on netting arrangements.

Note 10 Derivative instruments (continued)

On a notional amount basis, approximately 46% of OTC interest rate contracts held as of 31 December 2022 (31 December 2021: 40%) mature within one year, 32% (31 December 2021: 36%) within one to five years and 22% 31 December 2021: 25%) after five years.

Notional amounts of interest rate contracts cleared through either a central counterparty or an exchange that are legally settled or economically net settled on a daily basis are presented under *Other notional amounts* in the table above and are categorized into maturity buckets on the basis of contractual maturities of the cleared underlying derivative contracts. Other notional amounts related to interest rate contracts increased by USD 2.6trn compared with 31 December 2021, mainly reflecting higher business volumes driven by elevated interest rate volatility and inflation, partly offset by compression activity.

Note 11 Property, equipment and software

At historical cost less accumulated depreciation

USD m	Owned properties and equipment[1]	Leased properties and equipment[2]	Software	Projects in progress	2022[3]	2021[3]
Historical cost						
Balance at the beginning of the year	13,048	4,174	8,642	1,250	27,113	26,238
Additions	162	412	300	1,182	2,057	2,090
Disposals / write-offs[4]	(333)	(62)	(106)	0	(501)	(751)
Reclassifications	(1,073)	0	1,151	(1,301)	(1,223)	(18)
Foreign currency translation	(217)	(65)	(42)	5	(319)	(445)
Balance at the end of the year	11,587	4,459	9,944	1,136	27,127	27,113
Accumulated depreciation						
Balance at the beginning of the year	8,072	1,346	4,807		14,225	13,129
Depreciation	577	451	1,005		2,033	2,078
Impairment[5]	3	0	0		3	10
Disposals / write-offs[4]	(332)	(59)	(106)		(497)	(737)
Reclassifications	(761)	(1)	0		(761)	(12)
Foreign currency translation	(135)	(24)	(6)		(164)	(243)
Balance at the end of the year	7,425	1,714	5,699		14,839	14,225
Net book value						
Net book value at the beginning of the year	4,976	2,828	3,835	1,250	12,888	13,109
Net book value at the end of the year	**4,162**	**2,746**	**4,245**	**1,136[6]**	12,288	12,888

1 Includes leasehold improvements and IT hardware. 2 Represents right-of-use assets recognized by UBS as lessee. UBS predominantly enters into lease contracts, or contracts that include lease components, in relation to real estate, including offices, retail branches and sales offices. The total cash outflow for leases during 2022 was USD 614m (2021: USD 657m). Interest expense on lease liabilities is included within Interest expense from financial instruments measured at amortized cost and Lease liabilities are included within Other financial liabilities measured at amortized cost. Refer to Notes 3 and 18a, respectively. There were no material gains or losses arising from sale-and-leaseback transactions in 2022 and in 2021. 3 The total reclassification amount for the respective periods represents net reclassifications to Properties and other non-current assets held for sale. 4 Includes write-offs of fully depreciated assets. 5 Impairment charges recorded in 2022 generally relate to assets that are no longer used, for which the recoverable amount based on a value in use approach was determined to be zero. 6 Consists of USD 939m related to software and USD 197m related to Owned properties and equipment.

Note 12 Goodwill and intangible assets

Introduction

UBS performs an impairment test on its goodwill assets on an annual basis or when indicators of impairment exist.

UBS considers Asset Management, as it is reported in Note 2a, as a separate cash-generating unit (a CGU), as that is the level at which the performance of investment (and the related goodwill) is reviewed and assessed by management. Given that a significant amount of goodwill in Global Wealth Management relates to the PaineWebber acquisition in 2000, which mainly affected the Americas portion of the business, this goodwill remains separately monitored by the Americas, despite the formation of Global Wealth Management in 2018. Therefore, goodwill for Global Wealth Management is separately considered for impairment at the level of two CGUs: Americas; and Switzerland and International (consisting of EMEA, Asia Pacific and Global).

The impairment test is performed for each CGU to which goodwill is allocated by comparing the recoverable amount with the carrying amount of the respective CGU. UBS determines the recoverable amount of the respective CGUs based on their value in use. An impairment charge is recognized if the carrying amount exceeds the recoverable amount.

As of 31 December 2022, total goodwill recognized on the balance sheet was USD 6.0bn, of which USD 3.7bn was carried by the Global Wealth Management Americas CGU, USD 1.2bn was carried by the Global Wealth Management Switzerland and International CGU, and USD 1.2bn was carried by Asset Management. Based on the impairment testing methodology described below, UBS concluded that the goodwill balances as of 31 December 2022 allocated to these CGUs were not impaired.

Methodology for goodwill impairment testing

The recoverable amounts are determined using a discounted cash flow model, which has been adapted to use inputs that consider features of the banking business and its regulatory environment. The recoverable amount of a CGU is the sum of the discounted earnings attributable to shareholders from the first three forecast years and the terminal value, adjusted for the effect of the capital assumed to be needed over the next three years and to support growth beyond that period. The terminal value, which covers all periods beyond the third year, is calculated on the basis of the forecast of the third-year profit, the discount rate and the long-term growth rate, as well as the implied perpetual capital growth.

The carrying amount for each CGU is determined by reference to the Group's equity attribution framework. Within this framework, which is described in the "Capital, liquidity and funding, and balance sheet" section of this report, UBS attributes equity to the businesses on the basis of their risk-weighted assets and leverage ratio denominator (both metrics include resource allocations from Group Functions to the business divisions), their goodwill and their intangible assets, as well as attributed equity related to certain common equity tier 1 deduction items. The framework is primarily used for the purpose of measuring the performance of the businesses and includes certain management assumptions. Attributed equity is equal to the capital a CGU requires to conduct its business and is currently considered a reasonable approximation of the carrying amount of the CGUs. The attributed equity methodology is also applied in the business planning process, the inputs from which are used in calculating the recoverable amounts of the respective CGU.

› **Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information about the equity attribution framework**

Assumptions

Valuation parameters used within the Group's impairment test model are linked to external market information, where applicable. The model used to determine the recoverable amount is most sensitive to changes in the forecast earnings available to shareholders in years one to three, to changes in the discount rates and to changes in the long-term growth rate. The applied long-term growth rate is based on long-term economic growth rates for different regions worldwide. Earnings available to shareholders are estimated on the basis of forecast results, which are part of the business plan approved by the Board of Directors.

The discount rates are determined by applying a capital asset pricing model-based approach, as well as considering quantitative and qualitative inputs from both internal and external analysts and the view of management. They also take into account regional differences in risk-free rates at the level of the individual CGUs. In line with discount rates, long-term growth rates are determined at the regional level based on nominal GDP growth rate forecasts.

Key assumptions used to determine the recoverable amounts of each CGU are tested for sensitivity by applying a reasonably possible change to those assumptions. Forecast earnings available to shareholders were changed by 20%, the discount rates were changed by 1.5 percentage points, and the long-term growth rates were changed by 0.75 percentage points. Under all scenarios, reasonably possible changes in key assumptions did not result in an impairment of goodwill or intangible assets reported by Global Wealth Management Americas, Global Wealth Management Switzerland and International, and Asset Management.

If the estimated earnings and other assumptions in future periods deviate from the current outlook, the value of goodwill attributable to Global Wealth Management Americas, Global Wealth Management Switzerland and International, and Asset Management may become impaired in the future, giving rise to losses in the income statement. Recognition of any impairment of goodwill would reduce International Financial Reporting Standards equity and net profit. It would not affect cash flows and, as goodwill is required to be deducted from capital under the Basel III capital framework, no effect would be expected on the Group's capital ratios.

Discount and growth rates

	Discount rates		Growth rates	
In %	31.12.22	31.12.21	31.12.22	31.12.21
Global Wealth Management Americas	10.5	9.5	3.8	4.0
Global Wealth Management Switzerland and International	9.4	8.5	3.6	3.1
Asset Management	9.5	8.5	3.4	2.9

Note 12 Goodwill and intangible assets (continued)

USD m	Goodwill	Intangible assets[1]	2022	2021
Historical cost				
Balance at the beginning of the year	6,126	1,612	7,739	7,865
Additions	0	0	0	1
Disposals[2]	(22)	0	(22)	(3)
Write-offs	0	0	0	(41)
Foreign currency translation	(61)	(14)	(76)	(83)
Balance at the end of the year	6,043	1,598	7,641	7,739
Accumulated amortization and impairment				
Balance at the beginning of the year		1,360	1,360	1,385
Amortization		26	26	31
Impairment / (reversal of impairment)		(1)	(1)	(1)
Write-offs		0	0	(41)
Foreign currency translation		(11)	(11)	(13)
Balance at the end of the year		1,374	1,374	1,360
Net book value at the end of the year	6,043	224	6,267	6,378
of which: Global Wealth Management Americas	*3,709*	*31*	*3,740*	*3,760*
of which: Global Wealth Management Switzerland and International	*1,166*	*59*	*1,225*	*1,276*
of which: Asset Management	*1,167*	*0*	*1,167*	*1,202*
of which: Investment Bank	*0*	*135*	*135*	*139*

1 Intangible assets mainly include customer relationships, contractual rights and the fully amortized branch network intangible asset recognized in connection with the acquisition of PaineWebber Group, Inc.
2 Reflects the derecognition of goodwill allocated to businesses that have been disposed of, in accordance with IAS 36 requirements.

The table below presents estimated aggregated amortization expenses for intangible assets.

USD m	Intangible assets
Estimated aggregated amortization expenses for:	
2023	26
2024	24
2025	23
2026	23
2027	22
Thereafter	104
Not amortized due to indefinite useful life	2
Total	224

Note 13 Other assets

a) Other financial assets measured at amortized cost

USD m	31.12.22	31.12.21
Debt securities	44,594	18,858
Loans to financial advisors	2,611	2,453
Fee- and commission-related receivables	1,812	1,972
Finance lease receivables	1,315	1,356
Settlement and clearing accounts	1,175	455
Accrued interest income	1,259	520
Other	499	594
Total other financial assets measured at amortized cost	53,264	26,209

Debt securities increased by USD 25.7bn compared with 31 December 2021, largely reflecting shifts from cash into securities within UBS's high-quality liquid asset portfolio as spreads widened. In addition, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost in 2022.

› **Refer to Note 1b for more information**

b) Other non-financial assets

USD m	31.12.22	31.12.21
Precious metals and other physical commodities	4,471	5,258
Deposits and collateral provided in connection with litigation, regulatory and similar matters[1]	2,205	1,526
Prepaid expenses	1,076	1,108
VAT, withholding tax and other tax receivables	1,468	638
Properties and other non-current assets held for sale	369	32
Assets of disposal group held for sale[2]		1,093
Other	578	621
Total other non-financial assets	10,166	10,277

1 Refer to Note 17 for more information. 2 Refer to Note 29 for more information.

Note 14 Customer deposits

USD m	31.12.22	31.12.21
Demand deposits	180,822	246,417
Retail savings / deposits	149,310	133,354
Sweep deposits	69,223	113,870
Time deposits[1]	125,696	48,365
Total customer deposits	525,051	542,007

1 Includes customer deposits in UBS AG Jersey Branch placed by UBS Switzerland AG on behalf of its clients.

Increases in interest rates during the year resulted in significant shifts from demand deposits to time deposits.

Note 15 Debt issued designated at fair value

USD m	31.12.22	31.12.21
Issued debt instruments		
Equity-linked[1]	41,901	47,059
Rates-linked	16,276	16,369
Credit-linked	2,170	1,723
Fixed-rate	6,538	2,868
Commodity-linked	4,294	2,911
Other	2,459	2,868
of which: debt that contributes to total loss-absorbing capacity	*1,959*	*2,136*
Total debt issued designated at fair value	73,638	73,799
of which: issued by UBS AG with original maturity greater than one year[2]	*57,750*	*57,967*

1 Includes investment fund unit-linked instruments issued. 2 Based on original contractual maturity without considering any early redemption features. As of 31 December 2022, 100% of the balance was unsecured (31 December 2021: 100%).

Note 16 Debt issued measured at amortized cost

USD m	31.12.22	31.12.21
Short-term debt[1]	29,676	43,098
Senior unsecured debt that contributes to total loss-absorbing capacity (TLAC)	42,073	38,984
Senior unsecured debt other than TLAC	17,892	27,590
of which: issued by UBS AG with original maturity greater than one year	*17,892*	*23,307*
Covered bonds	0	1,389
Subordinated debt	16,017	18,640
of which: eligible as high-trigger loss-absorbing additional tier 1 capital instruments	*9,882*	*11,052*
of which: eligible as low-trigger loss-absorbing additional tier 1 capital instruments	*1,189*	*2,425*
of which: eligible as low-trigger loss-absorbing tier 2 capital instruments	*2,422*	*2,596*
of which: eligible as non-Basel III-compliant tier 2 capital instruments	*536*	*547*
Debt issued through the Swiss central mortgage institutions	8,962	9,454
Long-term debt[2]	84,945	96,057
Total debt issued measured at amortized cost[3]	114,621	139,155

1 Debt with an original contractual maturity of less than one year, includes mainly certificates of deposit and commercial paper. 2 Debt with an original contractual maturity greater than or equal to one year. The classification of debt issued into short-term and long-term does not consider any early redemption features. 3 Net of bifurcated embedded derivatives, the fair value of which was not material for the periods presented.

The Group uses interest rate and foreign exchange derivatives to manage the risks inherent in certain debt instruments held at amortized cost. In some cases, the Group applies hedge accounting for interest rate risk as discussed in item 2j in Note 1a and Note 25. As a result of applying hedge accounting, the life-to-date adjustment to the carrying amount of debt issued was a decrease of USD 6.1bn as of 31 December 2022 and an increase of USD 0.5bn as of 31 December 2021, reflecting changes in fair value due to interest rate movements.

Subordinated debt consists of unsecured debt obligations that are contractually subordinated in right of payment to all other present and future non-subordinated obligations of the respective issuing entity. All of the subordinated debt instruments outstanding as of 31 December 2022 pay a fixed rate of interest.

› **Refer to Note 23 for maturity information**

Note 17 Provisions and contingent liabilities

a) Provisions

The table below presents an overview of total provisions.

USD m	31.12.22	31.12.21
Provisions other than provisions for expected credit losses	3,042	3,322
Provisions for expected credit losses[1]	201	196
Total provisions	3,243	3,518

1 Refer to Note 9 for more information about ECL provisions recognized for off-balance sheet financial instruments and credit lines.

The following table presents additional information for provisions other than provisions for expected credit losses.

USD m	Litigation, regulatory and similar matters[1]	Restructuring	Other[3]	Total 2022
Balance at the beginning of the year	2,798	172	352	3,322
Increase in provisions recognized in the income statement	406	231	53	690
Release of provisions recognized in the income statement	(58)	(25)	(36)	(118)
Provisions used in conformity with designated purpose	(470)	(243)	(32)	(745)
Capitalized reinstatement costs	0	0	1	1
Foreign currency translation / unwind of discount	(91)	(5)	(12)	(108)
Balance at the end of the year	2,586	130[2]	326	3,042

1 Consists of provisions for losses resulting from legal, liability and compliance risks. 2 Consists of personnel-related restructuring provisions of USD 102m as of 31 December 2022 (31 December 2021: USD 125m) and provisions for onerous contracts of USD 28m as of 31 December 2022 (31 December 2021: USD 47m). 3 Mainly includes provisions related to real estate, employee benefits and operational risks.

Restructuring provisions relate to personnel-related provisions and onerous contracts. Personnel-related restructuring provisions are generally used within a short period of time. The level of personnel-related provisions can change when natural staff attrition reduces the number of people affected by a restructuring event, and therefore results in lower estimated costs. Onerous contracts for property are recognized when UBS is committed to pay for non-lease components, such as utilities, service charges, taxes and maintenance, when a property is vacated or not fully recovered from sub-tenants.

Information about provisions and contingent liabilities in respect of litigation, regulatory and similar matters, as a class, is included in Note 17b. There are no material contingent liabilities associated with the other classes of provisions.

b) Litigation, regulatory and similar matters

The Group operates in a legal and regulatory environment that exposes it to significant litigation and similar risks arising from disputes and regulatory proceedings. As a result, UBS (which for purposes of this Note may refer to UBS Group AG and/or one or more of its subsidiaries, as applicable) is involved in various disputes and legal proceedings, including litigation, arbitration, and regulatory and criminal investigations.

Such matters are subject to many uncertainties, and the outcome and the timing of resolution are often difficult to predict, particularly in the earlier stages of a case. There are also situations where the Group may enter into a settlement agreement. This may occur in order to avoid the expense, management distraction or reputational implications of continuing to contest liability, even for those matters for which the Group believes it should be exonerated. The uncertainties inherent in all such matters affect the amount and timing of any potential outflows for both matters with respect to which provisions have been established and other contingent liabilities. The Group makes provisions for such matters brought against it when, in the opinion of management after seeking legal advice, it is more likely than not that the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against the Group, but are nevertheless expected to be, based on the Group's experience with similar asserted claims. If any of those conditions is not met, such matters result in contingent liabilities. If the amount of an obligation cannot be reliably estimated, a liability exists that is not recognized even if an outflow of resources is probable. Accordingly, no provision is established even if the potential outflow of resources with respect to such matters could be significant. Developments relating to a matter that occur after the relevant reporting period, but prior to the issuance of financial statements, which affect management's assessment of the provision for such matter (because, for example, the developments provide evidence of conditions that existed at the end of the reporting period), are adjusting events after the reporting period under IAS 10 and must be recognized in the financial statements for the reporting period.

Specific litigation, regulatory and other matters are described below, including all such matters that management considers to be material and others that management believes to be of significance due to potential financial, reputational and other effects. The amount of damages claimed, the size of a transaction or other information is provided where available and appropriate in order to assist users in considering the magnitude of potential exposures.

In the case of certain matters below, we state that we have established a provision, and for the other matters, we make no such statement. When we make this statement and we expect disclosure of the amount of a provision to prejudice seriously our position with other parties in the matter because it would reveal what UBS believes to be the probable and reliably estimable outflow, we do not disclose that amount. In some cases we are subject to confidentiality obligations that preclude such disclosure. With respect to the matters for which we do not state whether we have established a provision, either: (a) we have not established a provision, in which case the matter is treated as a contingent liability under the applicable accounting standard; or (b) we have established a provision but expect disclosure of that fact to prejudice seriously our position with other parties in the matter because it would reveal the fact that UBS believes an outflow of resources to be probable and reliably estimable.

With respect to certain litigation, regulatory and similar matters for which we have established provisions, we are able to estimate the expected timing of outflows. However, the aggregate amount of the expected outflows for those matters for which we are able to estimate expected timing is immaterial relative to our current and expected levels of liquidity over the relevant time periods.

The aggregate amount provisioned for litigation, regulatory and similar matters as a class is disclosed in the "Provisions" table in Note 17a above. It is not practicable to provide an aggregate estimate of liability for our litigation, regulatory and similar matters as a class of contingent liabilities. Doing so would require UBS to provide speculative legal assessments as to claims and proceedings that involve unique fact patterns or novel legal theories, that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Although UBS therefore cannot provide a numerical estimate of the future losses that could arise from litigation, regulatory and similar matters, UBS believes that the aggregate amount of possible future losses from this class that are more than remote substantially exceeds the level of current provisions.

Litigation, regulatory and similar matters may also result in non-monetary penalties and consequences. A guilty plea to, or conviction of, a crime could have material consequences for UBS. Resolution of regulatory proceedings may require UBS to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations, and may permit financial market utilities to limit, suspend or terminate UBS's participation in such utilities. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for UBS.

The risk of loss associated with litigation, regulatory and similar matters is a component of operational risk for purposes of determining capital requirements. Information concerning our capital requirements and the calculation of operational risk for this purpose is included in the "Capital, liquidity and funding, and balance sheet" section of this report.

Note 17 Provisions and contingent liabilities (continued)

Provisions for litigation, regulatory and similar matters by business division and in Group Functions[1]

USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	Total 2022
Balance at the beginning of the year	1,338	181	8	310	962	2,798
Increase in provisions recognized in the income statement	268	2	1	129	6	406
Release of provisions recognized in the income statement	(23)	(15)	0	(8)	(12)	(58)
Provisions used in conformity with designated purpose	(331)	0	0	(115)	(23)	(470)
Reclassifications	0	0	0	4	(4)	0
Foreign currency translation / unwind of discount	(70)	(9)	0	(11)	0	(91)
Balance at the end of the year	1,182	159	8	308	928	2,586

1 Provisions, if any, for the matters described in items 3 and 4 of this Note are recorded in Global Wealth Management, and provisions, if any, for the matters described in item 2 are recorded in Group Functions. Provisions, if any, for the matters described in items 1 and 6 of this Note are allocated between Global Wealth Management and Personal & Corporate Banking, provisions, if any, for the matters described in item 5 are allocated between the Investment Bank and Group Functions, and provisions, if any, for the matters described in item 7 are allocated between Global Wealth Management and the Investment Bank.

1. Inquiries regarding cross-border wealth management businesses

Tax and regulatory authorities in a number of countries have made inquiries, served requests for information or examined employees located in their respective jurisdictions relating to the cross-border wealth management services provided by UBS and other financial institutions.

Since 2013, UBS (France) S.A., UBS AG and certain former employees have been under investigation in France in relation to UBS's cross-border business with French clients. In connection with this investigation, the investigating judges ordered UBS AG to provide bail ("caution") of EUR 1.1bn.

On 20 February 2019, the court of first instance returned a verdict finding UBS AG guilty of unlawful solicitation of clients on French territory and aggravated laundering of the proceeds of tax fraud, and UBS (France) S.A. guilty of aiding and abetting unlawful solicitation and of laundering the proceeds of tax fraud. The court imposed fines aggregating EUR 3.7bn on UBS AG and UBS (France) S.A. and awarded EUR 800m of civil damages to the French state. A trial in the French Court of Appeal took place in March 2021. On 13 December 2021, the Court of Appeal found UBS AG guilty of unlawful solicitation and aggravated laundering of the proceeds of tax fraud. The court ordered a fine of EUR 3.75m, the confiscation of EUR 1bn, and awarded civil damages to the French state of EUR 800m. UBS AG has filed an appeal with the French Supreme Court to preserve its rights. The notice of appeal enables UBS AG to thoroughly assess the verdict of the Court of Appeal and to determine next steps in the best interest of its stakeholders. The fine and confiscation imposed by the Court of Appeal are suspended during the appeal. The civil damages award has been paid to the French state (EUR 99m of which was deducted from the bail), subject to the result of UBS's appeal.

Our balance sheet at 31 December 2022 reflected provisions with respect to this matter in an amount of EUR 1.1bn (USD 1.2bn). The wide range of possible outcomes in this case contributes to a high degree of estimation uncertainty and the provision reflects our best estimate of possible financial implications, although actual penalties and civil damages could exceed (or may be less than) the provision amount.

Our balance sheet at 31 December 2022 reflected provisions with respect to matters described in this item 1 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

2. Claims related to sales of residential mortgage-backed securities and mortgages

From 2002 through 2007, prior to the crisis in the US residential loan market, UBS was a substantial issuer and underwriter of US residential mortgage-backed securities (RMBS) and was a purchaser and seller of US residential mortgages.

In November 2018, the DOJ filed a civil complaint in the District Court for the Eastern District of New York. The complaint seeks unspecified civil monetary penalties under the Financial Institutions Reform, Recovery and Enforcement Act of 1989 related to UBS's issuance, underwriting and sale of 40 RMBS transactions in 2006 and 2007. UBS moved to dismiss the civil complaint in February 2019. In December 2019, the district court denied UBS's motion to dismiss.

Our balance sheet at 31 December 2022 reflected a provision with respect to matters described in this item 2 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of this matter cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

3. Madoff

In relation to the Bernard L. Madoff Investment Securities LLC (BMIS) investment fraud, UBS AG, UBS (Luxembourg) S.A. (now UBS Europe SE, Luxembourg branch) and certain other UBS subsidiaries have been subject to inquiries by a number of regulators, including the Swiss Financial Market Supervisory Authority (FINMA) and the Luxembourg Commission de Surveillance du Secteur Financier. Those inquiries concerned two third-party funds established under Luxembourg law, substantially all assets of which were with BMIS, as well as certain funds established in offshore jurisdictions with either direct or indirect exposure to BMIS. These funds faced severe losses, and the Luxembourg funds are in liquidation. The documentation establishing both funds identifies UBS entities in various roles, including custodian, administrator, manager, distributor and promoter, and indicates that UBS employees serve as board members.

In 2009 and 2010, the liquidators of the two Luxembourg funds filed claims against UBS entities, non-UBS entities and certain individuals, including current and former UBS employees, seeking amounts totaling approximately EUR 2.1bn, which includes amounts that the funds may be held liable to pay the trustee for the liquidation of BMIS (BMIS Trustee).

A large number of alleged beneficiaries have filed claims against UBS entities (and non-UBS entities) for purported losses relating to the Madoff fraud. The majority of these cases have been filed in Luxembourg, where decisions that the claims in eight test cases were inadmissible have been affirmed by the Luxembourg Court of Appeal, and the Luxembourg Supreme Court has dismissed a further appeal in one of the test cases.

In the US, the BMIS Trustee filed claims against UBS entities, among others, in relation to the two Luxembourg funds and one of the offshore funds. The total amount claimed against all defendants in these actions was not less than USD 2bn. In 2014, the US Supreme Court rejected the BMIS Trustee's motion for leave to appeal decisions dismissing all claims except those for the recovery of approximately USD 125m of payments alleged to be fraudulent conveyances and preference payments. In 2016, the bankruptcy court dismissed these claims against the UBS entities. In February 2019, the Court of Appeals reversed the dismissal of the BMIS Trustee's remaining claims, and the US Supreme Court subsequently denied a petition seeking review of the Court of Appeals' decision. The case has been remanded to the Bankruptcy Court for further proceedings.

4. Puerto Rico

Declines since 2013 in the market prices of Puerto Rico municipal bonds and of closed-end funds (funds) that are sole-managed and co-managed by UBS Trust Company of Puerto Rico and distributed by UBS Financial Services Incorporated of Puerto Rico (UBS PR) led to multiple regulatory inquiries, which in 2014 and 2015, led to settlements with the Office of the Commissioner of Financial Institutions for the Commonwealth of Puerto Rico, the US Securities and Exchange Commission (SEC) and the Financial Industry Regulatory Authority.

Since then, UBS clients in Puerto Rico who own the funds or Puerto Rico municipal bonds and/or who used their UBS account assets as collateral for UBS non-purpose loans filed customer complaints and arbitration demands seeking aggregate damages of USD 3.42bn, of which USD 3.37bn have been resolved through settlements, arbitration or withdrawal of claims. Allegations include fraud, misrepresentation and unsuitability of the funds and of the loans.

A shareholder derivative action was filed in 2014 against various UBS entities and current and certain former directors of the funds, alleging hundreds of millions of US dollars in losses in the funds. In 2021, the parties reached an agreement to settle this matter for USD 15m, subject to court approval.

In 2011, a purported derivative action was filed on behalf of the Employee Retirement System of the Commonwealth of Puerto Rico (System) against over 40 defendants, including UBS PR, which was named in connection with its underwriting and consulting services. Plaintiffs alleged that defendants violated their purported fiduciary duties and contractual obligations in connection with the issuance and underwriting of USD 3bn of bonds by the System in 2008 and sought damages of over USD 800m. In 2016, the court granted the System's request to join the action as a plaintiff. In 2022, a federal district court enjoined the plaintiffs from proceeding with the action on the grounds it impermissibly conflicted with Puerto Rico's approved Plan of Adjustment.

Beginning in 2015, certain agencies and public corporations of the Commonwealth of Puerto Rico (Commonwealth) defaulted on certain interest payments on Puerto Rico bonds. In 2016, US federal legislation created an oversight board with power to oversee Puerto Rico's finances and to restructure its debt. The oversight board has imposed a stay on the exercise of certain creditors' rights. In 2017, the oversight board placed certain of the bonds into a bankruptcy-like proceeding under the supervision of a Federal District Judge.

In May 2019, the oversight board filed complaints in Puerto Rico federal district court bringing claims against financial, legal and accounting firms that had participated in Puerto Rico municipal bond offerings, including UBS, seeking a return of underwriting and swap fees paid in connection with those offerings. UBS estimates that it received approximately USD 125m in fees in the relevant offerings.

In August 2019, and February and November 2020, four US insurance companies that insured issues of Puerto Rico municipal bonds sued UBS and several other underwriters of Puerto Rico municipal bonds in three separate cases. The actions collectively seek recovery of an aggregate of USD 955m in damages from the defendants. The plaintiffs in these cases claim that defendants failed to reasonably investigate financial statements in the offering materials for the insured Puerto Rico bonds issued between 2002 and 2007, which plaintiffs argue they relied upon in agreeing to insure the bonds notwithstanding that they had no contractual relationship with the underwriters. Defendants' motions to dismiss have been granted in all three cases; those decisions are being appealed by the plaintiffs.

Our balance sheet at 31 December 2022 reflected provisions with respect to matters described in this item 4 in amounts that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provisions that we have recognized.

5. Foreign exchange, LIBOR and benchmark rates, and other trading practices

Foreign exchange-related regulatory matters: Beginning in 2013, numerous authorities commenced investigations concerning possible manipulation of foreign exchange markets and precious metals prices. As a result of these investigations, UBS entered into resolutions with Swiss, US and United Kingdom regulators and the European Commission. UBS was granted conditional immunity by the Antitrust Division of the DOJ and by authorities in other jurisdictions in connection with potential competition law violations relating to foreign exchange and precious metals businesses.

Foreign exchange-related civil litigation: Putative class actions have been filed since 2013 in US federal courts and in other jurisdictions against UBS and other banks on behalf of putative classes of persons who engaged in foreign currency transactions with any of the defendant banks. UBS has resolved US federal court class actions relating to foreign currency transactions with the defendant banks and persons who transacted in foreign exchange futures contracts and options on such futures under a settlement agreement that provides for UBS to pay an aggregate of USD 141m and provide cooperation to the settlement classes. Certain class members have excluded themselves from that settlement and have filed individual actions in US and English courts against UBS and other banks, alleging violations of US and European competition laws and unjust enrichment. UBS and the other banks have reached an agreement in principle to resolve those individual matters.

In 2015, a putative class action was filed in federal court against UBS and numerous other banks on behalf of persons and businesses in the US who directly purchased foreign currency from the defendants and alleged co-conspirators for their own end use. In March 2017, the court granted UBS's (and the other banks') motions to dismiss the complaint. The plaintiffs filed an amended complaint in August 2017. In March 2018, the court denied the defendants' motions to dismiss the amended complaint. In March 2022, the court denied plaintiffs' motion for class certification.

LIBOR and other benchmark-related regulatory matters: Numerous government agencies conducted investigations regarding potential improper attempts by UBS, among others, to manipulate LIBOR and other benchmark rates at certain times. UBS reached settlements or otherwise concluded investigations relating to benchmark interest rates with the investigating authorities. UBS was granted conditional leniency or conditional immunity from authorities in certain jurisdictions, including the Antitrust Division of the DOJ and the Swiss Competition Commission (WEKO), in connection with potential antitrust or competition law violations related to certain rates. However, UBS has not reached a final settlement with WEKO, as the Secretariat of WEKO has asserted that UBS does not qualify for full immunity.

LIBOR and other benchmark-related civil litigation: A number of putative class actions and other actions are pending in the federal courts in New York against UBS and numerous other banks on behalf of parties who transacted in certain interest rate benchmark-based derivatives. Also pending in the US and in other jurisdictions are a number of other actions asserting losses related to various products whose interest rates were linked to LIBOR and other benchmarks, including adjustable rate mortgages, preferred and debt securities, bonds pledged as collateral, loans, depository accounts, investments and other interest-bearing instruments. The complaints allege manipulation, through various means, of certain benchmark interest rates, including USD LIBOR, Euroyen TIBOR, Yen LIBOR, EURIBOR, CHF LIBOR, GBP LIBOR, SGD SIBOR and SOR and Australian BBSW, and seek unspecified compensatory and other damages under varying legal theories.

USD LIBOR class and individual actions in the US: In 2013 and 2015, the district court in the USD LIBOR actions dismissed, in whole or in part, certain plaintiffs' antitrust claims, federal racketeering claims, CEA claims, and state common law claims, and again dismissed the antitrust claims in 2016 following an appeal. In December 2021, the Second Circuit affirmed the district court's dismissal in part and reversed in part and remanded to the district court for further proceedings. The Second Circuit, among other things, held that there was personal jurisdiction over UBS and other foreign defendants based on allegations that at least one alleged co-conspirator undertook an overt act in the United States. Separately, in 2018, the Second Circuit reversed in part the district court's 2015 decision dismissing certain individual plaintiffs' claims and certain of these actions are now proceeding. In 2018, the district court denied plaintiffs' motions for class certification in the USD class actions for claims pending against UBS, and plaintiffs sought permission to appeal that ruling to the Second Circuit. In July 2018, the Second Circuit denied the petition to appeal of the class of USD lenders and in November 2018 denied the petition of the USD exchange class. In January 2019, a putative class action was filed in the District Court for the Southern District of New York against UBS and numerous other banks on behalf of US residents who, since 1 February 2014, directly transacted with a defendant bank in USD LIBOR instruments. The complaint asserts antitrust claims. The defendants moved to dismiss the complaint in August 2019. In March 2020 the court granted defendants' motion to dismiss the complaint in its entirety. Plaintiffs have appealed the dismissal. In March 2022, the Second Circuit dismissed the appeal because appellants, who had been substituted in to replace the original plaintiffs who had withdrawn, lacked standing to pursue the appeal. In August 2020, an individual action was filed in the Northern District of California against UBS and numerous other banks alleging that the defendants conspired to fix the interest rate used as the basis for loans to consumers by jointly setting the USD LIBOR rate and monopolized the market for LIBOR-based consumer loans and credit cards. Defendants moved to dismiss the complaint in September 2021. In September 2022, the court granted defendants' motion to dismiss the complaint in its entirety, while allowing plaintiffs the opportunity to file an amended complaint. Plaintiffs filed an amended complaint in October 2022, and defendants have moved to dismiss the amended complaint in November 2022.

Other benchmark class actions in the US:
Yen LIBOR / Euroyen TIBOR – In 2014, 2015 and 2017, the court in one of the Yen LIBOR / Euroyen TIBOR lawsuits dismissed certain of the plaintiffs' claims, including the plaintiffs' federal antitrust and racketeering claims. In August 2020, the court granted defendants' motion for judgment on the pleadings and dismissed the lone remaining claim in the action as impermissibly extraterritorial. In October 2022, the appeals court affirmed the dismissal on multiple grounds. In 2017, the court dismissed the other Yen LIBOR / Euroyen TIBOR action in its entirety on standing grounds. In April 2020, the appeals court reversed the dismissal and in August 2020 plaintiffs in that action filed an amended complaint focused on Yen LIBOR. The court granted in part and denied in part defendants' motion to dismiss the amended complaint in September 2021. In August 2022, the court granted UBS's motion for reconsideration and dismissed the case against UBS.

CHF LIBOR – In 2017, the court dismissed the CHF LIBOR action on standing grounds and failure to state a claim. Plaintiffs filed an amended complaint, and the court granted a renewed motion to dismiss in September 2019. Plaintiffs appealed. In September 2021, the Second Circuit granted the parties' joint motion to vacate the dismissal and remand the case for further proceedings. Plaintiffs filed a third amended complaint in November 2022 and defendants have moved to dismiss the amended complaint in January 2023.

EURIBOR – In 2017, the court in the EURIBOR lawsuit dismissed the case as to UBS and certain other foreign defendants for lack of personal jurisdiction. Plaintiffs have appealed.

SIBOR / SOR – In October 2018, the court in the SIBOR / SOR action dismissed all but one of plaintiffs' claims against UBS. Plaintiffs filed an amended complaint, and the court granted a renewed motion to dismiss in July 2019. Plaintiffs appealed. In March 2021, the Second Circuit reversed the dismissal. Plaintiffs filed an amended complaint in October 2021, which defendants moved to dismiss in November 2021. In March 2022, plaintiffs reached a settlement in principle with the remaining defendants, including UBS. The court granted final approval of the settlement in November 2022.

BBSW – In November 2018, the court dismissed the BBSW lawsuit as to UBS and certain other foreign defendants for lack of personal jurisdiction. Plaintiffs filed an amended complaint in April 2019, which UBS and other defendants moved to dismiss in May 2019. In February 2020, the court granted in part and denied in part defendants' motions to dismiss the amended complaint. In August 2020, UBS and other BBSW defendants joined a motion for judgment on the pleadings, which the court denied in May 2021. In February 2022, plaintiffs reached a settlement in principle with the remaining defendants, including UBS. The court granted final approval of the settlement in November 2022.

GBP LIBOR – The court dismissed the GBP LIBOR action in August 2019. Plaintiffs have appealed.

Government bonds: Putative class actions have been filed since 2015 in US federal courts against UBS and other banks on behalf of persons who participated in markets for US Treasury securities since 2007. A consolidated complaint was filed in 2017 in the US District Court for the Southern District of New York alleging that the banks colluded with respect to, and manipulated prices of, US Treasury securities sold at auction and in the secondary market and asserting claims under the antitrust laws and for unjust enrichment. Defendants' motions to dismiss the consolidated complaint were granted in March 2021. Plaintiffs filed an amended complaint, which defendants moved to dismiss in June 2021. In March 2022, the court granted defendants' motion to dismiss that complaint. Plaintiffs have appealed the dismissal. Similar class actions have been filed concerning European government bonds and other government bonds.

In May 2021, the European Commission issued a decision finding that UBS and six other banks breached European Union antitrust rules in 2007–2011 relating to European government bonds. The European Commission fined UBS EUR 172m. UBS is appealing the amount of the fine.

With respect to additional matters and jurisdictions not encompassed by the settlements and orders referred to above, our balance sheet at 31 December 2022 reflected a provision in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

6. Swiss retrocessions

The Federal Supreme Court of Switzerland ruled in 2012, in a test case against UBS, that distribution fees paid to a firm for distributing third-party and intra-group investment funds and structured products must be disclosed and surrendered to clients who have entered into a discretionary mandate agreement with the firm, absent a valid waiver. FINMA issued a supervisory note to all Swiss banks in response to the Supreme Court decision. UBS has met the FINMA requirements and has notified all potentially affected clients.

The Supreme Court decision has resulted, and continues to result, in a number of client requests for UBS to disclose and potentially surrender retrocessions. Client requests are assessed on a case-by-case basis. Considerations taken into account when assessing these cases include, among other things, the existence of a discretionary mandate and whether or not the client documentation contained a valid waiver with respect to distribution fees.

Our balance sheet at 31 December 2022 reflected a provision with respect to matters described in this item 6 in an amount that UBS believes to be appropriate under the applicable accounting standard. The ultimate exposure will depend on client requests and the resolution thereof, factors that are difficult to predict and assess. Hence, as in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

7. Communications recordkeeping

The SEC and CFTC conducted investigations of UBS and other financial institutions regarding compliance with records preservation requirements relating to business communications sent over unapproved electronic messaging channels. UBS cooperated with the investigations, and, in September 2022, UBS agreed to pay civil monetary penalties of USD 125m to the SEC and USD 75m to the CFTC to resolve these matters.

Note 18 Other liabilities

a) Other financial liabilities measured at amortized cost

USD m	31.12.22	31.12.21
Other accrued expenses	1,760	1,876
Accrued interest expenses	1,949	1,094
Settlement and clearing accounts	1,075	1,304
Lease liabilities	3,334	3,558
Other	1,457	1,167
Total other financial liabilities measured at amortized cost	9,575	9,001

b) Other financial liabilities designated at fair value

USD m	31.12.22	31.12.21
Financial liabilities related to unit-linked investment contracts	13,221	21,466
Securities financing transactions	15,333	6,377
Over-the-counter debt instruments and other	1,684	2,231
Total other financial liabilities designated at fair value	30,237	30,074

c) Other non-financial liabilities

USD m	31.12.22	31.12.21
Compensation related liabilities	6,822	7,257
of which: Deferred Contingent Capital Plan	*1,614*	*1,628*
of which: financial advisor compensation plans	*1,463*	*1,512*
of which: other compensation plans	*2,680*	*2,846*
of which: net defined benefit liability	*469*	*633*
of which: other compensation-related liabilities[1]	*596*	*638*
Current tax liabilities	1,071	1,398
Deferred tax liabilities	236	300
VAT, withholding tax and other tax payables	592	590
Deferred income	235	240
Liabilities of disposal group held for sale[2]		1,298
Other	84	68
Total other non-financial liabilities	9,040	11,151

1 Includes liabilities for payroll taxes and untaken vacation. 2 Refer to Note 29 for more information.

Note 19 Expected credit loss measurement

a) Expected credit losses in the period

Total net credit loss expenses were USD 29m in 2022, reflecting net credit loss expenses of USD 29m related to stage 1 and 2 positions and USD 0m net credit loss expenses related to credit-impaired (stage 3) positions.

Stage 1 and 2 expected credit loss (ECL) expenses of USD 29m include USD 123m expenses related to scenario and parameter updates and USD 13m related to other book quality and size changes, partly offset by USD 77m post-model adjustment (PMA) releases and USD 30m releases related to model changes. Lending to corporate clients not secured by mortgages contributed USD 21m, mainly driven by scenario effects related to the downward revision of GDP and higher interest rate assumptions in the newly introduced *stagflationary geopolitical crisis scenario* (SGC). Lending secured by mortgages contributed USD 16m in expenses, mainly driven by scenario effects related to higher interest rate assumptions, especially from the SGC, and adverse house price assumptions from both applied downside scenarios. This was partly offset by releases from other lending of USD 9m.

› **Refer to Note 19b for more information regarding changes to ECL models, scenarios, scenario weights and the post-model adjustment and to Note 19c for more information regarding the development of ECL allowances and provisions**

Stage 3 net expenses of USD 0m were recognized across a number of defaulted positions, with net expenses of USD 12m in Personal and Corporate Banking and USD 5m in Global Wealth Management, offset by releases of USD 18m in the Investment Bank, including a USD 28m release for a single airline-related counterparty, mainly due to improved cashflow assumptions, and USD 10m net expenses across a number of defaulted positions.

Credit loss expense / (release)

USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	Total
For the year ended 31.12.22						
Stages 1 and 2	(5)	27	0	6	1	29
Stage 3	5	12	0	(18)	2	0
Total credit loss expense / (release)	0	39	0	(12)	3	29
For the year ended 31.12.21						
Stages 1 and 2	(28)	(62)	0	(34)	0	(123)
Stage 3	(1)	(24)	1	0	0	(25)
Total credit loss expense / (release)	**(29)**	**(86)**	**1**	**(34)**	**0**	**(148)**
For the year ended 31.12.20						
Stages 1 and 2	48	129	0	88	0	266
Stage 3	40	128	2	217	42	429
Total credit loss expense / (release)	**88**	**257**	**2**	**305**	**42**	**694**

b) Changes to ECL models, scenarios, scenario weights and key inputs

Refer to Note 1a for information about the principles governing expected credit loss (ECL) models, scenarios, scenario weights and key inputs applied.

Governance

Comprehensive cross-functional and cross-divisional governance processes are in place and are used to discuss and approve scenario updates and weights, to assess whether significant increases in credit risk resulted in stage transfers, to review model outputs and to reach conclusions regarding post-model adjustments.

Model changes

During 2022, the model review and enhancement process led to adjustments of the probability of default (PD), loss given default (LGD), and credit conversion factor (CCF) models, resulting in a USD 30m decrease in ECL allowances. This includes a decrease of USD 19m in Global Wealth Management affecting loans to financial advisors and specialized US lending portfolios and an USD 11m decrease in Personal & Corporate Banking related to lending to *large corporate clients* and *financial intermediaries & hedge funds*.

Scenario and key input updates

During 2022, the scenarios and related macroeconomic factors were updated from those applied at the end of 2021 by considering the prevailing economic and political conditions and uncertainty. The review focused on events that significantly changed the economic outlook during the year: the Russia–Ukraine war, with the subsequent effect on energy markets, the inflation outlook and economic growth in Europe, and rising global interest rates due to central banks' adoption of more restrictive monetary policies.

Baseline scenario: the projections of the baseline scenario, which are aligned to the economic and market assumptions used for UBS's business planning purposes, are broadly in line with external data, such as that from Bloomberg Consensus, Oxford Economics and the International Monetary Fund World Economic Outlook. The expectation for 2023 is that global growth stalls under the weight of monetary policy tightening, and continued pressure on real purchasing power due to high inflation – further fueled in Europe by the energy crisis and a lack of labor supply – even though unemployment rates are forecast to be higher than in 2022 and an energy crisis in Europe seems likely to be averted. Interest rates are expected to remain high, given the persistence of inflationary trends, leading to a less optimistic outlook for global house prices, which is cushioned in Switzerland by continued strong demand.

Global crisis scenario: The first hypothetical downside scenario, the global crisis scenario, is aligned with the Group's 2022 binding stress scenario and was updated in 2022 to reflect expected risks, resulting in minimal changes. It assumes that, while the global economy has returned to pre-pandemic levels and the immediate risks from COVID-19 have decreased, the associated disruptions and the consequences of the unprecedented monetary and fiscal stimulus measures will remain critical. Concerns regarding the sustainability of public debt, following the marked deterioration of fiscal positions, lead to a loss of confidence and market turbulence, while protectionism results in a decrease in global trade. Governments and central banks have limited scope to support the economies, and interest rate levels remain moderate. As a consequence, China suffers a hard landing which, combined with political, solvency and liquidity concerns, affects emerging markets significantly. A spillover effect leads to a contraction of the Eurozone, Swiss and US economies, as global demand is significantly affected. Given the severity of the macroeconomic impact, unemployment rates rise to historical highs and real estate sectors contract sharply.

Stagflationary geopolitical crisis scenario: The second downside scenario was changed during 2022. In light of the developments caused by Russia's invasion of Ukraine, the *mild global interest rate steepening scenario* was replaced by a *severe global interest rate steepening scenario* in the first quarter of 2022, as the beginning of the Russia–Ukraine war increased fears of higher inflation and a corresponding reaction by monetary authorities. In the second quarter of the year, the progression of the war and the enforcement of sanctions regimes led to a redesign of the scenario. The resulting *severe Russia–Ukraine conflict scenario* has similar dynamics as the severe global interest rate steepening scenario, but addressed specifically the prospect of rising energy costs, especially in Europe, with the consequences of lower growth and higher inflation rates. In the fourth quarter of 2022, UBS developed a new *stagflationary geopolitical crisis scenario* (SGC) and included this new scenario in the ECL calculation for year-end 2022 in lieu of the *severe Russia–Ukraine conflict scenario*. While the SGC scenario addresses similar risks as the *severe Russia–Ukraine conflict scenario*, it also covers additional and broader risks and therefore assumes more severe shocks. Geopolitical tensions cause an escalation of security concerns and undermine globalization. The ensuing economic regionalization leads to a surge in global commodity prices and further disruptions of supply chains and raises the specter of prolonged stagflation. The severe interest rate and adverse house price assumptions in the SGC scenario had a substantive impact on model-based ECL allowances for loans secured by mortgages in Switzerland and the US. These effects were partly offset by PMA releases related to loans secured by mortgages. Refer to the section below on "Scenario weights and post-model adjustments" for more details.

Asset price inflation scenario: The upside scenario is based on positive developments, such as an easing of geopolitical tensions across the globe and a rebound in Chinese economic growth. A combination of lower energy and commodity prices, effective monetary policies and easing supply chain disruptions helps reduce inflation. Improved consumer and business sentiment lead to an economic rebound with central banks able to normalize interest rates; asset prices increase significantly.

Note 19 Expected credit loss measurement (continued)

The table below details the key assumptions for the four scenarios applied as of 31 December 2022.

Scenario weights and post-model adjustments

Due to the less positive outlook compared with the assessment on 31 December 2021, the scenario weights changed during 2022. The upside scenario was allocated a 0% probability, and the previous 5% weight was added to the *baseline scenario*, now set at 60%. Following the introduction of the SGC, which was deemed to have a higher probability of occurring than the *global crisis scenario*, the weights were rebalanced. The SGC has a weight of 25% (compared with 10% for the *mild global interest rate steepening scenario* used as of 31 December 2021) and the weight of the *global crisis scenario* was reduced to 15% (from 30% as of 31 December 2021). The weights are also shown in the table below.

The scenarios and weight allocation were established in line with the general market sentiment that the short-term outlook is subdued and a recession in major markets is a strong probability. The downside risks in relation to inflation and monetary policy, as well as the availability and price of energy, mainly in Europe, are better reflected in our models compared with the uncertain developments caused by COVID-19 in recent years.

However, unquantifiable risks continue to be relevant, as the pandemic has not been overcome and the world may face new disruptions. Furthermore, the geopolitical situation worsened during 2022, and the impact on the world economy from escalations with unforeseeable consequences could be severe. In the near term, this uncertainty relates primarily to the development of the Russia–Ukraine war. Models, which are based on supportable statistical information from past experiences regarding interdependencies of macroeconomic factors and their implications for credit risk portfolios, cannot comprehensively reflect such extraordinary events, such as a pandemic or a fundamental change in the world political order. Rather than creating multiple additional scenarios to attempt gauging these risks and applying model parameters that lack supportable information and cannot be robustly validated, management continued to also apply PMAs.

These PMA took into account that more of the downside risks were modeled in 2022, particularly for lending secured by mortgages. The PMA amounted to USD 131m as of 31 December 2022 (31 December 2021: USD 224m). These remaining PMA for uncertainties on potentially unmodeled risk almost entirely relate to corporate lending portfolios in Personal & Corporate Banking and the Investment Bank.

Economic scenarios and weights applied

	Assigned weights in %	
ECL scenario	31.12.22	31.12.21
Asset price inflation	0.0	5.0
Baseline	60.0	55.0
Mild global interest rate steepening	0.0	10.0
Stagflationary geopolitical crisis	25.0	0.0
Global crisis	15.0	30.0

Scenario assumptions

	One year				Three years cumulative			
31.12.22	Asset price inflation	Baseline	Stagflationary geopolitical crisis	Global crisis	Asset price inflation	Baseline	Stagflationary geopolitical crisis	Global crisis
Real GDP growth (% change)								
United States	4.0	(0.3)	(4.8)	(6.4)	9.1	3.2	(4.4)	(1.8)
Eurozone	3.0	0.6	(5.6)	(8.5)	6.2	2.5	(5.7)	(8.3)
Switzerland	3.0	0.7	(4.8)	(6.7)	6.6	3.5	(4.9)	(3.7)
Consumer price index (% change)								
United States	2.5	2.6	10.0	(0.5)	8.1	6.5	15.8	1.2
Eurozone	2.3	5.0	9.6	(0.7)	7.4	9.6	14.8	(0.7)
Switzerland	2.1	1.6	5.8	(1.8)	6.2	3.9	10.7	(1.6)
Unemployment rate (end-of-period level, %)								
United States	3.0	3.9	9.2	10.0	3.0	5.3	11.8	9.4
Eurozone	6.0	7.0	10.9	11.9	6.0	7.1	12.2	13.0
Switzerland	1.7	2.3	4.3	4.4	1.5	2.6	5.1	4.9
Fixed income: 10-year government bonds (change in yields, basis points)								
USD	25.0	(5.6)	235.0	(326.0)	70.0	(13.2)	205.0	(291.1)
EUR	20.0	47.8	250.0	(270.6)	57.5	44.7	220.0	(246.5)
CHF	25.0	45.7	220.0	(209.7)	62.5	57.0	205.0	(159.6)
Equity indices (% change)								
S&P 500	20.0	7.4	(51.5)	(50.0)	51.7	22.8	(45.6)	(27.9)
EuroStoxx 50	17.0	17.2	(51.6)	(50.0)	42.9	29.2	(47.2)	(39.3)
SPI	14.0	5.6	(51.6)	(46.0)	37.9	19.3	(47.2)	(32.9)
Swiss real estate (% change)								
Single-Family Homes	6.6	1.1	(16.7)	(19.9)	14.0	2.3	(32.9)	(23.9)
Other real estate (% change)								
United States (S&P / Case–Shiller)	7.8	(4.5)	(12.8)	(19.3)	19.1	(0.6)	(35.8)	(32.7)
Eurozone (House Price Index)	7.0	(2.7)	(8.4)	(8.9)	15.4	2.0	(14.7)	(17.5)

Note 19 Expected credit loss measurement (continued)

Scenario assumptions	One year				Three years cumulative			
31.12.21	Asset price inflation	Baseline	Mild global interest rate steepening	Global crisis	Asset price inflation	Baseline	Mild global interest rate steepening	Global crisis
Real GDP growth (% change)								
United States	9.1	4.4	(0.1)	(5.9)	17.8	10.1	1.8	(3.8)
Eurozone	9.4	3.9	(0.1)	(8.7)	17.3	7.5	0.9	(10.3)
Switzerland	5.5	2.4	(0.9)	(6.6)	13.1	5.8	(0.1)	(5.7)
Consumer price index (% change)								
United States	3.1	2.2	5.7	(1.2)	9.5	6.3	13.0	0.4
Eurozone	2.3	1.4	4.2	(1.3)	8.0	4.8	10.4	(1.7)
Switzerland	1.8	0.3	3.5	(1.8)	6.1	1.7	9.0	(1.6)
Unemployment rate (end-of-period level, %)								
United States	3.0	3.9	6.1	10.9	3.0	3.5	7.2	10.8
Eurozone	6.2	7.4	8.7	12.9	6.0	7.2	9.1	15.1
Switzerland	2.3	2.5	3.4	5.2	1.6	2.3	4.2	5.9
Fixed income: 10-year government bonds (change in yields, basis points)								
USD	50.0	16.5	259.2	(50.0)	170.0	41.2	329.2	(15.0)
EUR	40.0	11.1	283.8	(35.0)	140.0	34.9	349.3	(25.0)
CHF	50.0	12.1	245.5	(70.0)	150.0	34.4	307.3	(35.0)
Equity indices (% change)								
S&P 500	12.0	14.1	(27.0)	(50.2)	35.5	24.7	(21.8)	(40.1)
EuroStoxx 50	16.0	12.3	(23.4)	(57.6)	41.6	20.7	(19.9)	(50.4)
SPI	14.0	12.1	(22.9)	(53.6)	37.9	19.1	(19.6)	(44.2)
Swiss real estate (% change)								
Single-Family Homes	5.1	4.4	(4.3)	(17.0)	15.5	7.4	(8.8)	(30.0)
Other real estate (% change)								
United States (S&P / Case–Shiller)	10.0	3.5	(2.3)	(9.5)	21.7	7.1	(8.7)	(26.3)
Eurozone (House Price Index)	8.4	5.1	(4.0)	(5.4)	17.8	9.6	(7.6)	(10.8)

c) Development of ECL allowances and provisions

The ECL allowances and provisions recognized in the period are impacted by a variety of factors, such as:
- the effect of selecting and updating forward-looking scenarios and the respective weights;
- origination of new instruments during the period;
- the effect of passage of time (lower residual lifetime PD and the effect of discount unwind) as the ECL on an instrument for the remaining lifetime decreases (all other factors remaining the same);
- derecognition of instruments in the period;
- change in individual asset quality of instruments;
- movements from a maximum 12-month ECL to the recognition of lifetime ECL (and vice versa) following transfers between stages 1 and 2;
- movements from stages 1 and 2 to stage 3 (credit-impaired status) when default has become certain and PD increases to 100% (or vice versa);
- changes in models or updates to model parameters;
- write-off; and
- foreign exchange translations for assets denominated in foreign currencies.

Note 19 Expected credit loss measurement (continued)

The table below explains the changes in the ECL allowances and provisions for on- and off-balance sheet financial instruments and credit lines in scope of ECL requirements between the beginning and the end of the period due to the factors listed above.

Development of ECL allowances and provisions

USD m	Total	Stage 1	Stage 2	Stage 3
Balance as of 31 December 2021	(1,165)	(282)	(220)	(662)
Net movement from new and derecognized transactions[1]	(7)	(21)	16	(2)
of which: Private clients with mortgages	*(6)*	*(6)*	*0*	*0*
of which: Real estate financing	*(3)*	*(5)*	*2*	*0*
of which: Large corporate clients	*8*	*(1)*	*11*	*(2)*
of which: SME clients	*(1)*	*(1)*	*0*	*0*
of which: Other	*(6)*	*(8)*	*3*	*0*
of which: Financial intermediaries and hedge funds	*0*	*(2)*	*2*	*0*
of which: Loans to financial advisors	*0*	*0*	*0*	*0*
Remeasurements with stage transfers[2]	(65)	20	(39)	(46)
of which: Private clients with mortgages	*(10)*	*3*	*(12)*	*0*
of which: Real estate financing	*7*	*(1)*	*8*	*0*
of which: Large corporate clients	*(33)*	*16*	*(28)*	*(21)*
of which: SME clients	*(23)*	*2*	*(2)*	*(22)*
of which: Other	*(6)*	*1*	*(4)*	*(3)*
of which: Financial intermediaries and hedge funds	*0*	*0*	*0*	*0*
of which: Loans to financial advisors	*1*	*2*	*(1)*	*0*
Remeasurements without stage transfers[3]	13	(8)	(27)	48
of which: Private clients with mortgages	*(12)*	*5*	*(18)*	*1*
of which: Real estate financing	*13*	*3*	*10*	*0*
of which: Large corporate clients	*32*	*(11)*	*2*	*41*
of which: SME clients	*(6)*	*(10)*	*(9)*	*14*
of which: Other	*(15)*	*5*	*(12)*	*(8)*
of which: Sovereigns	*(8)*	*0*	*(8)*	*0*
of which: Loans to financial advisors	*(3)*	*3*	*(1)*	*(6)*
Model changes[4]	30	29	1	0
Movements with profit or loss impact[5]	(29)	20	(49)	0
Movements without profit or loss impact (write-off, FX and other)[6]	104	3	1	99
Balance as of 31 December 2022	(1,091)	(259)	(267)	(564)

1 Represents the increase and decrease in allowances and provisions resulting from financial instruments (including guarantees and facilities) that were newly originated, purchased or renewed and from the final derecognition of loans or facilities on their maturity date or earlier. 2 Represents the remeasurement between 12-month and lifetime ECL due to stage transfers. 3 Represents the change in allowances and provisions related to changes in model inputs or assumptions, including changes in forward-looking macroeconomic conditions, changes in the exposure profile, PD and LGD changes, and unwinding of the time value. 4 Represents the change in the allowances and provisions related to changes in models and methodologies. 5 Includes ECL movements from new and derecognized transactions, remeasurement changes, model and methodology changes. 6 Represents the decrease in allowances and provisions resulting from write-offs of the ECL allowance against the gross carrying amount when all or part of a financial asset is deemed uncollectible or forgiven and movements in foreign exchange rates.

Movements with profit or loss impact: Stages 1 and 2 ECL allowances and provisions increased on a net basis by USD 29m:

- *Net movement from new and derecognized transactions* includes USD 21m stage 1 expenses and USD 16m stage 2 releases: Stage 1 expenses are primarily driven by new loans secured by real estate. The residual effect is spread across lending segments. Stage 2 releases are largely driven by redemption of corporate loans in the Investment Bank.
- *Remeasurements with stage transfers* include USD 20m releases in stage 1 and USD 39m expenses in stage 2. This mainly includes the transfer of a few large corporate lending transactions in the Investment Bank from stage 1 to 2 (i.e., releases in stage 1 and related but generally higher expenses in stage 2), driven by rating downgrades and scenario effects.
- *Remeasurements without stage transfers* include stage 1 expenses of USD 8m and stage 2 expenses of USD 27m. These expenses of USD 35m relate to large and SME corporate lending (USD 28m), substantially due to scenario effects, and to a single sovereign counterparty (USD 8m).
- Model changes: refer to Note 19b for more information.

Movements without profit or loss impact: Stage 3 allowances decreased by USD 99m almost entirely due to write-offs of USD 95m.

Note 19 Expected credit loss measurement (continued)

Development of ECL allowances and provisions

USD m	Total	Stage 1	Stage 2	Stage 3
Balance as of 31 December 2020	(1,468)	(306)	(333)	(829)
Net movement from new and derecognized transactions[1]	(59)	(72)	13	0
of which: Private clients with mortgages	*(7)*	*(10)*	*3*	*0*
of which: Real estate financing	*(7)*	*(11)*	*4*	*0*
of which: Large corporate clients	*(13)*	*(21)*	*7*	*0*
of which: SME clients	*(8)*	*(8)*	*0*	*0*
of which: Other	*(24)*	*(23)*	*(2)*	*0*
of which: Financial intermediaries and hedge funds	*(21)*	*(18)*	*(4)*	*0*
of which: Loans to financial advisors	*0*	*(1)*	*1*	*0*
Remeasurements with stage transfers[2]	(40)	8	0	(49)
of which: Private clients with mortgages	*(9)*	*4*	*(13)*	*0*
of which: Real estate financing	*(3)*	*1*	*(4)*	*0*
of which: Large corporate clients	*2*	*(2)*	*12*	*(8)*
of which: SME clients	*(27)*	*5*	*4*	*(36)*
of which: Other	*(3)*	*0*	*2*	*(4)*
of which: Financial intermediaries and hedge funds	*2*	*(1)*	*3*	*0*
of which: Loans to financial advisors	*0*	*1*	*(1)*	*0*
Remeasurements without stage transfers[3]	203	55	74	74
of which: Private clients with mortgages	*33*	*8*	*26*	*(1)*
of which: Real estate financing	*30*	*13*	*13*	*3*
of which: Large corporate clients	*44*	*5*	*21*	*17*
of which: SME clients	*53*	*(1)*	*1*	*53*
of which: Other	*44*	*29*	*14*	*2*
of which: Financial intermediaries and hedge funds	*27*	*15*	*12*	*0*
of which: Loans to financial advisors	*6*	*8*	*1*	*(3)*
Model changes[4]	45	29	16	0
Movements with profit or loss impact[5]	148	19	104	25
Movements without profit or loss impact (write-off, FX and other)[6]	154	5	9	141
Balance as of 31 December 2021	(1,165)	(282)	(220)	(662)

1 Represents the increase and decrease in allowances and provisions resulting from financial instruments (including guarantees and facilities) that were newly originated, purchased or renewed and from the final derecognition of loans or facilities on their maturity date or earlier. 2 Represents the remeasurement between 12-month and lifetime ECL due to stage transfers. 3 Represents the change in allowances and provisions related to changes in model inputs or assumptions, including changes in forward-looking macroeconomic conditions, changes in the exposure profile, PD and LGD changes, and unwinding of the time value. 4 Represents the change in the allowances and provisions related to changes in models and methodologies. 5 Includes ECL movements from new and derecognized transactions, remeasurement changes, model and methodology changes. 6 Represents the decrease in allowances and provisions resulting from write-offs of the ECL allowance against the gross carrying amount when all or part of a financial asset is deemed uncollectible or forgiven and movements in foreign exchange rates.

As explained in Note 1a, the assessment of a significant increase in credit risk (SICR) considers a number of qualitative and quantitative factors to determine whether a stage transfer between stage 1 and stage 2 is required, although the primary assessment considers changes in PD based on rating analyses and economic outlook. Additionally, UBS takes into consideration counterparties that have moved to a credit watch list and those with payments that are at least 30 days past due.

ECL stage 2 (“significant deterioration in credit risk”) allowances / provisions as of 31 December 2022 – classification by trigger

USD m	Stage 2	*of which: PD layer*	*of which: watch list*	*of which: ≥30 days past due*
On- and off-balance sheet	(267)	*(196)*	*(21)*	*(50)*
of which: Private clients with mortgages	*(107)*	*(83)*	*0*	*(25)*
of which: Real estate financing	*(23)*	*(18)*	*0*	*(5)*
of which: Large corporate clients	*(65)*	*(51)*	*(13)*	*0*
of which: SME clients	*(37)*	*(22)*	*(7)*	*(7)*
of which: Financial intermediaries and hedge funds	*(17)*	*(17)*	*0*	*0*
of which: Loans to financial advisors	*(2)*	*0*	*0*	*(2)*
of which: Credit cards	*(12)*	*0*	*0*	*(12)*
of which: Other	*(5)*	*(5)*	*0*	*0*

d) Maximum exposure to credit risk

The tables below provide the Group's maximum exposure to credit risk for financial instruments subject to ECL requirements and the respective collateral and other credit enhancements mitigating credit risk for these classes of financial instruments.

The maximum exposure to credit risk includes the carrying amounts of financial instruments recognized on the balance sheet subject to credit risk and the notional amounts for off-balance sheet arrangements. Where information is available, collateral is presented at fair value. For other collateral, such as real estate, a reasonable alternative value is used. Credit enhancements, such as credit derivative contracts and guarantees, are included at their notional amounts. Both are capped at the maximum exposure to credit risk for which they serve as security. The "Risk management and control" section of this report describes management's view of credit risk and the related exposures, which can differ in certain respects from the requirements of International Financial Reporting Standards (IFRS).

Maximum exposure to credit risk

	31.12.22								
		Collateral[1,2]				Credit enhancements[1]			
USD bn	Maximum exposure to credit risk	Cash collateral received	Collateralized by equity and debt instruments	Secured by real estate	Other collateral[3]	Netting	Credit derivative contracts	Guarantees	Exposure to credit risk after collateral and credit enhancements
Financial assets measured at amortized cost on the balance sheet									
Cash and balances at central banks	169.4								169.4
Loans and advances to banks[4]	14.8		0.0					0.1	14.7
Receivables from securities financing transactions measured at amortized cost	67.8	0.0	64.5		2.4				0.9
Cash collateral receivables on derivative instruments[5,6]	35.0					22.9			12.1
Loans and advances to customers	387.2	33.6	115.9	197.8	19.6			3.0	17.3
Other financial assets measured at amortized cost	53.3	0.1	0.5	0.0	1.3				51.3
Total financial assets measured at amortized cost	727.6	33.7	181.0	197.9	23.4	22.9	0.0	3.0	265.8
Financial assets measured at fair value through other comprehensive income – debt	2.2								2.2
Total maximum exposure to credit risk reflected on the balance sheet within the scope of ECL	729.8	33.7	181.0	197.9	23.4	22.9	0.0	3.0	268.0
Guarantees[7]	22.1	1.2	9.3	0.1	2.0			1.8	7.7
Loan commitments[7]	39.9	0.2	3.1	1.3	6.5		0.1	1.0	27.8
Forward starting transactions, reverse repurchase and securities borrowing agreements	3.8		3.8						0.0
Committed unconditionally revocable credit lines	41.4	0.2	8.2	6.0	6.2			0.5	20.2
Total maximum exposure to credit risk not reflected on the balance sheet within the scope of ECL	107.2	1.6	24.4	7.5	14.7	0.0	0.1	3.3	55.7

	31.12.21								
		Collateral[1,2]				Credit enhancements[1]			
USD bn	Maximum exposure to credit risk	Cash collateral received	Collateralized by equity and debt instruments	Secured by real estate	Other collateral[3]	Netting	Credit derivative contracts	Guarantees	Exposure to credit risk after collateral and credit enhancements
Financial assets measured at amortized cost on the balance sheet									
Cash and balances at central banks	192.8								192.8
Loans and advances to banks[4]	15.5		0.1					0.1	15.3
Receivables from securities financing transactions measured at amortized cost	75.0	0.0	68.0		6.9				0.0
Cash collateral receivables on derivative instruments[5,6]	30.5					18.4			12.1
Loans and advances to customers	397.8	37.5	128.7	191.3	20.2			4.0	16.2
Other financial assets measured at amortized cost	26.2	0.2	0.1	0.0	1.3				24.6
Total financial assets measured at amortized cost	737.8	37.7	196.9	191.3	28.4	18.4	0.0	4.0	261.0
Financial assets measured at fair value through other comprehensive income – debt	8.8								8.8
Total maximum exposure to credit risk reflected on the balance sheet within the scope of ECL	746.6	37.7	196.9	191.3	28.4	18.4	0.0	4.0	269.8
Guarantees[7]	20.9	1.3	6.5	0.2	2.5			2.3	8.1
Loan commitments[7]	39.4	0.5	4.0	2.4	7.3		0.3	1.7	23.1
Forward starting transactions, reverse repurchase and securities borrowing agreements	1.4		1.4						0.0
Committed unconditionally revocable credit lines	40.7	0.3	9.0	6.2	3.9			0.5	20.9
Total maximum exposure to credit risk not reflected on the balance sheet within the scope of ECL	102.5	2.2	20.9	8.7	13.7	0.0	0.3	4.5	52.1

1 Of which: USD 1,372m for 31 December 2022 (31 December 2021: USD 1,443m) relates to total credit-impaired financial assets measured at amortized cost and USD 113m for 31 December 2022 (31 December 2021: USD 130m) to total off-balance sheet financial instruments and credit lines for credit-impaired positions. 2 Collateral arrangements generally incorporate a range of collateral, including cash, equity and debt instruments, real estate and other collateral. UBS applies a risk-based approach that generally prioritizes collateral according to its liquidity profile. 3 Includes but is not limited to life insurance contracts, inventory, mortgage loans, gold and other commodities. 4 Loans and advances to banks include amounts held with third-party banks on behalf of clients. The credit risk associated with these balances may be borne by those clients. 5 Included within Cash collateral receivables on derivative instruments are margin balances due from exchanges or clearing houses. Some of these margin balances reflect amounts transferred on behalf of clients who retain the associated credit risk. 6 The amount shown in the "Netting" column represents the netting potential not recognized on the balance sheet. Refer to Note 21 for more information. 7 The amount shown in the "Guarantees" column includes sub-participations.

Note 19 Expected credit loss measurement (continued)

e) Financial assets subject to credit risk by rating category

The table below shows the credit quality and the maximum exposure to credit risk based on the Group's internal credit rating system and year-end stage classification. Under IFRS 9, the credit risk rating reflects the Group's assessment of the probability of default of individual counterparties, prior to substitutions. The amounts presented are gross of impairment allowances.

› **Refer to the "Risk management and control" section of this report for more details regarding the Group's internal grading system**

Financial assets subject to credit risk by rating category

USD m	31.12.22								
Rating category[1]	0–1	2–3	4–5	6–8	9–13	Credit-impaired (defaulted)	Total gross carrying amount	ECL allowances	Net carrying amount (maximum exposure to credit risk)
Financial assets measured at amortized cost									
Cash and balances at central banks	168,525	877	0	0	56	0	169,457	(12)	169,445
of which: stage 1	*168,525*	*877*	*0*	*0*	*0*	*0*	*169,402*	*0*	*169,402*
of which: stage 2	*0*	*0*	*0*	*0*	*56*	*0*	*56*	*(12)*	*44*
Loans and advances to banks	862	12,257	860	440	379	0	14,798	(6)	14,792
of which: stage 1	*862*	*12,257*	*860*	*440*	*378*	*0*	*14,797*	*(5)*	*14,792*
of which: stage 2	*0*	*0*	*0*	*0*	*1*	*0*	*1*	*(1)*	*1*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Receivables from securities financing transactions measured at amortized cost	27,158	15,860	8,870	15,207	721	0	67,816	(2)	67,814
of which: stage 1	*27,158*	*15,860*	*8,870*	*15,207*	*721*	*0*	*67,816*	*(2)*	*67,814*
Cash collateral receivables on derivative instruments	10,613	12,977	7,138	4,157	147	0	35,033	0	35,032
of which: stage 1	*10,613*	*12,977*	*7,138*	*4,157*	*147*	*0*	*35,033*	*0*	*35,032*
Loans and advances to customers	6,491	214,473	68,356	74,732	21,939	2,012	388,003	(783)	387,220
of which: stage 1	*6,491*	*212,980*	*66,114*	*68,034*	*16,605*	*0*	*370,224*	*(129)*	*370,095*
of which: stage 2	*0*	*1,493*	*2,242*	*6,698*	*5,334*	*0*	*15,767*	*(180)*	*15,587*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*2,012*	*2,012*	*(474)*	*1,538*
Other financial assets measured at amortized cost	29,011	16,632	447	6,600	450	210	53,350	(86)	53,264
of which: stage 1	*29,011*	*16,630*	*427*	*6,317*	*336*	*0*	*52,721*	*(17)*	*52,704*
of which: stage 2	*0*	*2*	*20*	*283*	*114*	*0*	*419*	*(6)*	*413*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*210*	*210*	*(63)*	*147*
Total financial assets measured at amortized cost	242,660	273,076	85,671	101,136	23,693	2,222	728,457	(889)	727,568
On-balance sheet financial instruments									
Financial assets measured at FVOCI – debt instruments	1,307	840	0	92	0	0	2,239	0	2,239
Total on-balance sheet financial instruments	243,966	273,916	85,671	101,228	23,693	2,222	730,696	(889)	729,807

Off-balance sheet positions subject to expected credit loss by rating category

USD m	31.12.22							
Rating category[1]	0–1	2–3	4–5	6–8	9–13	Credit-impaired (defaulted)	Total off-balance sheet exposure (maximum exposure to credit risk)	ECL provisions
Off-balance sheet financial instruments								
Guarantees	7,252	5,961	4,772	3,049	1,025	108	22,167	(48)
of which: stage 1	*7,252*	*5,917*	*3,812*	*2,229*	*596*	*0*	*19,805*	*(13)*
of which: stage 2	*0*	*44*	*960*	*821*	*429*	*0*	*2,254*	*(9)*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*108*	*108*	*(26)*
Irrevocable loan commitments	1,770	14,912	6,986	10,097	6,107	124	39,996	(111)
of which: stage 1	*1,770*	*14,789*	*6,818*	*9,625*	*4,529*	*0*	*37,531*	*(59)*
of which: stage 2	*0*	*123*	*168*	*472*	*1,578*	*0*	*2,341*	*(52)*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*124*	*124*	*0*
Forward starting reverse repurchase and securities borrowing agreements	2,781	2	11	1,007	0	0	3,801	0
Total off-balance sheet financial instruments	11,803	20,874	11,769	14,153	7,132	233	65,964	(159)
Credit lines								
Committed unconditionally revocable credit lines	2,288	15,918	9,247	10,162	3,739	36	41,390	(40)
of which: stage 1	*2,288*	*15,213*	*8,960*	*9,631*	*3,429*	*0*	*39,521*	*(32)*
of which: stage 2	*0*	*705*	*287*	*531*	*310*	*0*	*1,833*	*(8)*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*36*	*36*	*0*
Irrevocable committed prolongation of existing loans	7	1,939	1,489	868	392	2	4,696	(2)
of which: stage 1	*7*	*1,938*	*1,411*	*864*	*380*	*0*	*4,600*	*(2)*
of which: stage 2	*0*	*1*	*78*	*4*	*11*	*0*	*94*	*0*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*2*	*2*	*0*
Total credit lines	2,295	17,857	10,736	11,030	4,131	37	46,086	(42)

1 Refer to the "Internal UBS rating scale and mapping of external ratings" table in the "Risk management and control" section of this report for more information on rating categories.

Note 19 Expected credit loss measurement (continued)

Financial assets subject to credit risk by rating category

USD m	31.12.21								
Rating category[1]	0–1	2–3	4–5	6–8	9–13	Credit-impaired (defaulted)	Total gross carrying amount	ECL allowances	Net carrying amount (maximum exposure to credit risk)
Financial assets measured at amortized cost									
Cash and balances at central banks	191,015	1,802	0	0	0	0	192,817	0	192,817
of which: stage 1	*191,015*	*1,802*	*0*	*0*	*0*	*0*	*192,817*	*0*	*192,817*
Loans and advances to banks	407	12,623	1,171	795	490	1	15,488	(8)	15,480
of which: stage 1	*407*	*12,623*	*1,146*	*795*	*488*	*0*	*15,460*	*(7)*	*15,453*
of which: stage 2	*0*	*0*	*24*	*0*	*2*	*0*	*27*	*(1)*	*26*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*0*	*1*
Receivables from securities financing transactions measured at amortized cost	34,386	11,267	10,483	17,440	1,439	0	75,014	(2)	75,012
of which: stage 1	*34,386*	*11,267*	*10,483*	*17,440*	*1,439*	*0*	*75,014*	*(2)*	*75,012*
Cash collateral receivables on derivative instruments	7,466	13,476	5,878	3,647	47	0	30,514	0	30,514
of which: stage 1	*7,466*	*13,476*	*5,878*	*3,647*	*47*	*0*	*30,514*	*0*	*30,514*
Loans and advances to customers	5,295	232,233	67,620	69,892	21,423	2,148	398,611	(850)	397,761
of which: stage 1	*5,295*	*231,153*	*65,084*	*62,796*	*16,362*	*0*	*380,690*	*(126)*	*380,564*
of which: stage 2	*0*	*1,080*	*2,536*	*7,096*	*5,061*	*0*	*15,773*	*(152)*	*15,620*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*2,148*	*2,148*	*(572)*	*1,577*
Other financial assets measured at amortized cost	12,564	6,702	321	6,072	394	264	26,318	(109)	26,209
of which: stage 1	*12,564*	*6,693*	*307*	*5,863*	*317*	*0*	*25,745*	*(27)*	*25,718*
of which: stage 2	*0*	*10*	*13*	*209*	*77*	*0*	*309*	*(7)*	*302*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*264*	*264*	*(76)*	*189*
Total financial assets measured at amortized cost	**251,133**	**278,103**	**85,472**	**97,846**	**23,793**	**2,414**	**738,762**	**(969)**	**737,794**
On-balance sheet financial instruments									
Financial assets measured at FVOCI – debt instruments	3,996	4,771	0	77	0	0	8,844	0	8,844
Total on-balance sheet financial instruments	**255,130**	**282,874**	**85,472**	**97,923**	**23,793**	**2,414**	**747,606**	**(969)**	**746,638**

Off-balance sheet positions subject to expected credit loss by rating category

USD m	31.12.21							
Rating category[1]	0–1	2–3	4–5	6–8	9–13	Credit-impaired (defaulted)	Total off-balance sheet exposure (maximum exposure to credit risk)	ECL provisions
Off-balance sheet financial instruments								
Guarantees	4,457	7,064	4,535	3,757	1,009	150	20,972	(41)
of which: stage 1	*4,457*	*7,037*	*4,375*	*3,075*	*752*	*0*	*19,695*	*(18)*
of which: stage 2	*0*	*27*	*160*	*682*	*258*	*0*	*1,127*	*(8)*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*150*	*150*	*(15)*
Irrevocable loan commitments	2,797	14,183	7,651	8,298	6,502	46	39,478	(114)
of which: stage 1	*2,797*	*13,917*	*7,416*	*7,127*	*5,840*	*0*	*37,097*	*(72)*
of which: stage 2	*0*	*266*	*235*	*1,171*	*663*	*0*	*2,335*	*(42)*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*46*	*46*	*0*
Forward starting reverse repurchase and securities borrowing agreements	0	0	55	1,389	0	0	1,444	0
Total off-balance sheet financial instruments	**7,254**	**21,247**	**12,241**	**13,444**	**7,512**	**196**	**61,894**	**(155)**
Credit lines								
Committed unconditionally revocable credit lines	2,636	15,594	8,627	9,752	4,107	63	40,778	(38)
of which: stage 1	*2,636*	*15,250*	*8,304*	*8,346*	*3,671*	*0*	*38,207*	*(28)*
of which: stage 2	*0*	*344*	*323*	*1,406*	*436*	*0*	*2,508*	*(10)*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*63*	*63*	*0*
Irrevocable committed prolongation of existing loans	17	2,438	1,422	1,084	602	48	5,611	(3)
of which: stage 1	*17*	*2,438*	*1,422*	*1,082*	*568*	*0*	*5,527*	*(3)*
of which: stage 2	*0*	*0*	*0*	*1*	*34*	*0*	*36*	*0*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*48*	*48*	*0*
Total credit lines	**2,653**	**18,032**	**10,049**	**10,836**	**4,709**	**111**	**46,390**	**(41)**

1 Refer to the "Internal UBS rating scale and mapping of external ratings" table in the "Risk management and control" section of this report for more information on rating categories.

f) Sensitivity information

As outlined in Note 1a, ECL estimates involve significant uncertainties at the time they are made.

ECL models

The models applied to determine point-in-time PD and LGD rely on market and statistical data, which has been found to correlate well with historically observed defaults in sufficiently homogeneous segments. The risk sensitivities for each of the ECL reporting segments to such factors are summarized in Note 9.

Sustainability and climate risk

Sustainability and climate risk (SCR) may negatively affect clients or portfolios due to direct or indirect transition costs, or exposure to physical risks in locations likely to be impacted by climate change. Such effects could lead to a deterioration in credit worthiness, which in turn would have an impact on ECLs.

While some indicators that are more influenced by climate change (e.g., energy prices) are factored into the current PD models where they have demonstrated statistical relevance, UBS currently does not use a specific SCR scenario in addition to the four general economic scenarios applied to derive the weighted-average ECL. The rationale for the approach at this point in time is the significance of model risks and challenges in calibration and probability weight assessment given the paucity of data.

Instead, UBS focuses on the process of vetting clients and business transactions and takes individual actions, where transition risk is deemed to be a significant driver of a counterparty's credit worthiness. This review process may lead to a downward revision of the counterparty's credit rating, or the adoption of risk mitigating actions, and hence affect the individual contribution to ECLs.

At the portfolio level, UBS has started to use stress loss assumptions to assess the extent to which SCR may affect the quality of the loans extended to small and medium-sized entities and large corporate clients. Initial tests were based on a set of assumptions presented by external parties (such as the Bank of England). Such analysis undertaken during 2022 concluded that the counterparties are not expected to be significantly impacted by physical or transition risks, mainly as there are no material risk concentrations in high-risk sectors. The analysis of the corporate loan book has also shown that any potential significant impacts from transition costs or physical risks would materialize over a time horizon that exceeds in most cases the contractual lifetime of the underlying assets. Based on current information on regulatory developments, this would also apply to the portfolio of private clients' mortgages and real estate financing, given the long lead times for investments in upgrading the housing stock.

As a result of the aforementioned factors, it was assessed that the magnitude of any impact of SCR on the weighted-average ECL would not be material as of 31 December 2022. Therefore, no specific post-model adjustment was made in this regard.

› **Refer to "Sustainability and climate risk" in the "Risk management and control" section of this report**
› **Refer to "Our focus on sustainability and climate" in the "Our strategy, business model and environment" section of this report**
› **Refer to "UBS AG consolidated supplemental disclosures required under SEC regulations" for the maturity profile of UBS core loan book**

Forward-looking scenarios

Depending on the scenario selection and related macroeconomic assumptions for the risk factors, the components of the relevant weighted-average ECL change. This is particularly relevant for interest rates, which can move in both directions under a given growth assumption, e.g., low growth with high interest rates in a stagflation scenario, versus low growth and falling interest rates in a recession. Management generally looks for scenario narratives that reflect the key risk drivers of a given credit portfolio.

As forecasting models are complex, due to the combination of multiple factors, simple what-if analyses involving a change of individual parameters do not necessarily provide realistic information on the exposure of segments to changes in the macroeconomy. Portfolio-specific analyses based on their key risk factors would also not be meaningful, as potential compensatory effects in other segments would be ignored. The table below indicates some sensitivities to ECLs, if a key macroeconomic variable for the forecasting period is amended across all scenarios with all other factors remaining unchanged.

Potential effect on stage 1 and stage 2 positions from changing key parameters as of 31 December 2022

USD m	100% Baseline	100% Stagflationary geopolitical crisis	100% Global crisis	Weighted average
Change in key parameters				
Fixed income: Government bonds (absolute change)				
–0.50%	(3)	(106)	(2)	(14)
+0.50%	4	124	2	17
+1.00%	8	264	10	37
Unemployment rate (absolute change)				
–1.00%	(4)	(138)	(24)	(23)
–0.50%	(2)	(78)	(13)	(12)
+0.50%	3	84	16	15
+1.00%	5	179	32	31
Real GDP growth (relative change)				
–2.00%	7	13	18	11
–1.00%	3	7	9	5
+1.00%	(3)	(7)	(9)	(5)
+2.00%	(5)	(13)	(18)	(10)
House Price Index (relative change)				
–5.00%	15	196	88	56
–2.50%	7	92	40	25
+2.50%	(4)	(83)	(35)	(19)
+5.00%	(7)	(157)	(65)	(36)
Equity (S&P500, EuroStoxx, SMI) (relative change)				
–10.00%	4	7	6	5
–5.00%	2	3	3	2
+5.00%	(2)	(4)	(3)	(2)
+10.00%	(4)	(8)	(7)	(5)

Sensitivities can be more meaningfully assessed in the context of coherent scenarios with consistently developed macroeconomic factors. The table above outlines favorable and unfavorable effects, based on reasonably possible alternative changes to the economic conditions for stage 1 and stage 2 positions. The ECL impact is calculated for material portfolios and disclosed for each scenario.

The forecasting horizon is limited to three years, with a model-based mean reversion of PD and LGD assumed thereafter. Changes to these timelines may have an effect on ECLs: depending on the cycle, a longer or shorter forecasting horizon will lead to different annualized lifetime PD and average LGD estimations. This is currently not deemed to be material for UBS, as a large proportion of loans, including mortgages in Switzerland, have maturities that are within the forecasting horizon.

Scenario weights and stage allocation

Potential effect on stage 1 and stage 2 positions from changing scenario weights or moving to an ECL lifetime calculation as of 31 December 2022

	Actual ECL allowances and provisions, including staging (as per Note 9)	Pro forma ECL allowances and provisions, including staging and assuming application of 100% scenario weighting				Pro forma ECL allowances and provisions, assuming all positions being subject to lifetime ECL
Scenarios	Weighted average	100% Baseline	100% Asset price inflation	100% Stagflationary geopolitical crisis	100% Global crisis	Weighted average
USD m, except where indicated						
Segmentation						
Private clients with mortgages	(136)	(25)	(13)	(523)	(184)	(473)
Real estate financing	(43)	(26)	(22)	(176)	(30)	(126)
Large corporate clients	(136)	(97)	(84)	(199)	(174)	(235)
SME clients	(86)	(67)	(66)	(162)	(97)	(153)
Other segments	(125)	(114)	(111)	(145)	(153)	(281)
Total	**(526)**	**(329)**	**(295)**	**(1,204)**	**(638)**	**(1,267)**

Scenario weights

ECL is sensitive to changing scenario weights, in particular if narratives and parameters are selected that are not close to the baseline scenario, highlighting the non-linearity of credit losses.

As shown in the table above, the ECLs for stage 1 and stage 2 positions would have been USD 329m (31 December 2021: USD 387m) instead of USD 526m (31 December 2021: USD 503m) if ECLs had been determined solely on the *baseline scenario*. The weighted-average ECL therefore amounted to 160% (31 December 2021: 130%) of the baseline value. The effects of weighting each of the four scenarios 100% are shown in the table above.

Stage allocation and SICR

The determination of what constitutes an SICR is based on management judgment, as explained in Note 1a. Changing the SICR trigger will have a direct effect on ECLs, as more or fewer positions would be subject to lifetime ECLs under any scenario.

The relevance of the SICR trigger on overall ECL is demonstrated in the table above with the indication that the ECL allowances and provisions for stage 1 and stage 2 positions would have been USD 1,267m, if all non-impaired positions across the portfolio had been measured for lifetime ECLs irrespective of their actual SICR status. This amount compares with actual stage 1 and 2 allowances and provisions of USD 526m as of 31 December 2022.

Maturity profile

The maturity profile is an important driver in ECLs, in particular for transactions in stage 2. A transfer of a transaction into stage 2 may therefore have a significant effect on ECLs. The current maturity profile of most lending books is relatively short.

Lending to large corporate clients is generally between one and two years, with related loan commitments up to four years. Real estate lending is generally between two and three years in Switzerland, with long dated maturities in the US. Lombard-lending contracts typically have average contractual maturities of 12 months or less, and include callable features.

A significant portion of our lending to SMEs and Real estate financings is documented under multi-purpose credit agreements, which allow for various forms of utilization but are unconditionally cancelable by UBS at any time: a) for drawings under such agreements with a fixed maturity, the respective term is applied for ECL calculations, or a maximum of 12 months in stage 1; b) for unused credit lines and all drawings that have no fixed maturity (e.g., current accounts), UBS generally applies a 12-month maturity from the reporting date, given the credit review policies, which require either continuous monitoring of key indicators and behavioral patterns for smaller positions or an annual formal review for any other limit. The ECLs for these products are sensitive to shortening or extending the maturity assumption.

Note 20 Fair value measurement

a) Valuation principles

All financial and non-financial assets and liabilities measured or disclosed at fair value are categorized into one of three fair value hierarchy levels in accordance with International Financial Reporting Standards (IFRS). The fair value hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. In certain cases, the inputs used to measure fair value may fall within different levels of the fair value hierarchy. For disclosure purposes, the level in the hierarchy within which an instrument is classified in its entirety is based on the lowest level input that is significant to the position's fair value measurement:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities;
- Level 2 – valuation techniques for which all significant inputs are, or are based on, observable market data; or
- Level 3 – valuation techniques for which significant inputs are not based on observable market data.

Fair values are determined using quoted prices in active markets for identical assets or liabilities, where available. Where the market for a financial instrument or non-financial asset or liability is not active, fair value is established using a valuation technique, including pricing models. Valuation adjustments may be made to allow for additional factors, including model, liquidity, credit and funding risks, which are not explicitly captured within the valuation technique, but which would nevertheless be considered by market participants when establishing a price. The limitations inherent in a particular valuation technique are considered in the determination of the classification of an asset or liability within the fair value hierarchy. Generally, the unit of account for a financial instrument is the individual instrument, and UBS applies valuation adjustments at an individual instrument level, consistent with that unit of account. However, if certain conditions are met, UBS may estimate the fair value of a portfolio of financial assets and liabilities with substantially similar and offsetting risk exposures on the basis of the net open risks.

› **Refer to Note 20d for more information**

b) Valuation governance

UBS's fair value measurement and model governance framework includes numerous controls and other procedural safeguards that are intended to maximize the quality of fair value measurements reported in the financial statements. New products and valuation techniques must be reviewed and approved by key stakeholders from the risk and finance control functions. Responsibility for the ongoing measurement of financial and non-financial instruments at fair value is with the business divisions.

Fair value estimates are validated by the risk and finance control functions, which are independent of the business divisions. Independent price verification is performed by Finance through benchmarking the business divisions' fair value estimates with observable market prices and other independent sources. A governance framework and associated controls are in place in order to monitor the quality of third-party pricing sources where used. For instruments where valuation models are used to determine fair value, independent valuation and model control groups within Finance and Risk Control evaluate UBS's models on a regular basis, including valuation and model input parameters, as well as pricing. As a result of the valuation controls employed, valuation adjustments may be made to the business divisions' estimates of fair value to align with independent market data and the relevant accounting standard.

› **Refer to Note 20d for more information**

c) Fair value hierarchy

The table below provides the fair value hierarchy classification of financial and non-financial assets and liabilities measured at fair value. The narrative that follows describes valuation techniques used in measuring their fair value of different product types (including significant valuation inputs and assumptions used), and the factors considered in determining their classification within the fair value hierarchy.

During 2022, assets and liabilities that were transferred from Level 2 to Level 1, or from Level 1 to Level 2, and were held for the entire reporting period were not material.

Determination of fair values from quoted market prices or valuation techniques[1]

	31.12.22				31.12.21			
USD m	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value on a recurring basis								
Financial assets at fair value held for trading	96,241	10,138	1,488	107,866	113,697	14,825	2,299	130,821
of which: Equity instruments	83,074	789	126	83,988	97,958	1,090	149	99,197
of which: Government bills / bonds	5,496	950	18	6,464	7,135	1,351	10	8,496
of which: Investment fund units	6,673	596	61	7,330	7,843	1,364	21	9,229
of which: Corporate and municipal bonds	976	6,363	541	7,880	708	7,604	556	8,868
of which: Loans	0	1,179	628	1,807	0	3,099	1,443	4,542
of which: Asset-backed securities	22	261	114	397	53	317	120	489
Derivative financial instruments	769	147,875	1,464	150,108	522	116,479	1,140	118,142
of which: Foreign exchange	575	84,881	2	85,458	255	53,043	7	53,305
of which: Interest rate	0	39,345	460	39,805	0	32,747	494	33,241
of which: Equity / index	1	21,542	653	22,195	0	27,861	384	28,245
of which: Credit	0	719	318	1,038	0	1,179	236	1,414
of which: Commodities	0	1,334	30	1,365	0	1,590	16	1,606
Brokerage receivables	0	17,576	0	17,576	0	21,839	0	21,839
Financial assets at fair value not held for trading	26,572	29,498	3,725	59,796	27,278	28,622	4,180	60,080
of which: Financial assets for unit-linked investment contracts	13,071	1	0	13,072	21,110	187	6	21,303
of which: Corporate and municipal bonds	35	14,101	230	14,366	123	13,937	306	14,366
of which: Government bills / bonds	13,103	3,638	0	16,741	5,624	3,236	0	8,860
of which: Loans	0	3,602	736	4,337	0	4,982	892	5,874
of which: Securities financing transactions	0	7,590	114	7,704	0	5,704	100	5,804
of which: Auction rate securities	0	0	1,326	1,326	0	0	1,585	1,585
of which: Investment fund units	307	566	190	1,063	338	574	117	1,028
of which: Equity instruments	57	0	792	849	83	2	681	765
Financial assets measured at fair value through other comprehensive income on a recurring basis								
Financial assets measured at fair value through other comprehensive income	57	2,182	0	2,239	2,704	6,140	0	8,844
of which: Asset-backed securities[2]	0	0	0	0	0	4,849	0	4,849
of which: Government bills / bonds[2]	0	26	0	26	2,658	27	0	2,686
of which: Corporate and municipal bonds	57	2,156	0	2,213	45	1,265	0	1,310
Non-financial assets measured at fair value on a recurring basis								
Precious metals and other physical commodities	4,471	0	0	4,471	5,258	0	0	5,258
Non-financial assets measured at fair value on a non-recurring basis								
Other non-financial assets[3]	0	0	110	110	0	0	26	26
Total assets measured at fair value	128,110	207,269	6,788	342,166	149,459	187,905	7,645	345,010

Note 20 Fair value measurement (continued)

Determination of fair values from quoted market prices or valuation techniques (continued)[1]

	31.12.22				31.12.21			
USD m	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial liabilities measured at fair value on a recurring basis								
Financial liabilities at fair value held for trading	23,578	5,823	114	29,515	25,413	6,170	105	31,688
of which: Equity instruments	*16,521*	*352*	*78*	*16,951*	*18,328*	*513*	*83*	*18,924*
of which: Corporate and municipal bonds	*36*	*4,643*	*27*	*4,707*	*30*	*4,219*	*17*	*4,266*
of which: Government bills / bonds	*5,880*	*706*	*1*	*6,587*	*5,883*	*826*	*0*	*6,709*
of which: Investment fund units	*1,141*	*84*	*3*	*1,229*	*1,172*	*555*	*6*	*1,733*
Derivative financial instruments	640	152,582	1,684	154,906	509	118,558	2,242	121,309
of which: Foreign exchange	*587*	*87,897*	*24*	*88,508*	*258*	*53,800*	*21*	*54,078*
of which: Interest rate	*0*	*37,429*	*116*	*37,545*	*0*	*28,398*	*278*	*28,675*
of which: Equity / index	*0*	*24,963*	*1,184*	*26,148*	*0*	*33,438*	*1,511*	*34,949*
of which: Credit	*0*	*920*	*279*	*1,199*	*0*	*1,412*	*341*	*1,753*
of which: Commodities	*0*	*1,309*	*52*	*1,361*	*0*	*1,503*	*63*	*1,566*
Financial liabilities designated at fair value on a recurring basis								
Brokerage payables designated at fair value	0	45,085	0	45,085	0	44,045	0	44,045
Debt issued designated at fair value	0	63,111	10,527	73,638	0	59,606	14,194	73,799
Other financial liabilities designated at fair value	0	29,547	691	30,237	0	29,258	816	30,074
of which: Financial liabilities related to unit-linked investment contracts	*0*	*13,221*	*0*	*13,221*	*0*	*21,466*	*0*	*21,466*
of which: Securities financing transactions	*0*	*15,333*	*0*	*15,333*	*0*	*6,375*	*2*	*6,377*
of which: Over-the-counter debt instruments and other	*0*	*993*	*691*	*1,684*	*0*	*1,417*	*814*	*2,231*
Total liabilities measured at fair value	24,219	296,148	13,015	333,381	25,922	257,637	17,357	300,916

1 Bifurcated embedded derivatives are presented on the same balance sheet lines as their host contracts and are not included in this table. The fair value of these derivatives was not material for the periods presented. 2 Effective 1 April 2022, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost. Refer to Note 1 for more information. 3 Other non-financial assets primarily consist of properties and other non-current assets held for sale, which are measured at the lower of their net carrying amount or fair value less costs to sell.

Valuation techniques

UBS uses widely recognized valuation techniques for determining the fair value of financial and non-financial instruments that are not actively traded and quoted. The most frequently applied valuation techniques include discounted value of expected cash flows, relative value and option pricing methodologies.

Discounted value of expected cash flows is a valuation technique that measures fair value using estimated expected future cash flows from assets or liabilities and then discounts these cash flows using a discount rate or discount margin that reflects the credit and / or funding spreads required by the market for instruments with similar risk and liquidity profiles to produce a present value. When using such valuation techniques, expected future cash flows are estimated using an observed or implied market price for the future cash flows or by using industry-standard cash flow projection models. The discount factors within the calculation are generated using industry-standard yield curve modeling techniques and models.

Relative value models measure fair value based on the market prices of equivalent or comparable assets or liabilities, making adjustments for differences between the characteristics of the observed instrument and the instrument being valued.

Option pricing models incorporate assumptions regarding the behavior of future price movements of an underlying referenced asset or assets to generate a probability-weighted future expected payoff for the option. The resulting probability-weighted expected payoff is then discounted using discount factors generated from industry-standard yield curve modeling techniques and models. The option pricing model may be implemented using a closed-form analytical formula or other mathematical techniques (e.g., binomial tree or Monte Carlo simulation).

Where available, valuation techniques use market-observable assumptions and inputs. If such data is not available, inputs may be derived by reference to similar assets in active markets, from recent prices for comparable transactions or from other observable market data. In such cases, the inputs selected are based on historical experience and practice for similar or analogous instruments, derivation of input levels based on similar products with observable price levels, and knowledge of current market conditions and valuation approaches.

For more complex instruments, fair values may be estimated using a combination of observed transaction prices, consensus pricing services and relevant quotes. Consideration is given to the nature of the quotes (e.g., indicative or firm) and the relationship of recently evidenced market activity to the prices provided by consensus pricing services. UBS also uses internally developed models, which are typically based on valuation methods and techniques recognized as standard within the industry. Assumptions and inputs used in valuation techniques include benchmark interest rate curves, credit and funding spreads used in estimating discount rates, bond and equity prices, equity index prices, foreign exchange rates, levels of market volatility and correlation. Refer to Note 20e for more information. The discount curves used by the Group incorporate the funding and credit characteristics of the instruments to which they are applied.

Financial instruments excluding derivatives: valuation and classification in the fair value hierarchy

Product	Valuation and classification in the fair value hierarchy	
Government bills and bonds	Valuation	– Generally valued using prices obtained directly from the market. – Instruments not priced directly using active-market data are valued using discounted cash flow valuation techniques that incorporate market data for similar government instruments.
	Fair value hierarchy	– Generally traded in active markets with prices that can be obtained directly from these markets, resulting in classification as Level 1, while the remaining positions are classified as Level 2 and Level 3.
Corporate and municipal bonds	Valuation	– Generally valued using prices obtained directly from the market for the security, or similar securities, adjusted for seniority, maturity and liquidity. – When prices are not available, instruments are valued using discounted cash flow valuation techniques incorporating the credit spread of the issuer or similar issuers. – For convertible bonds without directly comparable prices, issuances may be priced using a convertible bond model.
	Fair value hierarchy	– Generally classified as Level 1 or Level 2, depending on the depth of trading activity behind price sources. – Level 3 instruments have no suitable pricing information available.
Traded loans and loans measured at fair value	Valuation	– Valued directly using market prices that reflect recent transactions or quoted dealer prices, where available. – Where no market price data is available, loans are valued by relative value benchmarking using pricing derived from debt instruments in comparable entities or different products in the same entity, or by using a credit default swap valuation technique, which requires inputs for credit spreads, credit recovery rates and interest rates. Recently originated commercial real estate loans are measured using a securitization approach based on rating agency guidelines.
	Fair value hierarchy	– Instruments with suitably deep and liquid pricing information are classified as Level 2. – Positions requiring the use of valuation techniques, or for which the price sources have insufficient trading depth, are classified as Level 3.
Investment fund units	Valuation	– Predominantly exchange-traded, with readily available quoted prices in liquid markets. – Where market prices are not available, fair value may be measured using net asset values (NAVs).
	Fair value hierarchy	– Listed units are classified as Level 1, provided there is sufficient trading activity to justify active-market classification, while other positions are classified as Level 2. – Positions for which NAVs are not available are classified as Level 3.
Asset-backed securities (ABS)	Valuation	– For liquid securities, the valuation process will use trade and price data, updated for movements in market levels between the time of trading and the time of valuation. Less liquid instruments are measured using discounted expected cash flows incorporating price data for instruments or indices with similar risk profiles.
	Fair value hierarchy	– Residential mortgage-backed securities, commercial mortgage-backed securities and other ABS are generally classified as Level 2. However, if significant inputs are unobservable, or if market or fundamental data is not available, they are classified as Level 3.
Auction rate securities (ARS)	Valuation	– ARS are valued utilizing a discounted cash flow methodology. The model captures interest rate risk emanating from the note coupon, credit risk attributable to the underlying closed-end fund investments, liquidity risk as a function of the level of trading volume in these positions, and extension risk, as ARS are perpetual instruments that require an assumption regarding their maturity or issuer redemption date.
	Fair value hierarchy	– Granular and liquid pricing information is generally not available for ARS. As a result, these securities are classified as Level 3.
Equity instruments	Valuation	– Listed equity instruments are generally valued using prices obtained directly from the market. – Unlisted equity holdings, including private equity positions, are initially marked at their transaction price and are revalued when reliable evidence of price movement becomes available or when the position is deemed to be impaired.
	Fair value hierarchy	– The majority of equity securities are actively traded on public stock exchanges where quoted prices are readily and regularly available, resulting in Level 1 classification. – Equity securities less actively traded will be classified as Level 2 and illiquid positions as Level 3.
Financial assets for unit-linked investment contracts	Valuation	– The majority of assets are listed on exchanges and fair values are determined using quoted prices.
	Fair value hierarchy	– Most assets are classified as Level 1 if actively traded, or Level 2 if trading is not active. – Instruments for which prices are not readily available are classified as Level 3.
Securities financing transactions	Valuation	– These instruments are valued using discounted expected cash flow techniques. The discount rate applied is based on funding curves that are relevant to the collateral eligibility terms.
	Fair value hierarchy	– Collateral funding curves for these instruments are generally observable and, as a result, these positions are classified as Level 2. – Where the collateral terms are non-standard, the funding curve may be considered unobservable and these positions are classified as Level 3.
Brokerage receivables and payables	Valuation	– Fair value is determined based on the value of the underlying balances.
	Fair value hierarchy	– Due to their on-demand nature, these receivables and payables are deemed as Level 2.

Note 20 Fair value measurement (continued)

Product	Valuation and classification in the fair value hierarchy	
Financial liabilities related to unit-linked investment contracts	Valuation	– The fair values of investment contract liabilities are determined by reference to the fair value of the corresponding assets.
	Fair value hierarchy	– The liabilities themselves are not actively traded, but are mainly referenced to instruments that are actively traded and are therefore classified as Level 2.
Precious metals and other physical commodities	Valuation	– Physical assets are valued using the spot rate observed in the relevant market.
	Fair value hierarchy	– Generally traded in active markets with prices that can be obtained directly from these markets, resulting in classification as Level 1.
Debt issued designated at fair value	Valuation	– The risk management and the valuation approaches for these instruments are closely aligned with the equivalent derivatives business and the underlying risk, and the valuation techniques used for this component are the same as the relevant valuation techniques described below.
	Fair value hierarchy	– The observability is closely aligned with the equivalent derivatives business and the underlying risk.

Derivative instruments: valuation and classification in the fair value hierarchy

The curves used for discounting expected cash flows in the valuation of collateralized derivatives reflect the funding terms associated with the relevant collateral arrangement for the instrument being valued. These collateral arrangements differ across counterparties with respect to the eligible currency and interest terms of the collateral. The majority of collateralized derivatives are measured using a discount curve based on funding rates derived from overnight interest in the cheapest eligible currency for the respective counterparty collateral agreement.

Uncollateralized and partially collateralized derivatives are discounted using the alternative reference rate (the ARR) (or equivalent) curve for the currency of the instrument. As described in Note 20d, the fair value of uncollateralized and partially collateralized derivatives is then adjusted by credit valuation adjustments (CVAs), debit valuation adjustments (DVAs) and funding valuation adjustments (FVAs), as applicable, to reflect an estimation of the effect of counterparty credit risk, UBS's own credit risk, and funding costs and benefits.

› **Refer to Note 10 for more information about derivative instruments**

Derivative product	Valuation and classification in the fair value hierarchy	
Interest rate contracts	Valuation	– Interest rate swap contracts are valued by estimating future interest cash flows and discounting those cash flows using a rate that reflects the appropriate funding rate for the position being measured. The yield curves used to estimate future index levels and discount rates are generated using market-standard yield curve models using interest rates associated with current market activity. The key inputs to the models are interest rate swap rates, forward rate agreement rates, short-term interest rate futures prices, basis swap spreads and inflation swap rates. – Interest rate option contracts are valued using various market-standard option models, using inputs that include interest rate yield curves, inflation curves, volatilities and correlations. – When the maturity of an interest rate swap or option contract exceeds the term for which standard market quotes are observable for a significant input parameter, the contracts are valued by extrapolation from the last observable point using standard assumptions or by reference to another observable comparable input parameter to represent a suitable proxy for that portion of the term.
	Fair value hierarchy	– The majority of interest rate swaps are classified as Level 2, as the standard market contracts that form the inputs for yield curve models are generally traded in active and observable markets. – Options are generally treated as Level 2, as the calibration process enables the model output to be validated to active-market levels. Models calibrated in this way are then used to revalue the portfolio of both standard options and more exotic products. – Interest rate swap or option contracts are classified as Level 3 when the terms exceed standard market-observable quotes. – Exotic options for which appropriate volatility or correlation input levels cannot be implied from observable market data are classified as Level 3.
Credit derivative contracts	Valuation	– Credit derivative contracts are valued using industry-standard models based primarily on market credit spreads, upfront pricing points and implied recovery rates. Where a derivative credit spread is not directly available, it may be derived from the price of the reference cash bond. – Asset-backed credit derivatives are valued using a valuation technique similar to that of the underlying security with an adjustment to reflect the funding differences between cash and synthetic form.
	Fair value hierarchy	– Single-entity and portfolio credit derivative contracts are classified as Level 2 when credit spreads and recovery rates are determined from actively traded observable market data. Where the underlying reference name(s) are not actively traded and the correlation cannot be directly mapped to actively traded tranche instruments, these contracts are classified as Level 3. – Asset-backed credit derivatives follow the characteristics of the underlying security and are therefore distributed across Level 2 and Level 3.

Derivative product	Valuation and classification in the fair value hierarchy	
Foreign exchange contracts	Valuation	– Open spot foreign exchange (FX) contracts are valued using the FX spot rate observed in the market. – Forward FX contracts are valued using the FX spot rate adjusted for forward pricing points observed from standard market-based sources. – Over-the-counter (OTC) FX option contracts are valued using market-standard option valuation models. The models used for shorter-dated options (i.e., maturities of five years or less) tend to be different than those used for longer-dated options because the models needed for longer-dated OTC FX contracts require additional consideration of interest rate and FX rate interdependency. – The valuation for multi-dimensional FX options uses a multi-local volatility model, which is calibrated to the observed FX volatilities for all relevant FX pairs.
	Fair value hierarchy	– The markets for FX spot and FX forward pricing points are both actively traded and observable and therefore such FX contracts are generally classified as Level 2. – A significant proportion of OTC FX option contracts are classified as Level 2 as inputs are derived mostly from standard market contracts traded in active and observable markets. – OTC FX option contracts classified as Level 3 include multi-dimensional FX options and long-dated FX exotic option contracts where there is no active market from which to derive volatility or correlation inputs.
Equity / index contracts	Valuation	– Equity forward contracts have a single stock or index underlying and are valued using market-standard models. The key inputs to the models are stock prices, estimated dividend rates and equity funding rates (which are implied from prices of forward contracts observed in the market). Estimated cash flows are then discounted using market-standard discounted cash flow models using a rate that reflects the appropriate funding rate for that portion of the portfolio. When no market data is available for the instrument maturity, they are valued by extrapolation of available data, use of historical dividend data, or use of data for a related equity. – Equity option contracts are valued using market-standard models that estimate the equity forward level as described for equity forward contracts and incorporate inputs for stock volatility and for correlation between stocks within a basket. The probability-weighted expected option payoff generated is then discounted using market-standard discounted cash flow models applying a rate that reflects the appropriate funding rate for that portion of the portfolio. When volatility, forward or correlation inputs are not available, they are valued using extrapolation of available data, historical dividend, correlation or volatility data, or the equivalent data for a related equity.
	Fair value hierarchy	– As inputs are derived mostly from standard market contracts traded in active and observable markets, a significant proportion of equity forward contracts are classified as Level 2. – Equity option positions for which inputs are derived from standard market contracts traded in active and observable markets are also classified as Level 2. Level 3 positions are those for which volatility, forward or correlation inputs are not observable.
Commodity contracts	Valuation	– Commodity forward and swap contracts are measured using market-standard models that use market forward levels on standard instruments. – Commodity option contracts are measured using market-standard option models that estimate the commodity forward level as described for commodity forward and swap contracts, incorporating inputs for the volatility of the underlying index or commodity. For commodity options on baskets of commodities or bespoke commodity indices, the valuation technique also incorporates inputs for the correlation between different commodities or commodity indices.
	Fair value hierarchy	– Individual commodity contracts are typically classified as Level 2, because active forward and volatility market data is available.

d) Valuation adjustments and other items

The output of a valuation technique is always an estimate of a fair value that cannot be measured with complete certainty. As a result, valuations are adjusted where appropriate and when such factors would be considered by market participants in estimating fair value, to reflect close-out costs, credit exposure, model-driven valuation uncertainty, funding costs and benefits, trading restrictions and other factors.

Deferred day-1 profit or loss reserves

For new transactions where the valuation technique used to measure fair value requires significant inputs that are not based on observable market data, the financial instrument is initially recognized at the transaction price. The transaction price may differ from the fair value obtained using a valuation technique, where any such difference is deferred and not initially recognized in the income statement.

Deferred day-1 profit or loss is generally released into *Other net income from financial instruments measured at fair value through profit or loss* when pricing of equivalent products or the underlying parameters becomes observable or when the transaction is closed out.

The table below summarizes the changes in deferred day-1 profit or loss reserves during the respective period.

Note 20 Fair value measurement (continued)

Deferred day-1 profit or loss reserves

USD m	2022	2021	2020
Reserve balance at the beginning of the year	418	269	146
Profit / (loss) deferred on new transactions	299	459	362
(Profit) / loss recognized in the income statement	(295)	(308)	(238)
Foreign currency translation	0	(2)	0
Reserve balance at the end of the year	422	418	269

Own credit

Own credit risk is reflected in the valuation of UBS's fair value option liabilities where this component is considered relevant for valuation purposes by UBS's counterparties and other market participants.

Changes in the fair value of financial liabilities designated at fair value through profit or loss related to own credit are recognized in *Other comprehensive income* directly within *Retained earnings, with no reclassification to the income statement in future periods.* This presentation does not create or increase an accounting mismatch in the income statement, as the Group does not hedge changes in own credit.

Own credit is estimated using own credit adjustment (OCA) curves, which incorporate observable market data, including market-observed secondary prices for UBS's debt and debt curves of peers. In the table below, the change in unrealized own credit consists of changes in fair value that are attributable to the change in UBS's credit spreads, as well as the effect of changes in fair values attributable to factors other than credit spreads, such as redemptions, effects from time decay and changes in interest and other market rates. Realized own credit is recognized when an instrument with an associated unrealized OCA is repurchased prior to the contractual maturity date. Life-to-date amounts reflect the cumulative unrealized change since initial recognition.

› **Refer to Note 15 for more information about debt issued designated at fair value**

Own credit adjustments on financial liabilities designated at fair value

	Included in Other comprehensive income		
	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Recognized during the period:			
Realized gain / (loss)	1	(14)	2
Unrealized gain / (loss)	866	60	(295)
Total gain / (loss), before tax	867	46	(293)
USD m	31.12.22	31.12.21	31.12.20
Recognized on the balance sheet as of the end of the period:			
Unrealized life-to-date gain / (loss)	556	(315)	(381)
of which: debt issued designated at fair value	453	(347)	(418)
of which: other financial liabilities designated at fair value	103	32	36

Credit valuation adjustments

In order to measure the fair value of OTC derivative instruments, including funded derivative instruments that are classified as *Financial assets at fair value not held for trading,* CVAs are needed to reflect the credit risk of the counterparty inherent in these instruments. This amount represents the estimated fair value of protection required to hedge the counterparty credit risk of such instruments. A CVA is determined for each counterparty, considering all exposures with that counterparty, and is dependent on the expected future value of exposures, default probabilities and recovery rates, applicable collateral or netting arrangements, break clauses, funding spreads, and other contractual factors.

Funding valuation adjustments

FVAs reflect the costs and benefits of funding associated with uncollateralized and partially collateralized derivative receivables and payables and are calculated as the valuation effect from moving the discounting of the uncollateralized derivative cash flows from the ARR to OCA using the CVA framework, including the probability of counterparty default. An FVA is also applied to collateralized derivative assets in cases where the collateral cannot be sold or repledged.

Debit valuation adjustments

A DVA is estimated to incorporate own credit in the valuation of derivatives where an FVA is not already recognized. The DVA calculation is effectively consistent with the CVA framework, being determined for each counterparty, considering all exposures with that counterparty and taking into account collateral netting agreements, expected future mark-to-market movements and UBS's credit default spreads.

Other valuation adjustments

Instruments that are measured as part of a portfolio of combined long and short positions are valued at mid-market levels to ensure consistent valuation of the long- and short-component risks. A liquidity valuation adjustment is then made to the overall net long or short exposure to move the fair value to bid or offer as appropriate, reflecting current levels of market liquidity. The bid–offer spreads used in the calculation of this valuation adjustment are obtained from market transactions and other relevant sources and are updated periodically.

Uncertainties associated with the use of model-based valuations are incorporated into the measurement of fair value through the use of model reserves. These reserves reflect the amounts that the Group estimates should be deducted from valuations produced directly by models to incorporate uncertainties in the relevant modeling assumptions, in the model and market inputs used, or in the calibration of the model output to adjust for known model deficiencies. In arriving at these estimates, the Group considers a range of market practices, including how it believes market participants would assess these uncertainties. Model reserves are reassessed periodically in light of data from market transactions, consensus pricing services and other relevant sources.

Balance sheet valuation adjustments on financial instruments

	As of	
USD m	31.12.22	31.12.21
Credit valuation adjustments[1]	(33)	(44)
Funding valuation adjustments	(50)	(49)
Debit valuation adjustments	4	2
Other valuation adjustments	(839)	(913)
of which: liquidity	*(311)*	*(341)*
of which: model uncertainty	*(529)*	*(571)*

1 Amounts do not include reserves against defaulted counterparties.

Other items

In the first half of 2021, UBS incurred a loss of USD 861m as a result of closing out a significant portfolio of swaps with a US-based client of its prime brokerage business and the unwinding of related hedges, following the client's default. This loss is presented within *Other net income from financial instruments measured at fair value through profit or loss*.

e) Level 3 instruments: valuation techniques and inputs

The table below presents material Level 3 assets and liabilities, together with the valuation techniques used to measure fair value, the inputs used in a given valuation technique that are considered significant as of 31 December 2022 and unobservable, and a range of values for those unobservable inputs.

The range of values represents the highest- and lowest-level inputs used in the valuation techniques. Therefore, the range does not reflect the level of uncertainty regarding a particular input or an assessment of the reasonableness of the Group's estimates and assumptions, but rather the different underlying characteristics of the relevant assets and liabilities held by the Group. The ranges will therefore vary from period to period and parameter to parameter based on characteristics of the instruments held at each balance sheet date. Furthermore, the ranges of unobservable inputs may differ across other financial institutions, reflecting the diversity of the products in each firm's inventory.

Valuation techniques and inputs used in the fair value measurement of Level 3 assets and liabilities

	Fair value						Range of inputs						
	Assets		Liabilities				31.12.22			31.12.21			
USD bn	31.12.22	31.12.21	31.12.22	31.12.21	Valuation technique(s)	Significant unobservable input(s)[1]	low	high	weighted average[2]	low	high	weighted average[2]	unit[1]
Financial assets and liabilities at fair value held for trading and Financial assets at fair value not held for trading													
Corporate and municipal bonds	*0.8*	*0.9*	*0.0*	*0.0*	Relative value to market comparable	Bond price equivalent	14	112	85	16	143	98	points
					Discounted expected cash flows	Discount margin	412	412		434	434		basis points
Traded loans, loans measured at fair value, loan commitments and guarantees	*1.7*	*2.8*	*0.0*	*0.0*	Relative value to market comparable	Loan price equivalent	30	100	97	0	101	99	points
					Discounted expected cash flows	Credit spread	200	200	200	175	800	436	basis points
					Market comparable and securitization model	Credit spread	145	1,350	322	28	1,544	241	basis points
Auction rate securities	*1.3*	*1.6*			Discounted expected cash flows	Credit spread	115	196	144	115	197	153	basis points
Investment fund units[3]	*0.3*	*0.1*	*0.0*	*0.0*	Relative value to market comparable	Net asset value							
Equity instruments[3]	*0.9*	*0.8*	*0.1*	*0.1*	Relative value to market comparable	Price							
Debt issued designated at fair value[4]			*10.5*	*14.2*									
Other financial liabilities designated at fair value			*0.7*	*0.8*	Discounted expected cash flows	Funding spread	23	175		24	175		basis points
Derivative financial instruments													
Interest rate	*0.5*	*0.5*	*0.1*	*0.3*	Option model	Volatility of interest rates	75	143		65	81		basis points
Credit	*0.3*	*0.2*	*0.3*	*0.3*	Discounted expected cash flows	Credit spreads	9	565		1	583		basis points
						Bond price equivalent	3	277		2	136		points
Equity / index	*0.7*	*0.4*	*1.2*	*1.5*	Option model	Equity dividend yields	0	20		0	11		%
						Volatility of equity stocks, equity and other indices	4	120		4	98		%
						Equity-to-FX correlation	(29)	84		(29)	76		%
						Equity-to-equity correlation	(25)	100		(25)	100		%

1 The ranges of significant unobservable inputs are represented in points, percentages and basis points. Points are a percentage of par (e.g., 100 points would be 100% of par). 2 Weighted averages are provided for most non-derivative financial instruments and were calculated by weighting inputs based on the fair values of the respective instruments. Weighted averages are not provided for inputs related to Other financial liabilities designated at fair value and Derivative financial instruments, as this would not be meaningful. 3 The range of inputs is not disclosed, as there is a dispersion of values given the diverse nature of the investments. 4 Debt issued designated at fair value primarily consists of UBS structured notes, which include variable maturity notes with various equity and foreign exchange underlying risks, rates-linked and credit-linked notes, all of which have embedded derivative parameters that are considered to be unobservable. The equivalent derivative instrument parameters are presented in the respective derivative financial instruments lines in this table.

Significant unobservable inputs in Level 3 positions

This section discusses the significant unobservable inputs used in the valuation of Level 3 instruments and assesses the potential effect that a change in each unobservable input in isolation may have on a fair value measurement. Relationships between observable and unobservable inputs have not been included in the summary below.

Input	Description
Bond price equivalent	– Where market prices are not available for a bond, fair value is measured by comparison with observable pricing data from similar instruments. Factors considered when selecting comparable instruments include credit quality, maturity and industry of the issuer. Fair value may be measured either by a direct price comparison or by conversion of an instrument price into a yield (either as an outright yield or as a spread to the relevant benchmark rate). – For corporate and municipal bonds, the range represents the range of prices from reference issuances used in determining fair value. Bonds priced at 0 are distressed to the point that no recovery is expected, while prices significantly in excess of 100 or par relate to inflation-linked or structured issuances that pay a coupon in excess of the market benchmark as of the measurement date. – For credit derivatives, the bond price range represents the range of prices used for reference instruments, which are typically converted to an equivalent yield or credit spread as part of the valuation process.
Loan price equivalent	– Where market prices are not available for a traded loan, fair value is measured by comparison with observable pricing data for similar instruments. Factors considered when selecting comparable instruments include industry segment, collateral quality, maturity and issuer-specific covenants. Fair value may be measured either by a direct price comparison or by conversion of an instrument price into a yield. The range represents the range of prices derived from reference issuances of a similar credit quality used to measure fair value for loans classified as Level 3. Loans priced at 0 are distressed to the point that no recovery is expected, while a current price of 100 represents a loan that is expected to be repaid in full.
Credit spread	– Valuation models for many credit derivatives require an input for the credit spread, which is a reflection of the credit quality of the associated referenced underlying. The credit spread of a particular security is quoted in relation to the yield on a benchmark security or reference rate, typically either US Treasury or ARR, and is generally expressed in terms of basis points. An increase / (decrease) in credit spread will increase / (decrease) the value of credit protection offered by credit default swaps and other credit derivative products. The income statement effect from such changes depends on the nature and direction of the positions held. Credit spreads may be negative where the asset is more creditworthy than the benchmark against which the spread is calculated. A wider credit spread represents decreasing creditworthiness. The range represents a diverse set of underlyings, with the lower end of the range representing credits of the highest quality and the upper end of the range representing greater levels of credit risk.
Discount margin	– The discount margin (DM) spread represents the discount rates applied to present value cash flows of an asset to reflect the market return required for uncertainty in the estimated cash flows. DM spreads are a rate or rates applied on top of a floating index (e.g., Secured Overnight Financing Rate (SOFR)) to discount expected cash flows. Generally, a decrease / (increase) in the DM in isolation would result in a higher / (lower) fair value. – The high end of the range relates to securities that are priced low within the market relative to the expected cash flow schedule. This indicates that the market is pricing an increased risk of credit loss into the security that is greater than what is being captured by the expected cash flow generation process. The low ends of the ranges are typical of funding rates on better-quality instruments.
Funding spread	– Structured financing transactions are valued using synthetic funding curves that best represent the assets that are pledged as collateral for the transactions. They are not representative of where UBS can fund itself on an unsecured basis, but provide an estimate of where UBS can source and deploy secured funding with counterparties for a given type of collateral. The funding spreads are expressed in terms of basis points, and if funding spreads widen, this increases the effect of discounting. – A small proportion of structured debt instruments and non-structured fixed-rate bonds within financial liabilities designated at fair value had an exposure to funding spreads that was longer in duration than the actively traded market.
Volatility	– Volatility measures the variability of future prices for a particular instrument and is generally expressed as a percentage, where a higher number reflects a more volatile instrument, for which future price movements are more likely to occur. Volatility is a key input into option models, where it is used to derive a probability-based distribution of future prices for the underlying instrument. The effect of volatility on individual positions within the portfolio is driven primarily by whether the option contract is a long or short position. In most cases, the fair value of an option increases as a result of an increase in volatility and is reduced by a decrease in volatility. Generally, volatility used in the measurement of fair value is derived from active-market option prices (referred to as implied volatility). A key feature of implied volatility is the volatility "smile" or "skew," which represents the effect of pricing options of different option strikes at different implied volatility levels. – Volatilities of low interest rates tend to be much higher than volatilities of high interest rates. In addition, different currencies may have significantly different implied volatilities.

Note 20 Fair value measurement (continued)

Input	Description
Correlation	– Correlation measures the interrelationship between the movements of two variables. It is expressed as a percentage between –100% and +100%, where +100% represents perfectly correlated variables (meaning a movement of one variable is associated with a movement of the other variable in the same direction) and –100% implies that the variables are inversely correlated (meaning a movement of one variable is associated with a movement of the other variable in the opposite direction). The effect of correlation on the measurement of fair value depends on the specific terms of the instruments being valued, reflecting the range of different payoff features within such instruments. – Equity-to-FX correlation is important for equity options based on a currency other than the currency of the underlying stock. Equity-to-equity correlation is particularly important for complex options that incorporate, in some manner, different equities in the projected payoff.
Equity dividend yields	– The derivation of a forward price for an individual stock or index is important for measuring fair value for forward or swap contracts and for measuring fair value using option pricing models. The relationship between the current stock price and the forward price is based on a combination of expected future dividend levels and payment timings, and, to a lesser extent, the relevant funding rates applicable to the stock in question. Dividend yields are generally expressed as an annualized percentage of the share price, with the lowest limit of 0% representing a stock that is not expected to pay any dividend. The dividend yield and timing represent the most significant parameter in determining fair value for instruments that are sensitive to an equity forward price.

f) Level 3 instruments: sensitivity to changes in unobservable input assumptions

The table below summarizes those financial assets and liabilities classified as Level 3 for which a change in one or more of the unobservable inputs to reflect reasonably possible favorable and unfavorable alternative assumptions would change fair value significantly, and the estimated effect thereof. The table below does not represent the estimated effect of stress scenarios. Interdependencies between Level 1, 2 and 3 parameters have not been incorporated in the table. Furthermore, direct interrelationships between the Level 3 parameters discussed below are not a significant element of the valuation uncertainty.

Sensitivity data is estimated using a number of techniques, including the estimation of price dispersion among different market participants, variation in modeling approaches and reasonably possible changes to assumptions used within the fair value measurement process. The sensitivity ranges are not always symmetrical around the fair values, as the inputs used in valuations are not always precisely in the middle of the favorable and unfavorable range.

Sensitivity data is determined at a product or parameter level and then aggregated assuming no diversification benefit. Diversification would incorporate estimated correlations across different sensitivity results and, as such, would result in an overall sensitivity that would be less than the sum of the individual component sensitivities. However, the Group believes that the diversification benefit is not significant to this analysis.

Sensitivity of fair value measurements to changes in unobservable input assumptions[1]

	31.12.22		31.12.21	
USD m	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes
Traded loans, loans measured at fair value, loan commitments and guarantees	19	(12)	19	(13)
Securities financing transactions	33	(37)	41	(53)
Auction rate securities	46[2]	(46)[2]	66	(66)
Asset-backed securities	27	(27)	20	(20)
Equity instruments	183	(161)	173	(146)
Interest rate derivatives, net	18[2]	(12)[2]	29	(19)
Credit derivatives, net	3	(4)	5	(8)
Foreign exchange derivatives, net	10	(5)	19	(11)
Equity / index derivatives, net	361	(330)	368	(335)
Other	39[2]	(62)[2]	50	(73)
Total	738	(696)	790	(744)

1 Sensitivity of issued and over-the-counter debt instruments is reported with the equivalent derivative or securities financing instrument. 2 Includes refinements applied in estimating valuation uncertainty across various parameters.

Note 20 Fair value measurement (continued)

g) Level 3 instruments: movements during the period

The table below presents additional information about material movements in Level 3 assets and liabilities measured at fair value on a recurring basis, excluding any related hedging activity.

Assets and liabilities transferred into or out of Level 3 are presented as if those assets or liabilities had been transferred at the beginning of the year.

Movements of Level 3 instruments

USD bn	Balance at the beginning of the period	Net gains / losses included in comprehensive income[1]	*of which: related to instruments held at the end of the period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance at the end of the period
For the twelve months ended 31 December 2022[2]											
Financial assets at fair value held for trading	2.3	(0.3)	*(0.3)*	0.3	(1.8)	0.5	0.0	0.7	(0.3)	(0.0)	1.5
of which: Investment fund units	*0.0*	*(0.0)*	*(0.0)*	*0.0*	*(0.0)*	*0.0*	*0.0*	*0.1*	*(0.0)*	*(0.0)*	*0.1*
of which: Corporate and municipal bonds	*0.6*	*(0.0)*	*(0.0)*	*0.3*	*(0.6)*	*0.0*	*0.0*	*0.4*	*(0.0)*	*(0.0)*	*0.5*
of which: Loans	*1.4*	*(0.1)*	*(0.1)*	*0.0*	*(1.1)*	*0.5*	*0.0*	*0.0*	*(0.2)*	*0.0*	*0.6*
Derivative financial instruments – assets	1.1	0.6	*0.3*	0.0	0.0	0.4	(0.7)	0.1	(0.0)	(0.0)	1.5
of which: Interest rate	*0.5*	*0.3*	*0.3*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*(0.1)*	*(0.0)*	*0.5*
of which: Equity / index	*0.4*	*0.2*	*0.1*	*0.0*	*0.0*	*0.4*	*(0.3)*	*0.1*	*(0.0)*	*(0.0)*	*0.7*
of which: Credit	*0.2*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*0.1*	*0.0*	*0.3*
Financial assets at fair value not held for trading	4.2	0.1	*0.1*	0.7	(1.2)	0.1	(0.0)	0.2	(0.3)	(0.0)	3.7
of which: Loans	*0.9*	*(0.0)*	*(0.0)*	*0.4*	*(0.4)*	*0.1*	*0.0*	*0.1*	*(0.3)*	*(0.0)*	*0.7*
of which: Auction rate securities	*1.6*	*0.1*	*0.0*	*0.0*	*(0.3)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*1.3*
of which: Equity instruments	*0.7*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.1*	*0.0*	*(0.0)*	*0.8*
Derivative financial instruments – liabilities	2.2	(0.8)	*(0.4)*	0.0	0.0	1.1	(0.9)	0.3	(0.2)	(0.1)	1.7
of which: Interest rate	*0.3*	*(0.3)*	*(0.0)*	*0.0*	*0.0*	*0.1*	*(0.0)*	*0.0*	*(0.0)*	*(0.0)*	*0.1*
of which: Equity / index	*1.5*	*(0.4)*	*(0.3)*	*0.0*	*0.0*	*0.8*	*(0.7)*	*0.1*	*(0.2)*	*(0.0)*	*1.2*
of which: Credit	*0.3*	*(0.1)*	*(0.0)*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.1*	*(0.0)*	*(0.0)*	*0.3*
Debt issued designated at fair value[3]	14.2	(2.2)	*(1.8)*	0.0	0.0	4.7	(3.1)	0.7	(3.4)	(0.3)	10.5
Other financial liabilities designated at fair value	0.8	(0.1)	*(0.1)*	0.0	0.0	0.0	(0.1)	0.0	(0.0)	(0.0)	0.7
For the twelve months ended 31 December 2021											
Financial assets at fair value held for trading	2.3	(0.0)	*(0.1)*	0.3	(1.6)	1.2	0.0	0.3	(0.3)	(0.0)	2.3
of which: Investment fund units	*0.0*	*(0.0)*	*(0.0)*	*0.0*	*(0.0)*	*0.0*	*0.0*	*0.0*	*(0.0)*	*(0.0)*	*0.0*
of which: Corporate and municipal bonds	*0.8*	*0.0*	*(0.0)*	*0.2*	*(0.4)*	*0.0*	*0.0*	*0.0*	*(0.1)*	*(0.0)*	*0.6*
of which: Loans	*1.1*	*0.0*	*(0.0)*	*0.0*	*(0.8)*	*1.2*	*0.0*	*0.0*	*(0.2)*	*0.0*	*1.4*
Derivative financial instruments – assets	1.8	(0.2)	*(0.1)*	0.0	0.0	0.5	(0.7)	0.1	(0.3)	(0.0)	1.1
of which: Interest rate	*0.5*	*0.1*	*0.1*	*0.0*	*0.0*	*0.1*	*(0.2)*	*0.0*	*(0.1)*	*(0.0)*	*0.5*
of which: Equity / index	*0.9*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.3*	*(0.4)*	*0.0*	*(0.2)*	*(0.0)*	*0.4*
of which: Credit	*0.3*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*(0.0)*	*0.0*	*0.2*
Financial assets at fair value not held for trading	3.9	0.1	*0.1*	1.0	(0.6)	0.0	0.0	0.1	(0.3)	(0.0)	4.2
of which: Loans	*0.9*	*(0.0)*	*0.0*	*0.6*	*(0.3)*	*0.0*	*0.0*	*0.0*	*(0.3)*	*(0.0)*	*0.9*
of which: Auction rate securities	*1.5*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*1.6*
of which: Equity instruments	*0.5*	*0.1*	*0.1*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.0)*	*(0.0)*	*0.7*
Derivative financial instruments – liabilities	3.5	0.2	*(0.0)*	0.0	0.0	0.9	(1.8)	0.0	(0.5)	(0.0)	2.2
of which: Interest rate	*0.5*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*(0.0)*	*(0.0)*	*0.3*
of which: Equity / index	*2.3*	*0.3*	*0.1*	*0.0*	*0.0*	*0.8*	*(1.5)*	*0.0*	*(0.4)*	*(0.0)*	*1.5*
of which: Credit	*0.5*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.0)*	*0.0*	*(0.1)*	*(0.0)*	*0.3*
Debt issued designated at fair value	11.0	0.7	*0.6*	0.0	0.0	8.0	(4.2)	0.2	(1.2)	(0.2)	14.2
Other financial liabilities designated at fair value	0.7	0.0	*0.0*	0.0	0.0	0.4	(0.2)	0.0	(0.0)	(0.0)	0.8

1 Net gains / losses included in comprehensive income are recognized in Net interest income and Other net income from financial instruments measured at fair value through profit or loss in the Income statement, and also in Gains / (losses) from own credit on financial liabilities designated at fair value, before tax in the Statement of comprehensive income. 2 Total Level 3 assets as of 31 December 2022 were USD 6.8bn (31 December 2021: USD 7.6bn). Total Level 3 liabilities as of 31 December 2022 were USD 13.0bn (31 December 2021: USD 17.4bn). 3 Of the USD 2.2bn in net gains / losses that is included in comprehensive income, USD 1.7bn is recognized in the Income statement and USD 0.5bn is recognized in the Statement of comprehensive income in Gains / (losses) from own credit on financial liabilities designated at fair value, before tax.

h) Maximum exposure to credit risk for financial instruments measured at fair value

The tables below provide the Group's maximum exposure to credit risk for financial instruments measured at fair value and the respective collateral and other credit enhancements mitigating credit risk for these classes of financial instruments.

The maximum exposure to credit risk includes the carrying amounts of financial instruments recognized on the balance sheet subject to credit risk and the notional amounts for off-balance sheet arrangements. Where information is available, collateral is presented at fair value. For other collateral, such as real estate, a reasonable alternative value is used. Credit enhancements, such as credit derivative contracts and guarantees, are included at their notional amounts. Both are capped at the maximum exposure to credit risk for which they serve as security. The "Risk management and control" section of this report describes management's view of credit risk and the related exposures, which can differ in certain respects from the requirements of IFRS.

Maximum exposure to credit risk

	31.12.22								
		Collateral				Credit enhancements			
USD bn	Maximum exposure to credit risk	Cash collateral received	Collateralized by equity and debt instruments	Secured by real estate	Other collateral	Netting	Credit derivative contracts	Guarantees	Exposure to credit risk after collateral and credit enhancements
Financial assets measured at fair value on the balance sheet[1]									
Financial assets at fair value held for trading – debt instruments[2,3]	16.5								16.5
Derivative financial instruments[4]	150.1		5.9			133.5			10.7
Brokerage receivables	17.6		17.3						0.3
Financial assets at fair value not held for trading – debt instruments[5]	44.8		11.4						33.4
Total financial assets measured at fair value	229.0	0.0	34.6	0.0	0.0	133.5	0.0	0.0	61.0
Guarantees[6]	0.2							0.2	0.0

	31.12.21								
		Collateral				Credit enhancements			
USD bn	Maximum exposure to credit risk	Cash collateral received	Collateralized by equity and debt instruments	Secured by real estate	Other collateral	Netting	Credit derivative contracts	Guarantees	Exposure to credit risk after collateral and credit enhancements
Financial assets measured at fair value on the balance sheet[1]									
Financial assets at fair value held for trading – debt instruments[2,3]	22.4								22.4
Derivative financial instruments[4]	118.1		4.2			103.2			10.7
Brokerage receivables	21.8		21.6						0.2
Financial assets at fair value not held for trading – debt instruments[5]	37.0		11.2						25.7
Total financial assets measured at fair value	**199.4**	**0.0**	**37.1**	**0.0**	**0.0**	**103.2**	**0.0**	**0.0**	**59.1**
Guarantees[6]	0.2							0.2	0.0

1 The maximum exposure to loss is generally equal to the carrying amount and subject to change over time with market movements. 2 These positions are generally managed under the market risk framework. For the purpose of this disclosure, collateral and credit enhancements were not considered. 3 Does not include investment fund units. 4 The amount shown in the "Netting" column represents the netting potential not recognized on the balance sheet. Refer to Note 21 for more information. 5 Financial assets at fair value not held for trading collateralized by securities consisted of structured loans and reverse repurchase and securities borrowing agreements. 6 The amount shown in the "Guarantees" column largely relates to sub-participations.

Note 20 Fair value measurement (continued)

i) Financial instruments not measured at fair value

The table below provides the estimated fair values of financial instruments not measured at fair value.

Financial instruments not measured at fair value

	31.12.22						31.12.21					
	Carrying amount	Fair value					Carrying amount	Fair value				
USD bn	Total	Carrying amount approximates fair value[1]	Level 1	Level 2	Level 3	Total	Total	Carrying amount approximates fair value[1]	Level 1	Level 2	Level 3	Total
Assets												
Cash and balances at central banks	169.4	169.4	0.1	0.0	0.0	169.4	192.8	192.7	0.1	0.0	0.0	192.8
Loans and advances to banks	14.8	14.0	0.0	0.7	0.0	14.8	15.5	14.8	0.0	0.7	0.0	15.5
Receivables from securities financing transactions measured at amortized cost	67.8	64.3	0.0	1.8	1.7	67.8	75.0	71.6	0.0	1.3	2.1	75.0
Cash collateral receivables on derivative instruments	35.0	35.0	0.0	0.0	0.0	35.0	30.5	30.5	0.0	0.0	0.0	30.5
Loans and advances to customers	387.2	134.3	0.0	45.9	194.7	374.9	397.8	163.1	0.0	43.8	190.1	396.9
Other financial assets measured at amortized cost[2]	53.3	12.9	10.3	25.1	2.5	50.8	26.2	4.1	9.3	10.7	2.4	26.5
Liabilities												
Amounts due to banks	11.6	8.9	0.0	2.7	0.0	11.6	13.1	9.1	0.0	4.0	0.0	13.1
Payables from securities financing transactions measured at amortized cost	4.2	3.5	0.0	0.7	0.0	4.2	5.5	4.1	0.0	1.5	0.0	5.5
Cash collateral payables on derivative instruments	36.4	36.4	0.0	0.0	0.0	36.4	31.8	31.8	0.0	0.0	0.0	31.8
Customer deposits	525.1	491.3	0.0	33.6	0.0	524.8	542.0	535.4	0.0	6.6	0.0	542.0
Debt issued measured at amortized cost	114.6	15.4	0.0	98.1	0.0	113.5	139.2	15.8	0.0	125.3	0.0	141.1
Other financial liabilities measured at amortized cost[3]	6.2	6.2	0.0	0.0	0.0	6.2	5.4	5.4	0.0	0.0	0.0	5.4

1 Includes certain financial instruments where the carrying amount is a reasonable approximation of the fair value due to the instruments' short-term nature (instruments that are receivable or payable on demand, or with a remaining maturity (excluding the effects of callable features) of three months or less). 2 Effective 1 April 2022, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost. Refer to Note 1 for information. 3 Excludes lease liabilities.

The fair values included in the table above have been calculated for disclosure purposes only. The valuation techniques and assumptions described below relate only to the fair value of UBS's financial instruments not measured at fair value. Other institutions may use different methods and assumptions for their fair value estimations, and therefore such fair value disclosures cannot necessarily be compared from one financial institution to another. The following principles were applied when determining fair value estimates for financial instruments not measured at fair value:

- For financial instruments with remaining maturities greater than three months, the fair value was determined from quoted market prices, if available.
- Where quoted market prices were not available, the fair values were estimated by discounting contractual cash flows using current market interest rates or appropriate yield curves for instruments with similar credit risk and maturity. These estimates generally include adjustments for counterparty credit risk or UBS's own credit.
- For short-term financial instruments with remaining maturities of three months or less, the carrying amount, which is net of credit loss allowances, is generally considered a reasonable estimate of fair value.

Note 21 Offsetting financial assets and financial liabilities

UBS enters into netting agreements with counterparties to manage the credit risks associated primarily with repurchase and reverse repurchase transactions, securities borrowing and lending, over-the-counter derivatives, and exchange-traded derivatives. These netting agreements and similar arrangements generally enable the counterparties to set off liabilities against available assets received in the ordinary course of business and / or in the event that the counterparties to the transaction are unable to fulfill their contractual obligations.

The tables below provide a summary of financial assets and financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements, as well as financial collateral received or pledged to mitigate credit exposures for these financial instruments.

The Group engages in a variety of counterparty credit risk mitigation strategies in addition to netting and collateral arrangements. Therefore, the net amounts presented in the tables below do not purport to represent their actual credit risk exposure.

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

	Assets subject to netting arrangements								
	Netting recognized on the balance sheet			Netting potential not recognized on the balance sheet[3]			Assets not subject to netting arrangements[4]	Total assets	
As of 31.12.22, USD bn	Gross assets before netting	Netting with gross liabilities[2]	Net assets recognized on the balance sheet	Financial liabilities	Collateral received	Assets after consideration of netting potential	Assets recognized on the balance sheet	Total assets after consideration of netting potential	Total assets recognized on the balance sheet
Receivables from securities financing transactions measured at amortized cost	60.8	(11.1)	49.6	(3.0)	(46.4)	0.3	18.2	18.5	67.8
Derivative financial instruments	147.4	(2.5)	144.9	(110.9)	(28.5)	5.5	5.2	10.7	150.1
Cash collateral receivables on derivative instruments[1]	33.5	0.0	33.5	(20.9)	(1.9)	10.6	1.5	12.1	35.0
Financial assets at fair value not held for trading	85.6	(76.8)	8.7	(1.5)	(7.3)	0.0	51.0	51.0	59.8
of which: reverse repurchase agreements	*84.4*	*(76.8)*	*7.6*	*(1.5)*	*(6.1)*	*0.0*	*0.1*	*0.1*	*7.7*
Total assets	327.2	(90.4)	236.8	(136.3)	(84.1)	16.4	76.0	92.3	312.8
As of 31.12.21, USD bn									
Receivables from securities financing transactions measured at amortized cost	67.7	(13.8)	53.9	(2.9)	(51.0)	0.0	21.1	21.1	75.0
Derivative financial instruments	116.0	(3.6)	112.4	(88.9)	(18.5)	5.0	5.7	10.7	118.1
Cash collateral receivables on derivative instruments[1]	29.4	0.0	29.4	(15.2)	(3.3)	11.0	1.1	12.1	30.5
Financial assets at fair value not held for trading	93.1	(87.6)	5.5	(1.1)	(4.4)	0.0	54.6	54.6	60.1
of which: reverse repurchase agreements	*93.1*	*(87.6)*	*5.5*	*(1.1)*	*(4.4)*	*0.0*	*0.3*	*0.3*	*5.8*
Total assets	**306.2**	**(105.0)**	**201.2**	**(108.1)**	**(77.2)**	**15.9**	**82.6**	**98.5**	**283.7**

1 The net amount of Cash collateral receivables on derivative instruments recognized on the balance sheet includes certain OTC derivatives that are net settled on a daily basis either legally or in substance under IAS 32 principles and exchange-traded derivatives that are economically settled on a daily basis. 2 The logic of the table results in amounts presented in the "Netting with gross liabilities" column corresponding directly to the amounts presented in the "Netting with gross assets" column in the liabilities table presented below. Netting in this column for reverse repurchase agreements presented within the lines "Receivables from securities financing transactions measured at amortized cost" and "Financial assets at fair value not held for trading" taken together corresponds to the amounts presented for repurchase agreements in the "Payables from securities financing transactions measured at amortized cost" and "Other financial liabilities designated at fair value" lines in the liabilities table presented below. 3 For the purpose of this disclosure, the amounts of financial instruments and cash collateral presented have been capped so as not to exceed the net amount of financial assets presented on the balance sheet; i.e., over-collateralization, where it exists, is not reflected in the table. 4 Includes assets not subject to enforceable netting arrangements and other out-of-scope items.

Note 21 Offsetting financial assets and financial liabilities (continued)

Financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

	Liabilities subject to netting arrangements								
	Netting recognized on the balance sheet			Netting potential not recognized on the balance sheet[3]			Liabilities not subject to netting arrangements[4]	Total liabilities	
As of 31.12.22, USD bn	Gross liabilities before netting	Netting with gross assets[2]	Net liabilities recognized on the balance sheet	Financial assets	Collateral pledged	Liabilities after consideration of netting potential	Liabilities recognized on the balance sheet	Total liabilities after consideration of netting potential	Total liabilities recognized on the balance sheet
Payables from securities financing transactions measured at amortized cost	14.1	(11.1)	3.0	(1.3)	(1.8)	0.0	1.2	1.2	4.2
Derivative financial instruments	150.3	(2.5)	147.8	(110.9)	(26.2)	10.7	7.1	17.8	154.9
Cash collateral payables on derivative instruments[1]	34.9	0.0	34.9	(20.0)	(1.9)	13.0	1.6	14.5	36.4
Other financial liabilities designated at fair value	92.5	(76.9)	15.6	(3.2)	(12.4)	0.0	14.6	14.6	30.2
of which: repurchase agreements	*92.1*	*(76.9)*	*15.3*	*(3.2)*	*(12.1)*	*0.0*	*0.1*	*0.1*	*15.3*
Total liabilities	291.7	(90.4)	201.3	(135.3)	(42.3)	23.7	24.5	48.1	225.8
As of 31.12.21, USD bn									
Payables from securities financing transactions measured at amortized cost	16.9	(12.8)	4.1	(1.8)	(2.3)	0.0	1.4	1.4	5.5
Derivative financial instruments	118.4	(3.6)	114.9	(88.9)	(18.1)	7.9	6.4	14.3	121.3
Cash collateral payables on derivative instruments[1]	30.4	0.0	30.4	(13.1)	(3.3)	14.0	1.4	15.4	31.8
Other financial liabilities designated at fair value	94.8	(88.6)	6.2	(2.2)	(3.8)	0.2	23.9	24.1	30.1
of which: repurchase agreements	*94.6*	*(88.6)*	*6.0*	*(2.2)*	*(3.8)*	*0.0*	*0.4*	*0.4*	*6.4*
Total liabilities	**260.6**	**(105.0)**	**155.6**	**(106.0)**	**(27.5)**	**22.1**	**33.1**	**55.2**	**188.7**

1 The net amount of Cash collateral payables on derivative instruments recognized on the balance sheet includes certain OTC derivatives that are net settled on a daily basis either legally or in substance under IAS 32 principles and exchange-traded derivatives that are economically settled on a daily basis. 2 The logic of the table results in amounts presented in the "Netting with gross assets" column corresponding to the amounts presented in the "Netting with gross liabilities" column in the assets table presented above. Netting in this column for repurchase agreements presented within the lines "Payables from securities financing transactions measured at amortized cost" and "Other financial liabilities designated at fair value" taken together corresponds to the amounts presented for reverse repurchase agreements in the "Receivables from securities financing transactions measured at amortized cost" and "Financial assets at fair value not held for trading" lines in the assets table presented above. 3 For the purpose of this disclosure, the amounts of financial instruments and cash collateral presented have been capped so as not to exceed the net amount of financial liabilities presented on the balance sheet; i.e., over-collateralization, where it exists, is not reflected in the table. 4 Includes liabilities not subject to enforceable netting arrangements and other out-of-scope items.

Note 22 Restricted and transferred financial assets

This Note provides information about restricted financial assets (Note 22a), transfers of financial assets (Note 22b and 22c) and financial assets that are received as collateral with the right to resell or repledge these assets (Note 22d).

a) Restricted financial assets

Restricted financial assets consist of assets pledged as collateral against an existing liability or contingent liability and other assets that are otherwise explicitly restricted such that they cannot be used to secure funding.

Financial assets are mainly pledged as collateral in securities lending transactions, in repurchase transactions, against loans from Swiss mortgage institutions and in connection with the issuance of covered bonds. The Group generally enters into repurchase and securities lending arrangements under standard market agreements. For securities lending, the cash received as collateral may be more or less than the fair value of the securities loaned, depending on the nature of the transaction. For repurchase agreements, the fair value of the collateral sold under an agreement to repurchase is generally in excess of the cash borrowed. Pledged mortgage loans serve as collateral for existing liabilities against Swiss central mortgage institutions and for existing covered bond issuances of USD 8,962m as of 31 December 2022 (31 December 2021: USD 10,843m).

Other restricted financial assets include assets protected under client asset segregation rules, assets held under unit-linked investment contracts to back related liabilities to the policy holders and assets held in certain jurisdictions to comply with explicit minimum local asset maintenance requirements. The carrying amount of the liabilities associated with these other restricted financial assets is generally equal to the carrying amount of the assets, with the exception of assets held to comply with local asset maintenance requirements, for which the associated liabilities are greater.

Restricted financial assets

USD m	31.12.22		31.12.21	
	Restricted financial assets	*of which: assets pledged as collateral that may be sold or repledged by counterparties*	Restricted financial assets	*of which: assets pledged as collateral that may be sold or repledged by counterparties*
Financial assets pledged as collateral				
Financial assets at fair value held for trading	57,377	*36,742*	63,725	*43,397*
Loans and advances to customers[1]	15,195		18,160	
Financial assets at fair value not held for trading	1,509	*1,220*	961	*961*
Debt securities classified as Other financial assets measured at amortized cost	3,432	*2,685*	2,234	*1,870*
Total financial assets pledged as collateral	77,513		85,079	
Other restricted financial assets				
Loans and advances to banks	3,689		3,408	
Financial assets at fair value held for trading	162		392	
Cash collateral receivables on derivative instruments	5,155		4,747	
Loans and advances to customers	1,127		1,237	
Financial assets at fair value not held for trading	14,478		22,765	
Financial assets measured at fair value through other comprehensive income	1,842		894	
Other	859		97	
Total other restricted financial assets	27,312		33,540	
Total financial assets pledged and other restricted financial assets[2]	104,825		118,619	

1 Mainly related to mortgage loans that serve as collateral for existing liabilities toward Swiss central mortgage institutions and for existing covered bond issuances. Of these pledged mortgage loans, approximately USD 3.1bn as of 31 December 2022 (31 December 2021: approximately USD 2.7bn) could be withdrawn or used for future liabilities or covered bond issuances without breaching existing collateral requirements.
2 Does not include assets placed with central banks related to undrawn credit lines and for payment, clearing and settlement purposes (31 December 2022: USD 5.9bn; 31 December 2021: USD 4.4bn).

Note 22 Restricted and transferred financial assets (continued)

In addition to restrictions on financial assets, UBS Group AG and its subsidiaries are, in certain cases, subject to regulatory requirements that affect the transfer of dividends and capital within the Group, as well as intercompany lending. Supervisory authorities also may require entities to measure capital and leverage ratios on a stressed basis, such as the Federal Reserve Board's Comprehensive Capital Analysis and Review (CCAR) process, which may limit the relevant subsidiaries' ability to make distributions of capital based on the results of those tests.

Supervisory authorities generally have discretion to impose higher requirements or to otherwise limit the activities of subsidiaries.

Non-regulated subsidiaries are generally not subject to such requirements and transfer restrictions. However, restrictions can also be the result of different legal, regulatory, contractual, entity- or country-specific arrangements and / or requirements.

› **Refer to the "Financial and regulatory key figures for our significant regulated subsidiaries and sub-groups" section of this report for financial information about significant regulated subsidiaries of the Group**

b) Transferred financial assets that are not derecognized in their entirety

The table below presents information for financial assets that have been transferred but are subject to continued recognition in full, as well as recognized liabilities associated with those transferred assets.

Transferred financial assets subject to continued recognition in full

USD m	31.12.22		31.12.21	
	Carrying amount of transferred assets	Carrying amount of associated liabilities recognized on balance sheet	Carrying amount of transferred assets	Carrying amount of associated liabilities recognized on balance sheet
Financial assets at fair value held for trading that may be sold or repledged by counterparties	36,742	16,470	43,397	17,687
relating to securities lending and repurchase agreements in exchange for cash received	*16,756*	*16,470*	*17,970*	*17,687*
relating to securities lending agreements in exchange for securities received	*18,908*		*24,146*	
relating to other financial asset transfers	*1,078*		*1,281*	
Financial assets at fair value not held for trading that may be sold or repledged by counterparties	1,220	1,050	961	898
Debt securities classified as Other financial assets measured at amortized cost that may be sold or repledged by counterparties	2,685	2,302	1,870	1,725
Total financial assets transferred	**40,647**	**19,822**	**46,227**	**20,311**

Transactions in which financial assets are transferred, but continue to be recognized in their entirety on UBS's balance sheet include securities lending and repurchase agreements, as well as other financial asset transfers. Repurchase and securities lending arrangements are, for the most part, conducted under standard market agreements and are undertaken with counterparties subject to UBS's normal credit risk control processes.

› **Refer to Note 1a item 2e for more information about repurchase and securities lending agreements**

As of 31 December 2022, approximately 45% of the transferred financial assets were assets held for trading transferred in exchange for cash, in which case the associated recognized liability represents the amount to be repaid to counterparties. For securities lending and repurchase agreements, a haircut of between 0% and 15% is generally applied to the transferred assets, which results in associated liabilities having a carrying amount below the carrying amount of the transferred assets. The counterparties to the associated liabilities presented in the table above have full recourse to UBS.

In securities lending arrangements entered into in exchange for the receipt of other securities as collateral, neither the securities received nor the obligation to return them are recognized on UBS's balance sheet, as the risks and rewards of ownership are not transferred to UBS. In cases where such financial assets received are subsequently sold or repledged in another transaction, this is not considered to be a transfer of financial assets.

Other financial asset transfers primarily include securities transferred to collateralize derivative transactions, for which the carrying amount of associated liabilities is not provided in the table above, because those replacement values are managed on a portfolio basis across counterparties and product types, and therefore there is no direct relationship between the specific collateral pledged and the associated liability.

Transferred financial assets that are not subject to derecognition in full but remain on the balance sheet to the extent of the Group's continuing involvement were not material as of 31 December 2022 and as of 31 December 2021.

Note 22 Restricted and transferred financial assets (continued)

c) Transferred financial assets that are derecognized in their entirety with continuing involvement

Continuing involvement in a transferred and fully derecognized financial asset may result from contractual provisions in the particular transfer agreement or from a separate agreement, with the counterparty or a third party, entered into in connection with the transfer.

The fair value and carrying amount of UBS's continuing involvement from transferred positions as of 31 December 2022 and 31 December 2021 was not material. Life-to-date losses reported in prior periods primarily relate to legacy positions in securitization vehicles that have been fully marked down, with no remaining exposure to loss.

d) Off-balance sheet assets received

The table below presents assets received from third parties that can be sold or repledged and that are not recognized on the balance sheet, but that are held as collateral, including amounts that have been sold or repledged.

Off-balance sheet assets received

USD m	31.12.22	31.12.21
Fair value of assets received that can be sold or repledged	434,023	497,828
received as collateral under reverse repurchase, securities borrowing and lending arrangements, derivative and other transactions [1]	*418,847*	*483,426*
received in unsecured borrowings	*15,175*	*14,402*
Thereof sold or repledged [2]	331,805	367,440
in connection with financing activities	*288,752*	*319,176*
to satisfy commitments under short sale transactions	*29,515*	*31,688*
in connection with derivative and other transactions [1]	*13,538*	*16,575*

1 Includes securities received as initial margin from its clients that UBS is required to remit to central counterparties, brokers and deposit banks through its exchange-traded derivative clearing and execution services.
2 Does not include off-balance sheet securities (31 December 2022: USD 9.9bn; 31 December 2021: USD 12.7bn) placed with central banks related to undrawn credit lines and for payment, clearing and settlement purposes for which there are no associated liabilities or contingent liabilities.

Note 23 Maturity analysis of assets and liabilities

a) Maturity analysis of carrying amounts of assets and liabilities

The table below provides an analysis of carrying amounts of balance sheet assets and liabilities, as well as off-balance sheet exposures by residual contractual maturity as of the reporting date. The residual contractual maturity of assets includes the effect of callable features. The residual contractual maturity of liabilities and off-balance sheet exposures is based on the earliest date on which a third party could require UBS to pay.

Derivative financial instruments and financial assets and liabilities at fair value held for trading are presented in the *Due within 1 month* column; however, the respective contractual maturities may extend over significantly longer periods.

Assets held to hedge unit-linked investment contracts (presented within *Financial assets at fair value not held for trading*) are presented in the *Due within 1 month* column, consistent with the maturity assigned to the related amounts due under unit-linked investment contracts (presented within *Other financial liabilities designated at fair value*).

Other financial assets and liabilities with no contractual maturity, such as equity securities, are presented in the *Perpetual / Not applicable* column. Undated or perpetual instruments are classified based on the contractual notice period that the counterparty of the instrument is entitled to give. Where there is no contractual notice period, undated or perpetual contracts are presented in the *Perpetual / Not applicable* column.

Non-financial assets and liabilities with no contractual maturity are generally included in the *Perpetual / Not applicable* column.

Loan commitments are classified based on the earliest date they can be drawn down.

Note 23 Maturity analysis of assets and liabilities (continued)

	31.12.22							
USD bn	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 2 years	Due between 2 and 5 years	Due over 5 years	Perpetual / Not applicable	Total
Assets								
Total financial assets measured at amortized cost[1]	422.6	28.7	34.4	78.7	70.4	92.7		727.6
Loans and advances to customers	*139.4*	*16.3*	*28.3*	*74.9*	*55.5*	*72.9*		*387.2*
Total financial assets measured at fair value through profit or loss	300.2	10.0	7.8	3.6	9.9	2.0	1.9	335.3
Financial assets at fair value not held for trading	*24.6*	*10.0*	*7.8*	*3.6*	*9.9*	*2.0*	*1.9*	*59.8*
Financial assets measured at fair value through other comprehensive income[1]	0.3	0.9	0.9	0.1	0.0	0.0		2.2
Total non-financial assets	7.6		0.2		2.0	0.4	29.0	39.2
Total assets	**730.7**	**39.6**	**43.4**	**82.4**	**82.3**	**95.1**	**31.0**	**1,104.4**
Liabilities								
Total financial liabilities measured at amortized cost	521.9	40.0	49.6	20.5	35.1	23.4	11.1	701.5
Customer deposits	*463.0*	*28.3*	*23.8*	*7.5*	*2.2*	*0.3*		*525.1*
Debt issued measured at amortized cost	*6.6*	*8.8*	*23.3*	*11.9*	*31.1*	*21.9*	*11.1*	*114.6*
of which: non-subordinated fixed rate debt	*3.1*	*4.0*	*13.2*	*7.6*	*28.4*	*21.9*		*78.1*
of which: non-subordinated floating rate debt	*1.5*	*4.8*	*10.1*	*1.9*	*2.2*	*0.0*		*20.5*
of which: subordinated fixed-rate debt	*2.0*			*2.4*	*0.5*		*11.1*	*16.0*
Total financial liabilities measured at fair value through profit or loss[2]	265.9	13.8	16.3	19.6	7.3	10.5		333.4
Debt issued designated at fair value	*9.3*	*12.3*	*15.9*	*19.3*	*6.9*	*10.0*		*73.6*
of which: non-subordinated fixed rate debt	*0.5*	*2.3*	*5.6*	*3.6*	*2.0*	*3.4*		*17.4*
of which: non-subordinated floating rate debt	*8.8*	*10.0*	*10.3*	*15.7*	*4.9*	*6.6*		*56.2*
Total non-financial liabilities	7.2	3.0					2.1	12.3
Total liabilities	**795.1**	**56.7**	**65.9**	**40.1**	**42.4**	**33.9**	**13.2**	**1,047.1**
Guarantees, loan commitments and forward starting transactions[3]								
Loan commitments	39.3	0.3	0.4	0.0				40.0
Guarantees	22.4							22.4
Forward starting transactions, reverse repurchase and securities borrowing agreements	3.8							3.8
Total	**65.4**	**0.3**	**0.4**	**0.0**				**66.2**

	31.12.21							
USD bn	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 2 years	Due between 2 and 5 years	Due over 5 years	Perpetual / Not applicable	Total
Assets								
Total financial assets measured at amortized cost	453.7	45.9	43.1	53.7	64.1	77.3		737.8
Loans and advances to customers	*157.2*	*28.7*	*37.2*	*49.6*	*54.9*	*70.1*		*397.8*
Total financial assets measured at fair value through profit or loss	300.5	5.8	8.1	5.2	7.1	2.5	1.8	330.9
Financial assets at fair value not held for trading	*29.7*	*5.8*	*8.1*	*5.2*	*7.1*	*2.5*	*1.8*	*60.1*
Financial assets measured at fair value through other comprehensive income	0.1	0.4	0.7	0.1	0.4	7.1		8.8
Total non-financial assets	7.7	0.5	0.1	0.2	1.4	0.3	29.4	39.7
Total assets	**761.9**	**52.6**	**52.0**	**59.2**	**73.0**	**87.2**	**31.2**	**1,117.2**
Liabilities								
Total financial liabilities measured at amortized cost	581.6	20.1	48.4	17.0	35.6	24.4	13.5	740.6
Customer deposits	*530.1*	*5.2*	*3.2*	*1.6*	*1.5*	*0.3*		*542.0*
Debt issued measured at amortized cost	*3.7*	*12.1*	*39.8*	*14.9*	*32.5*	*22.7*	*13.5*	*139.2*
of which: non-subordinated fixed rate debt	*3.7*	*10.8*	*28.8*	*10.6*	*26.0*	*22.7*		*102.6*
of which: non-subordinated floating rate debt		*1.3*	*9.0*	*4.3*	*3.3*			*17.9*
of which: subordinated fixed-rate debt			*2.0*		*3.1*		*13.5*	*18.6*
Total financial liabilities measured at fair value through profit or loss[2]	237.7	12.0	14.7	18.8	5.6	12.2		300.9
Debt issued designated at fair value	*12.5*	*11.6*	*14.1*	*18.6*	*5.4*	*11.5*		*73.8*
of which: non-subordinated fixed rate debt	*0.8*	*1.2*	*2.9*	*1.2*	*1.3*	*4.8*		*12.2*
of which: non-subordinated floating rate debt	*11.7*	*10.3*	*11.2*	*17.4*	*4.2*	*6.8*		*61.6*
Total non-financial liabilities	9.3	3.0					2.4	14.7
Total liabilities	**828.6**	**35.1**	**63.0**	**35.8**	**41.2**	**36.6**	**15.9**	**1,056.2**
Guarantees, loan commitments and forward starting transactions[3]								
Loan commitments	38.3	0.5	0.7	0.0				39.5
Guarantees	21.2							21.2
Forward starting transactions, reverse repurchase and securities borrowing agreements	1.4							1.4
Total	**60.9**	**0.5**	**0.7**	**0.0**	**0.0**	**0.0**	**0.0**	**62.1**

1 Effective 1 April 2022, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost. Refer to Note 1b for more information. 2 As of 31 December 2022 and 31 December 2021, the contractual redemption amount at maturity of debt issued designated at fair value through profit or loss and other financial liabilities measured at fair value through profit or loss was not materially different from the carrying amount. 3 The notional amounts associated with derivative loan commitments, as well as forward starting repurchase and reverse repurchase agreements, measured at fair value through profit or loss are presented together with notional amounts related to derivative instruments and have been excluded from the table above. Refer to Note 10 for more information.

Note 23 Maturity analysis of assets and liabilities (continued)

b) Maturity analysis of financial liabilities on an undiscounted basis

The table below provides an analysis of financial liabilities on an undiscounted basis, including all cash flows relating to principal and future interest payments. The residual contractual maturities for non-derivative and non-trading financial liabilities are based on the earliest date on which UBS could be contractually required to pay. Derivative positions and trading liabilities, predominantly made up of short sale transactions, are presented in the *Due within 1 month* column, as this provides a conservative reflection of the nature of these trading activities. The residual contractual maturities may extend over significantly longer periods.

	31.12.22							
USD bn	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 2 years	Due between 2 and 5 years	Due over 5 years	Perpetual / Not applicable	Total
Financial liabilities recognized on balance sheet[1]								
Amounts due to banks	6.3	2.6	1.9	0.3	0.6	0.0		11.7
Payables from securities financing transactions	3.3	0.3	0.4	0.3				4.4
Cash collateral payables on derivative instruments	36.4							36.4
Customer deposits	463.1	28.5	24.5	8.0	2.4	0.3		526.9
Debt issued measured at amortized cost[2]	6.8	9.4	24.8	14.4	37.9	28.0	11.9	133.4
Other financial liabilities measured at amortized cost	4.7	0.1	0.5	0.5	1.3	1.4		8.5
of which: lease liabilities	*0.1*	*0.1*	*0.5*	*0.5*	*1.3*	*1.4*		*3.8*
Total financial liabilities measured at amortized cost	520.7	40.9	52.1	23.6	42.3	29.7	11.9	721.2
Financial liabilities at fair value held for trading[3, 4]	29.5							29.5
Derivative financial instruments[3, 5]	154.9							154.9
Brokerage payables designated at fair value	45.1							45.1
Debt issued designated at fair value[6]	9.4	12.4	16.1	19.7	7.1	18.8		83.4
Other financial liabilities designated at fair value	27.1	1.4	0.4	0.4	0.5	0.8		30.6
Total financial liabilities measured at fair value through profit or loss	266.0	13.8	16.4	20.0	7.6	19.6		343.5
Total	786.8	54.7	68.6	43.6	49.8	49.3	11.9	1,064.7
Guarantees, commitments and forward starting transactions								
Loan commitments[7]	39.3	0.3	0.4	0.0				40.0
Guarantees	22.4							22.4
Forward starting transactions, reverse repurchase and securities borrowing agreements[7]	3.8							3.8
Total	65.4	0.3	0.4	0.0				66.2

	31.12.21							
USD bn	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 2 years	Due between 2 and 5 years	Due over 5 years	Perpetual / Not applicable	Total
Financial liabilities recognized on balance sheet[1]								
Amounts due to banks	6.7	2.4	3.5	0.0	0.5			13.1
Payables from securities financing transactions	3.8	0.3	1.6	0.0				5.7
Cash collateral payables on derivative instruments	31.8							31.8
Customer deposits	530.1	5.2	3.3	1.7	1.5	0.4		542.3
Debt issued measured at amortized cost[2]	4.0	12.7	41.1	16.7	36.9	24.3	13.3	148.9
Other financial liabilities measured at amortized cost	4.5	0.1	0.5	0.6	1.3	1.6		8.4
of which: lease liabilities	*0.1*	*0.1*	*0.5*	*0.6*	*1.3*	*1.6*		*4.0*
Total financial liabilities measured at amortized cost	580.9	20.8	49.9	19.0	40.3	26.2	13.3	750.2
Financial liabilities at fair value held for trading[3,4]	31.7							31.7
Derivative financial instruments[3,5]	121.3							121.3
Brokerage payables designated at fair value	44.0							44.0
Debt issued designated at fair value[6]	13.8	11.5	13.5	18.8	5.7	18.5		81.9
Other financial liabilities designated at fair value	28.1	0.4	0.5	0.2	0.2	1.1		30.5
Total financial liabilities measured at fair value through profit or loss	239.0	11.9	14.0	19.0	5.9	19.6		309.4
Total	**819.8**	**32.7**	**63.9**	**38.0**	**46.1**	**45.9**	**13.3**	**1,059.6**
Guarantees, commitments and forward starting transactions								
Loan commitments[7]	38.3	0.5	0.7	0.0				39.5
Guarantees	21.2							21.2
Forward starting transactions, reverse repurchase and securities borrowing agreements[7]	1.4							1.4
Total	**60.9**	**0.5**	**0.7**	**0.0**				**62.1**

1 Except for financial liabilities at fair value held for trading and derivative financial instruments (see footnote 3), the amounts presented generally represent undiscounted cash flows of future interest and principal payments. 2 The time-bucket Perpetual / Not applicable includes perpetual loss-absorbing additional tier 1 capital instruments. 3 Carrying amount is fair value. Management believes that this best represents the cash flows that would have to be paid if these positions had to be settled or closed out. 4 Contractual maturities of financial liabilities at fair value held for trading are: USD 27.8bn due within 1 month (31 December 2021: USD 30.8bn), USD 1.7bn due between 1 month and 1 year (31 December 2021: USD 0.9bn) and USD 0bn due between 1 and 5 years (31 December 2021: USD 0bn). 5 Includes USD 46m (31 December 2021: USD 34m) related to fair values of derivative loan commitments and forward starting reverse repurchase agreements classified as derivatives, presented within "Due within 1 month." The full contractual committed amount of USD 34.4bn (31 December 2021: USD 36.0bn) is presented in Note 10 under notional amounts. 6 Future interest payments on variable-rate liabilities are determined by reference to the applicable interest rate prevailing as of the reporting date. Future principal payments that are variable are determined by reference to the conditions existing at the relevant reporting date. 7 Excludes derivative loan commitments and forward starting reverse repurchase agreements measured at fair value (see footnote 5).

Note 24 Interest rate benchmark reform

Background

A market-wide reform of major interest rate benchmarks is being undertaken globally. The publication of London Interbank Offered Rates (LIBORs) ceased immediately after 31 December 2021 for all non-US dollar LIBORs, as well as for one-week and two-month USD LIBOR. Publication of the remaining USD LIBOR tenors will cease immediately after 30 June 2023.

In December 2022, the FCA consulted on the continued publication of one-, three- and six-month USD LIBOR under a synthetic format until the end of September 2024 to ensure an orderly winding down of remaining contracts that are not governed by US law. In addition, in December 2022, the US Federal Reserve Board adopted the final rules that implement the Adjustable Interest Rate (LIBOR) Act, which is substantially based on, and supersedes, the New York State LIBOR legislation. The Adjustable Interest Rate (LIBOR) Act provides a legislative solution for USD LIBOR legacy products governed by any US state law should such products fail to transition prior to the USD LIBOR cessation date of 30 June 2023.

A framework has been established within UBS to address the transition of contracts that do not contain adequate fallback provisions and to cease entering into new LIBOR contracts, with the exception of specific circumstances that are allowed by regulatory provisions for USD LIBOR.

Governance over the transition to alternative benchmark rates

Throughout the transition process UBS has been maintaining a global cross-divisional, cross-functional governance structure and change program to address the scale and complexity of the transition. This global program is sponsored by the Group CFO and led by senior representatives from the business divisions and UBS's control and support functions. The program includes governance and execution structures within each business division, together with cross-divisional teams from each control and support function. During 2022, progress was overseen centrally via a monthly Group LIBOR Transition Forum with an increased US regional focus.

Risks

A core part of UBS's change program is the identification, management and monitoring of the risks associated with IBOR reform and transition. These risks include, but are not limited to, the following:
- economic risks to UBS and its clients, through the repricing of existing contracts, reduced transparency and / or liquidity of pricing information, market uncertainty or disruption;
- accounting risks, where the transition affects the accounting treatment, including hedge accounting and consequential income statement volatility;
- valuation risks arising from the variation between benchmarks that will cease and ARRs, affecting the risk profile of financial instruments;
- operational risks arising from changes to UBS's front-to-back processes and systems to accommodate the transition (e.g., data sourcing and processing and bulk migration of contracts); and
- legal and conduct risks relating to UBS's engagement with clients and market counterparties around new benchmark products and amendments required for existing contracts referencing benchmarks that will cease.

Overall, the effort required to transition is affected by multiple factors, including whether negotiations need to take place with multiple stakeholders (as is the case for syndicated loans or certain listed securities), market readiness and a client's technical readiness to handle ARR market conventions. UBS remains confident that it has the transparency, oversight and operational preparedness to progress with the IBOR transition consistent with market timelines, given the significant progress made as of 31 December 2022. UBS did not have and does not expect changes to its risk management approach and strategy as a result of interest rate benchmark reform.

Transition progress

UBS's significant non-derivative exposures subject to IBOR reform primarily related to brokerage receivable and payable balances, corporate and private loans, and mortgages, linked to CHF and USD LIBORs. During 2020, UBS transitioned most of its CHF LIBOR-linked deposits to the Swiss Average Overnight Rate (SARON). In that same year, UBS launched SARON-based mortgages and corporate loans based on all major ARRs in the Swiss market, as well as Secure Overnight Financing Rate (SOFR)-based mortgages in the US market.

Throughout 2021, UBS transitioned substantially all of its private and corporate loans linked to non-USD IBORs, with the remaining CHF LIBOR-linked contracts transitioning on their first roll date in 2022. In addition, as of 31 December 2021 UBS had completed the transition of IBOR-linked non-derivative financial assets and liabilities related to brokerage accounts, except for balances originated in the US, which transitioned to SOFR in January 2022.

Note 24 Interest rate benchmark reform (continued)

In 2022, UBS focused its efforts on the transition of USD LIBOR and the remaining non-USD LIBOR contracts, by leveraging industry solutions (e.g., the use of fallback provisions), through third-party actions (those by clearing houses, agents, etc.) and bi-lateral contract negotiations. As of 31 December 2022, the transition of non-USD IBORs is substantially complete.

In addition, in 2022, substantially all US securities-based lending has been transitioned to SOFR and UBS continues to make good progress on the transition of the remaining USD LIBOR non-derivative assets and liabilities, with the US mortgage portfolio of USD 9bn (31 December 2021: USD 11bn) the largest remaining exposure left to transition.

In August 2022, to facilitate the transition of derivatives linked to the USD LIBOR Swap Rate, UBS adhered to the June 2022 Benchmark Module of the ISDA 2021 Fallbacks Protocol on the USD LIBOR Swap Rate. UBS will begin gradually transitioning USD LIBOR derivatives not transacted with clearing houses or exchanges from the first quarter of 2023. The transition of USD LIBOR-cleared derivatives is planned to commence in the second quarter of 2023.

As of 31 December 2022, UBS had approximately USD 3bn equivalent of yen- and US dollar-denominated publicly issued benchmark bonds that, per current contractual terms, if not called on their respective call dates, would reset based directly on JPY LIBOR and USD LIBOR. In addition, certain US dollar-denominated benchmark bonds publicly issued by UBS reference rates indirectly derived from IBORs, if they are not called on their respective call dates. These bonds have robust IBOR fallback language and the confirmation of interest rate calculation mechanics will be communicated as market standards formalize and in advance of any rate resets. These debt instruments have not been included in the table below, given their current fixed-rate coupon.

Financial instruments yet to transition to alternative benchmarks

The amounts included in the table below relate to financial instrument contracts across UBS's business divisions where UBS has material exposures subject to IBOR reform that have not yet transitioned to ARRs, and that:
– contractually reference an interest rate benchmark that will transition to an alternative benchmark; and
– have a contractual maturity date (including open-ended contracts) after the agreed cessation dates.

Contracts where penalty terms reference IBORs, or where exposure to an IBOR is not the primary purpose of the contract, have not been included, as these contracts do not have a material impact on the transition process.

In line with information provided to management and external parties monitoring UBS's transition progress, the table below includes the following financial metrics for instruments external to the Group that are subject to interest rate benchmark reform:
– gross carrying value / exposure for non-derivative financial instruments; and
– total trade count for derivative financial instruments.

The exposures included in the table below reflect the maximum IBOR exposure, without regard for early termination rights, with the actual exposure being dependent upon client preferences and investment decisions.

As of 31 December 2022, UBS had made significant progress in transitioning LIBOR exposures to ARRs. The remaining USD LIBOR-linked exposures included in the table below primarily relate to derivatives and US mortgages, with the transition planned to be completed by 30 June 2023.

		LIBOR benchmark rates					
		31.12.22[1]	31.12.21				
	Measure	USD	USD	CHF	GBP	EUR[2]	JPY
Carrying value of non-derivative financial instruments							
Total non-derivative financial assets	USD m	14,269[3]	65,234[3]	21,616[4]	45[5]	1	0
Total non-derivative financial liabilities	USD m	1,138[5]	1,985[5]	27[5]	3[5]	5[6]	0
Trade count of derivative financial instruments							
Total derivative financial instruments	Trade count	32,006[7]	40,500[7,8]	829[9]	183[9]	3,744[9]	184[9]
Off-balance sheet exposures							
Total irrevocable loan commitments	USD m	4,606[10]	11,863[11]	0	0	0	0

1 As of 31 December 2022, non-USD balances and trade counts are minimal. 2 Relates primarily to EUR LIBOR positions. 3 Includes USD 1bn (31 December 2021: USD 1bn) of loans related to revolving multi-currency credit lines, where IBOR transition efforts are complete, except for USD LIBOR. Balances as of 31 December 2021 also include USD 37bn USD LIBOR securities-based lending and USD 5bn brokerage accounts, which for the most part transitioned to SOFR in January 2022. The remaining balances as of 31 December 2022 and 31 December 2021 primarily relate to US mortgages and corporate lending. 4 Relates primarily to CHF LIBOR mortgages, which have automatically transitioned to SARON on their first roll date in 2022. 5 Relates to floating-rate notes that per their contractual terms can reset to rates linked to LIBOR, with transition dependent upon the actions of respective issuers. 6 Relates to contracts that transitioned in January 2022. 7 Includes approximately 2,000 (31 December 2021: 1,000) contracts having a contractual maturity after 30 June 2023, with the last USD LIBOR fixing occurring before 30 June 2023. No further contractual fixing is required for these contracts. 8 Includes approximately 5,000 cross-currency derivatives, of which approximately 500 have both a non-USD LIBOR leg and a USD LIBOR leg, where the non-USD leg transitioned in January 2022 before the next fixing date. The remainder represents cross-currency swaps with an ARR leg and a USD IBOR leg. 9 Includes predominantly bilateral derivatives, which transitioned in January 2022, and an insignificant amount of cleared derivatives, where the respective clearing houses' organized transition happened in January 2022. 10 Includes approximately USD 3bn of loan commitments that can be drawn in different currencies, however only USD LIBOR transition efforts remain open, with completion scheduled for 2023. 11 Includes loan commitments that can be drawn in different currencies at the client's discretion, of which approximately USD 3bn have only USD LIBOR exposure remaining and approximately USD 2bn retain a non-USD LIBOR interest rate, with transition dependent upon the actions of other parties. The remainder represents loan commitments that can be drawn in US dollars only and will transition on or before 30 June 2023.

Derivatives designated in hedge accounting relationships

The Group applies hedge accounting to interest rate risk and foreign exchange risk, including structural foreign exchange risk related to net investments in foreign operations.

› **Refer to "Market risk" in the "Risk management and control" section of this report for more information about how risks arise and how they are managed by the Group**

Hedging instruments and hedged risk

Interest rate swaps are designated in fair value hedges or cash flow hedges of interest rate risk arising solely from changes in benchmark interest rates. Fair value changes arising from such risk are usually the largest component of the overall change in the fair value of the hedged position in transaction currency.

Cross-currency swaps are designated as fair value hedges of foreign exchange risk. Foreign exchange forwards and foreign exchange swaps are mainly designated as hedges of structural foreign exchange risk related to net investments in foreign operations. In both cases the hedged risk arises solely from changes in the spot foreign exchange rate.

The notional of the designated hedging instruments matches the notional of the hedged items, except when the interest rate swaps are re-designated in cash flow hedges, in which case the hedge ratio designated is determined based on the swap sensitivity.

Hedged items and hedge designation

Fair value hedges of interest rate risk related to debt instruments and loan assets

Fair value hedges of interest rate risk related to debt instruments and loan assets involve swapping fixed cash flows associated with the debt issued, debt securities held and long-term fixed-rate mortgage loans in Swiss francs to floating cash flows by entering into interest rate swaps that either receive fixed and pay floating cash flows or that pay fixed and receive floating cash flows.

Designations have been made in US dollars, euro, Swiss francs, Australian dollars, yen, pounds sterling and Singapore dollars. For new hedging instruments and hedged risk designations entered into starting from 2021 in these currencies (with the exception of euro), the benchmark rate was the relevant alternative reference rate (ARR). Following the interbank offered rate (IBOR) transition for swaps with LCH (formerly the London Clearing House) in December 2021, the benchmark hedge rate for Swiss franc, yen and pound sterling designations was changed from an IBOR rate to the relevant ARR with the hedge relationship continuing in accordance with *Interest Rate Benchmark Reform – Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16)*.

Cash flow hedges of forecast transactions

The Group hedges forecast cash flows on non-trading financial assets and liabilities that bear interest at variable rates or are expected to be refinanced or reinvested in the future, due to movements in future market rates. The amounts and timing of future cash flows, representing both principal and interest flows, are projected on the basis of contractual terms and other relevant factors, including estimates of prepayments and defaults. The aggregate principal balances and interest cash flows across all portfolios over time form the basis for identifying the non-trading interest rate risk of the Group, which is hedged with interest rate swaps, the maximum maturity of which is 15 years. Cash flow forecasts and risk exposures are monitored and adjusted on an ongoing basis, and consequently additional hedging instruments are traded and designated, or are terminated resulting in a hedge discontinuance. Hedge designations have been made in the following currencies: US dollars, euro, Swiss francs, pounds sterling and Hong Kong dollars. The cash flow hedges in Swiss francs, pounds sterling and certain cash flow hedges in US dollars were discontinued and replaced with new ARR designations in December 2021. In addition, the transition of floating rate hedged items in USD to ARR rates in January 2022 resulted in the update of the hedged risk to ARR in the affected hedge relationships without discontinuation of hedge accounting in accordance with *Interest Rate Benchmark Reform – Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16)*.

Fair value hedges of foreign exchange risk related to issued debt instruments

Debt instruments denominated in currencies other than the US dollar are designated in fair value hedges of spot foreign exchange risk, in addition to and separate from the fair value hedges of interest rate risk. Cross-currency swaps economically convert debt denominated in currencies other than the US dollar to US dollars.

Hedges of net investments in foreign operations

The Group applies hedge accounting for certain net investments in foreign operations, which include subsidiaries, branches and associates. Upon maturity of hedging instruments, typically two months, the hedge relationship is terminated and new designations are made to reflect any changes in the net investments in foreign operations.

Economic relationship between hedged item and hedging instrument

The economic relationship between the hedged item and the hedging instrument is determined based on a qualitative analysis of their critical terms. In cases where hedge designation takes place after origination of the hedging instrument, a quantitative analysis of the possible behavior of the hedging derivative and the hedged item during their respective terms is also performed.

Sources of hedge ineffectiveness

In hedges of interest rate risk, hedge ineffectiveness can arise from mismatches of critical terms and / or the use of different curves to discount the hedged item and instrument, or from entering into a hedge relationship after the trade date of the hedging derivative.

In hedges of foreign exchange risk related to debt issued, hedge ineffectiveness can arise due to the discounting of the hedging instruments and undesignated risk components and lack of such discounting and risk components in the hedged items.

In hedges of net investments in foreign operations, ineffectiveness is unlikely unless the hedged net assets fall below the designated hedged amount. The exceptions are hedges where the hedging currency is not the same as the currency of the foreign operation, where the currency basis may cause ineffectiveness.

Hedge ineffectiveness from financial instruments measured at fair value through profit or loss is recognized in *Other net income.*

Derivatives not designated in hedge accounting relationships

Non-hedge accounted derivatives are mandatorily held for trading with all fair value movements taken to *Other net income from financial instruments measured at fair value through profit or loss*, even when held as an economic hedge or to facilitate client clearing. The one exception relates to forward points on certain short- and long-duration foreign exchange contracts acting as economic hedges, which are reported in *Net interest income.*

All hedges: designated hedging instruments and hedge ineffectiveness

	As of or for the year ended					
	31.12.22					
		Carrying amount				
USD m	Notional amount	Derivative financial assets	Derivative financial liabilities	Changes in fair value of hedging instruments[1]	Changes in fair value of hedged items[1]	Hedge ineffectiveness recognized in the income statement
Interest rate risk						
Fair value hedges	92,415	0	0	(5,195)	5,169	(27)
Cash flow hedges	75,304	2	5	(5,813)	5,760	(53)
Foreign exchange risk						
Fair value hedges[2]	20,566	845	3	(1,088)	1,105	18
Hedges of net investments in foreign operations	14,009	7	529	336	(337)	(1)

	As of or for the year ended					
	31.12.21					
		Carrying amount				
USD m	Notional amount	Derivative financial assets	Derivative financial liabilities	Changes in fair value of hedging instruments[1]	Changes in fair value of hedged items[1]	Hedge ineffectiveness recognized in the income statement
Interest rate risk						
Fair value hedges	89,525	0	7	(1,604)	1,602	(2)
Cash flow hedges	79,573	12	1	(1,185)	990	(196)
Foreign exchange risk						
Fair value hedges[2]	27,875	87	261	(2,139)	2,181	42
Hedges of net investments in foreign operations	13,939	23	105	497	(497)	0

1 Amounts used as the basis for recognizing hedge ineffectiveness for the period. 2 The foreign currency basis spread of cross-currency swaps designated as hedging derivatives is excluded from the hedge accounting designation and accounted for as a cost of hedging with amounts deferred in Other comprehensive income within Equity.

Note 25 Hedge accounting (continued)

Fair value hedges: designated hedged items

USD m	31.12.22 Interest rate risk	31.12.22 FX risk	31.12.21 Interest rate risk	31.12.21 FX risk
Debt issued measured at amortized cost				
Carrying amount of designated debt issued	68,529	20,566	74,700	27,875
of which: accumulated amount of fair value hedge adjustment	*(6,057)*		*478*	
Other financial assets measured at amortized cost – debt securities				
Carrying amount of designated debt securities	4,577		2,677	
of which: accumulated amount of fair value hedge adjustment	*(180)*		*(7)*	
Loans and advances to customers				
Carrying amount of designated loans	14,270		13,835	
of which: accumulated amount of fair value hedge adjustment	*(1,249)*		*(109)*	
of which: accumulated amount of fair value hedge adjustment subject to amortization attributable to the portion of the portfolio that ceased to be part of hedge accounting	*(51)*		*3*	

Fair value hedges: profile of the timing of the nominal amount of the hedging instrument

	31.12.22					
USD bn	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years	Total
Interest rate swaps	0	4	10	53	26	92
Cross-currency swaps	0	1	2	12	5	21

	31.12.21					
USD bn	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years	Total
Interest rate swaps	0	8	10	49	22	90
Cross-currency swaps	1	1	6	13	6	28

Cash flow hedge reserve on a pre-tax basis

USD m	31.12.22	31.12.21
Amounts related to hedge relationships for which hedge accounting continues to be applied	(4,692)	26
Amounts related to hedge relationships for which hedge accounting is no longer applied	(540)	743
Total other comprehensive income recognized directly in equity related to cash flow hedges, on a pre-tax basis	(5,232)	769

Foreign currency translation reserve on a pre-tax basis

USD m	31.12.22	31.12.21
Amounts related to hedge relationships for which hedge accounting continues to be applied	284	(45)
Amounts related to hedge relationships for which hedge accounting is no longer applied	266	262
Total other comprehensive income recognized directly in equity related to hedging instruments designated as net investment hedges, on a pre-tax basis	550	217

Interest rate benchmark reform

The Group continues to apply the relief provided by *Interest Rate Benchmark Reform (amendments to IFRS 9, IAS 39 and IFRS 7)*, published by the IASB in September 2019, mainly to its hedges in USD. The cessation date for USD LIBOR is 30 June 2023.

The following table provides details on the notional amount and carrying amount of the hedging instruments in the hedge relationships where the designated risk is LIBOR and maturing after the cessation date of the applicable interest rate benchmarks.

Hedges of net investments in foreign operations are not affected by the amendments.

› **Refer to Note 1a item 2j for more information about the relief provided by the amendments to IFRS 9 and IFRS 7 related to interest rate benchmark reform**
› **Refer to Note 24 for more information about the transition progress**
› **Refer to earlier parts of this Note for the information about the transition progress of fair value and cash flow hedges**

Note 25 Hedge accounting (continued)

Hedging instruments referencing LIBOR

	31.12.22			31.12.21		
		Carrying amount			Carrying amount	
USD m	Notional amount	Derivative financial assets	Derivative financial liabilities	Notional amount	Derivative financial assets	Derivative financial liabilities
Interest rate risk						
Fair value hedges	20,383	0	0	23,367	0	0
Cash flow hedges	2,179	0	0	10,803	0	0

Note 26 Post-employment benefit plans

a) Defined benefit plans

UBS has established defined benefit plans for its employees in various jurisdictions in accordance with local regulations and practices. The major plans are located in Switzerland, the UK, the US and Germany. The level of benefits depends on the specific plan rules.

Swiss pension plan

The Swiss pension plan covers employees of UBS Group AG in Switzerland and employees of companies in Switzerland having close economic or financial ties with UBS Group AG, and exceeds the minimum benefit requirements under Swiss pension law. The Swiss plan offers retirement, disability and survivor benefits and is governed by a Pension Foundation Board. The responsibilities of this board are defined by Swiss pension law and the plan rules.

Savings contributions to the Swiss plan are paid by both employer and employee. Depending on the age of the employee, UBS pays a savings contribution that ranges between 6.5% and 27.5% of contributory base salary and between 2.8% and 9% of contributory variable compensation. UBS also pays risk contributions that are used to fund disability and survivor benefits. Employees can choose the level of savings contributions paid by them, which vary between 2.5% and 13.5% of contributory base salary and between 0% and 9% of contributory variable compensation, depending on age and choice of savings contribution category.

The plan offers to members at the normal retirement age of 65 a choice between a lifetime pension and a partial or full lump sum payment. Participants can choose to draw early retirement benefits starting from the age of 58, but can also continue employment and remain active members of the plan until the age of 70. Employees have the opportunity to make additional purchases of benefits to fund early retirement benefits.

The pension amount payable to a participant is calculated by applying a conversion rate to the accumulated balance of the participant's retirement savings account at the retirement date. The balance is based on credited vested benefits transferred from previous employers, purchases of benefits, and the employee and employer contributions that have been made to the participant's retirement savings account, as well as the interest accrued. The annual interest rate credited to participants is determined by the Pension Foundation Board at the end of each year.

Although the Swiss plan is based on a defined contribution promise under Swiss pension law, it is accounted for as a defined benefit plan under International Financial Reporting Standards (IFRS), primarily because of the obligation to accrue interest on the participants' retirement savings accounts and the payment of lifetime pension benefits.

An actuarial valuation in accordance with Swiss pension law is performed regularly. Should an underfunded situation on this basis occur, the Pension Foundation Board is required to take the necessary measures to ensure that full funding can be expected to be restored within a maximum period of 10 years. If a Swiss plan were to become significantly underfunded on a Swiss pension law basis, additional employer and employee contributions could be required. In this situation, the risk is shared between employer and employees, and the employer is not legally obliged to cover more than 50% of the additional contributions required. As of 31 December 2022, the Swiss plan had a technical funding ratio in accordance with Swiss pension law of 119.0% (31 December 2021: 134.8%).

The investment strategy of the Swiss plan complies with Swiss pension law, including the rules and regulations relating to diversification of plan assets, and is derived from the risk budget defined by the Pension Foundation Board on the basis of regularly performed asset and liability management analyses. The Pension Foundation Board strives for a medium- and long-term balance between assets and liabilities.

As of 31 December 2022, the Swiss plan was in a surplus situation on an IFRS measurement basis, as the fair value of the plan's assets exceeded the defined benefit obligation (DBO) by USD 7,848m (31 December 2021: USD 6,577m). However, a surplus is only recognized on the balance sheet to the extent that it does not exceed the estimated future economic benefit, which equals the difference between the present value of the estimated future net service cost and the present value of the estimated future employer contributions. As of both 31 December 2022 and 31 December 2021, the estimated future economic benefit was zero and hence no net defined benefit asset was recognized on the balance sheet.

Changes to the Swiss pension plan in 2019

The Pension Foundation Board and UBS agreed to implement measures that took effect from the start of 2019 to support the long-term financial stability of the Swiss pension fund. The measures, among other things, lowered the conversion rate and increased the normal retirement age from 64 to 65. Pensions already in payment on 1 January 2019 were not affected.

To mitigate the effects for active participants, UBS committed to pay an extraordinary contribution and contributed CHF 646m (USD 698m) in three installments in 2020, 2021 and 2022. The installments of USD 235m, USD 254m and USD 209m paid in 2020, 2021 and 2022 reduced other comprehensive income with no effect on the income statement.

The regular employer contributions to be made to the Swiss plan in 2023 are estimated at USD 480m.

UK pension plan

The UK plan is a career-average revalued earnings scheme, and benefits increase automatically based on UK price inflation, subject to defined caps. The normal retirement age for participants in the UK plan is 60. The plan provides guaranteed lifetime pension benefits to participants upon retirement. The UK plan has been closed to new entrants for more than 20 years and, since 2013, participants are no longer accruing benefits for current or future service. Instead, employees participate in the UK defined contribution plan.

The governance responsibility for the UK plan lies jointly with the Pension Trustee Board and UBS. The employer contributions to the pension fund reflect agreed-upon deficit funding contributions, which are determined on the basis of the most recent actuarial valuation using assumptions agreed by the Pension Trustee Board and UBS. In the event of underfunding, UBS and the Pension Trustee Board must agree on a deficit recovery plan within statutory deadlines. In 2022, UBS made deficit funding contributions of USD 5m to the UK plan. In 2021, UBS made no deficit funding contributions.

The plan assets are invested in a diversified portfolio of financial assets, which include longevity swaps with an external insurance company. These swaps enable the UK pension plan to hedge the risk between expected and actual longevity, which should mitigate volatility in the net defined benefit asset / liability. As of 31 December 2022, the longevity swaps had a negative value of USD 1m (31 December 2021: negative USD 3m).

In 2019, UBS and the Pension Trustee Board entered into an arrangement whereby a collateral pool was established to provide security for the pension fund. The value of the collateral pool as of 31 December 2022 was USD 292m (31 December 2021: USD 337m) and includes corporate bonds, government-related debt instruments and other financial assets. The arrangement provides the Pension Trustee Board dedicated access to a pool of assets in the event of UBS's insolvency or not paying a required deficit funding contribution.

The employer contributions to be made to the UK defined benefit plan in 2023 are estimated at USD 18m, subject to regular funding reviews during the year.

US pension plans

There are two distinct major defined benefit plans in the US, with a normal retirement age of 65. Both plans were closed to new entrants more than 20 years ago. Since they closed, new employees have participated in a defined contribution plan.

One of the defined benefit plans is a contribution-based plan in which each participant accrues a percentage of salary in a retirement savings account. The retirement savings account is credited annually with interest based on a rate that is linked to the average yield on one-year US government bonds. For the other defined benefit plan, retirement benefits accrue based on the career-average earnings of each individual plan participant. Former employees with vested benefits have the option of taking a lump sum payment or a lifetime annuity.

As required under applicable pension laws, both plans have fiduciaries who, together with UBS, are responsible for the governance of the plans.

The plan assets of both plans are invested in diversified portfolios of financial assets. Each plan's fiduciaries are responsible for the investment decisions with respect to the plan assets.

The employer contributions to be made to the US defined benefit plans in 2023 are estimated at USD 11m.

German pension plans

There are two unfunded defined benefit plans in Germany. The normal retirement age is 65 and benefits are paid directly by UBS. In the larger of the two plans each participant accrues a percentage of salary in a retirement savings account. The accumulated account balance of the participant is credited on an annual basis with guaranteed interest at a rate of 5%. The plan has been closed to new entrants, and all participants younger than the age of 55 as of June 2021 no longer accrue benefits. In the other plan, amounts are accrued annually based on employee elections related to variable compensation. For this plan, the accumulated account balance is credited on an annual basis with a guaranteed interest rate of 6% for amounts accrued before 2010, of 4% for amounts accrued from 2010 to 2017 and of 0.9% for amounts accrued after 2017. Both plans are subject to German pension law, whereby the responsibility to pay pension benefits when they are due resides entirely with UBS. A portion of the pension payments is directly increased in line with price inflation.

Note 26 Post-employment benefit plans (continued)

In June 2021, UBS implemented a new funded pension plan with interest credited to participants equal to actual investment returns with a guaranteed minimum of 0%. The plan was implemented retrospectively for new hires since June 2018 and for all eligible active participants younger than 55 from July 2021. Each participant accrues a percentage of salary in a retirement savings account.

The employer contributions to be made to the German defined benefit plans in 2023 are estimated at USD 12m.

Financial information by plan

The tables below provide an analysis of the movement in the net asset / liability recognized on the balance sheet for defined benefit plans, as well as an analysis of amounts recognized in net profit and in *Other comprehensive income*.

Defined benefit plans

USD m	Swiss pension plan		UK pension plan		US and German pension plans		Total	
	2022	2021	2022	2021	2022	2021	2022	2021
Defined benefit obligation at the beginning of the year	27,398	27,728	4,105	4,162	1,740	1,905	33,242	33,795
Current service cost	416	494	0	0	5	6	420	500
Interest expense	344	58	67	58	35	30	446	147
Plan participant contributions	257	266	0	0	0	0	257	266
Remeasurements	(4,151)	837	(1,474)	71	(267)	(62)	(5,891)	846
of which: actuarial (gains) / losses due to changes in demographic assumptions	*3*	*51*	*(6)*	*14*	*1*	*4*	*(2)*	*69*
of which: actuarial (gains) / losses due to changes in financial assumptions	*(4,666)*	*(678)*	*(1,575)*	*(3)*	*(279)*	*(78)*	*(6,520)*	*(759)*
of which: experience (gains) / losses [1]	*512*	*1,464*	*107*	*59*	*11*	*12*	*631*	*1,535*
Past service cost related to plan amendments	0	0	0	0	0	4	0	4
Curtailments	(20)	(80)	0	0	0	0	(20)	(80)
Benefit payments	(1,454)	(1,097)	(123)	(148)	(111)	(112)	(1,687)	(1,357)
Other movements	(5)	0	0	0	0	1	(5)	1
Foreign currency translation	(513)	(809)	(408)	(38)	(28)	(33)	(949)	(880)
Defined benefit obligation at the end of the year	22,272	27,398	2,166	4,105	1,375	1,740	25,813	33,242
of which: amounts owed to active members	*11,927*	*14,333*	*65*	*150*	*169*	*222*	*12,160*	*14,705*
of which: amounts owed to deferred members	*0*	*0*	*656*	*1,593*	*528*	*669*	*1,184*	*2,262*
of which: amounts owed to retirees	*10,345*	*13,065*	*1,445*	*2,362*	*678*	*849*	*12,469*	*16,276*
of which: funded plans	*22,272*	*27,398*	*2,166*	*4,105*	*1,011*	*1,222*	*25,449*	*32,724*
of which: unfunded plans	*0*	*0*	*0*	*0*	*363*	*518*	*363*	*518*
Fair value of plan assets at the beginning of the year	33,975	32,590	4,297	4,149	1,329	1,360	39,601	38,100
Return on plan assets excluding interest income	(3,248)	2,322	(1,312)	277	(223)	40	(4,782)	2,639
Interest income	485	74	70	58	31	26	586	159
Employer contributions	685	763	5	0	16	16	706	779
Plan participant contributions	257	266	0	0	0	0	257	266
Benefit payments	(1,454)	(1,097)	(123)	(148)	(111)	(112)	(1,687)	(1,357)
Administration expenses, taxes and premiums paid	(12)	(13)	0	0	(3)	(4)	(16)	(17)
Other movements	(2)	0	0	0	0	1	(2)	1
Foreign currency translation	(567)	(930)	(450)	(39)	0	0	(1,017)	(969)
Fair value of plan assets at the end of the year	30,119	33,975	2,488	4,297	1,039	1,329	33,646	39,601
Surplus / (deficit)	7,848	6,577	321	192	(335)	(411)	7,834	6,358
Asset ceiling effect at the beginning of the year	6,577	4,862	0	0	0	0	6,577	4,862
Interest expense on asset ceiling effect	135	15	0	0	0	0	135	15
Asset ceiling effect excluding interest expense and foreign currency translation on asset ceiling effect	1,189	1,821	0	0	0	0	1,189	1,821
Foreign currency translation	(54)	(121)	0	0	0	0	(54)	(121)
Asset ceiling effect at the end of the year	7,848	6,577	0	0	0	0	7,848	6,577
Net defined benefit asset / (liability) of major plans	0	0	321	192	(335)	(411)	(14)	(219)
Net defined benefit asset / (liability) of remaining plans							(100)	(112)
Total net defined benefit asset / (liability)							(114)	(331)
of which: Net defined benefit asset							*355*	*302*
of which: Net defined benefit liability [2]							*(469)*	*(633)*

1 Experience (gains) / losses are a component of actuarial remeasurements of the defined benefit obligation and reflect the effects of differences between the previous actuarial assumptions and what has actually occurred. 2 Refer to Note 18c.

Note 26 Post-employment benefit plans (continued)

Income statement – expenses related to defined benefit plans[1]

USD m	Swiss pension plan		UK pension plan		US and German pension plans		Total	
For the year ended	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Current service cost	416	494	0	0	5	6	420	500
Interest expense related to defined benefit obligation	344	58	67	58	35	30	446	147
Interest income related to plan assets	(485)	(74)	(70)	(58)	(31)	(26)	(586)	(159)
Interest expense on asset ceiling effect	135	15	0	0	0	0	135	15
Administration expenses, taxes and premiums paid	12	13	0	0	3	4	16	17
Past service cost related to plan amendments	0	0	0	0	0	4	0	4
Curtailments	(20)	(80)	0	0	0	0	(20)	(80)
Net periodic expenses recognized in net profit for major plans	402	426	(3)	0	12	18	411	444
Net periodic expenses recognized in net profit for remaining plans[2]							25	25
Total net periodic expenses recognized in net profit							437	470

1 Refer to Note 6. 2 Includes differences between actual and estimated performance award accruals.

Other comprehensive income – gains / (losses) on defined benefit plans

USD m	Swiss pension plan		UK pension plan		US and German pension plans		Total	
For the year ended	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Remeasurement of defined benefit obligation	4,151	(837)	1,474	(71)	267	62	5,891	(846)
of which: change in discount rate assumption	*5,414*	*870*	*1,451*	*319*	*317*	*77*	*7,183*	*1,267*
of which: change in rate of pension increase assumption	*0*	*0*	*123*	*(316)*	*(5)*	*(1)*	*118*	*(318)*
of which: change in rate of interest credit on retirement savings assumption	*(718)*	*(193)*	*0*	*0*	*(82)*	*(1)*	*(800)*	*(194)*
of which: change in life expectancy	*0*	*0*	*5*	*9*	*(1)*	*(3)*	*4*	*5*
of which: change in other actuarial assumptions	*(33)*	*(50)*	*1*	*(23)*	*48*	*2*	*16*	*(71)*
of which: experience gains / (losses)[1]	*(512)*	*(1,464)*	*(107)*	*(59)*	*(11)*	*(12)*	*(631)*	*(1,535)*
Return on plan assets excluding interest income	(3,248)	2,322	(1,312)	277	(223)	40	(4,782)	2,639
Asset ceiling effect excluding interest expense and foreign currency translation	(1,189)	(1,821)	0	0	0	0	(1,189)	(1,821)
Total gains / (losses) recognized in other comprehensive income for major plans	(285)	(336)	162	207	43	102	(80)	(28)
Total gains / (losses) recognized in other comprehensive income for remaining plans							7	30
Total gains / (losses) recognized in other comprehensive income[2]							(73)	2

1 Experience (gains) / losses are a component of actuarial remeasurements of the defined benefit obligation and reflect the effects of differences between the previous actuarial assumptions and what has actually occurred. 2 Refer to the "Statement of comprehensive income."

The table below provides information about the duration of the DBO and the timing for expected benefit payments.

	Swiss pension plan		UK pension plan		US and German pension plans[1]	
	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Duration of the defined benefit obligation (in years)	13.1	15.1	13.7	18.8	7.9	9.5
Maturity analysis of benefits expected to be paid						
USD m						
Benefits expected to be paid within 12 months	1,294	1,312	107	110	123	123
Benefits expected to be paid between 1 and 3 years	2,657	2,636	234	248	232	237
Benefits expected to be paid between 3 and 6 years	3,977	3,824	384	418	335	338
Benefits expected to be paid between 6 and 11 years	6,743	6,220	667	743	502	495
Benefits expected to be paid between 11 and 16 years	6,223	5,572	667	751	388	392
Benefits expected to be paid in more than 16 years	22,446	18,092	2,570	3,028	516	519

1 The duration of the defined benefit obligation represents a weighted average across US and German plans.

Actuarial assumptions

The actuarial assumptions used for the defined benefit plans are based on the economic conditions prevailing in the jurisdiction in which they are offered. Changes in the defined benefit obligation are most sensitive to changes in the discount rate. The discount rate is based on the yield of high-quality corporate bonds quoted in an active market in the currency of the respective plan. A decrease in the discount curve increases the DBO. UBS regularly reviews the actuarial assumptions used in calculating the DBO to determine their continuing relevance.

› **Refer to Note 1a item 5 for a description of the accounting policy for defined benefit plans**

The tables below show the significant actuarial assumptions used in calculating the DBO at the end of the year.

Significant actuarial assumptions

	Swiss pension plan		UK pension plan		US pension plans		German pension plans	
In %	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Discount rate	2.34	0.34	5.02	1.82	4.92[1]	2.47[1]	3.81	0.99
Rate of pension increase	0.00	0.00	3.08	3.32	0.00	0.00	2.20	1.80
Rate of interest credit on retirement savings	3.39	1.04	0.00	0.00	5.73[2]	1.18[2]	0.00	0.00

1 Represents weighted average across US pension plans. 2 Only applicable to one of the US pension plans

Mortality tables and life expectancies for major plans

		Life expectancy at age 65 for a male member currently			
		aged 65		aged 45	
Country	Mortality table	31.12.22	31.12.21	31.12.22	31.12.21
Switzerland	BVG 2020 G with CMI 2021 projections[1]	21.7	21.7	23.4	23.3
UK	S3PA with CMI 2021 projections[2]	23.5	23.4	24.6	24.5
USA	Pri-2012 with MP-2021 projection scale	22.0	21.9	23.3	23.3
Germany	Dr. K. Heubeck 2018 G	20.6	20.5	23.4	23.2

		Life expectancy at age 65 for a female member currently			
		aged 65		aged 45	
Country	Mortality table	31.12.22	31.12.21	31.12.22	31.12.21
Switzerland	BVG 2020 G with CMI 2021 projections[1]	23.5	23.4	25.1	25.0
UK	S3PA with CMI 2021 projections[2]	25.0	24.9	26.4	26.3
USA	Pri-2012 with MP-2021 projection scale	23.4	23.3	24.8	24.7
Germany	Dr. K. Heubeck 2018 G	24.0	23.9	26.3	26.1

1 In 2021, BVG 2020 G with CMI 2019 projections was used. 2 In 2021, S3PA with CMI 2020 projections was used.

Sensitivity analysis of significant actuarial assumptions

The table below presents a sensitivity analysis for each significant actuarial assumption, showing how the DBO would have been affected by changes in the relevant actuarial assumption that were reasonably possible at the balance sheet date. Unforeseen circumstances may arise, which could result in variations that are outside the range of alternatives deemed reasonably possible. Caution should be used in extrapolating the sensitivities below on the DBO, as the sensitivities may not be linear.

Sensitivity analysis of significant actuarial assumptions[1]

Increase / (decrease) in defined benefit obligation	Swiss pension plan		UK pension plan		US and German pension plans	
USD m	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Discount rate						
Increase by 50 basis points	(1,128)	(1,695)	(141)	(361)	(51)	(78)
Decrease by 50 basis points	1,269	1,933	157	411	55	84
Rate of pension increase						
Increase by 50 basis points	877	1,333	127	334	4	6
Decrease by 50 basis points	–[2]	–[2]	(118)	(306)	(3)	(6)
Rate of interest credit on retirement savings						
Increase by 50 basis points	178	224	–[3]	–[3]	9	8
Decrease by 50 basis points	(178)	(224)	–[3]	–[3]	(8)	(7)
Life expectancy						
Increase in longevity by one additional year	593	915	65	184	39	56

1 The sensitivity analyses are based on a change in one assumption while holding all other assumptions constant, so that interdependencies between the assumptions are excluded. 2 As the assumed rate of pension increase was 0% as of 31 December 2022 and as of 31 December 2021, a downward change in assumption is not applicable. 3 As the UK plan does not provide interest credits on retirement savings, a change in assumption is not applicable.

Note 26 Post-employment benefit plans (continued)

Fair value of plan assets

The tables below provide information about the composition and fair value of plan assets of the major pension plans.

Composition and fair value of plan assets

Swiss pension plan

	31.12.22				31.12.21			
	Fair value			Plan asset allocation %	Fair value			Plan asset allocation %
USD m	Quoted in an active market	Other	Total		Quoted in an active market	Other	Total	
Cash and cash equivalents	326	0	326	1	187	0	187	1
Real estate / property								
Domestic	0	3,783	3,783	13	0	3,530	3,530	10
Foreign	0	919	919	3	0	580	580	2
Investment funds								
Equity								
Domestic	743	0	743	2	843	0	843	2
Foreign	4,964	2,171	7,134	24	6,213	2,652	8,865	26
Bonds[1]								
Domestic, AAA to BBB–	3,760	0	3,760	12	4,446	0	4,446	13
Foreign, AAA to BBB–	6,031	0	6,031	20	5,093	0	5,093	15
Foreign, below BBB–	1,062	0	1,062	4	1,314	0	1,314	4
Other	1,540	3,547	5,086	17	4,211	3,558	7,769	23
Other investments	624	651	1,275	4	668	682	1,349	4
Total fair value of plan assets	19,049	11,071	30,119	100	22,973	11,002	33,975	100

	31.12.22	31.12.21
Total fair value of plan assets	30,119	33,975
of which:[2]		
Bank accounts at UBS	*337*	*194*
UBS debt instruments	*50*	*28*
UBS shares	*27*	*25*
Securities lent to UBS[3]	*871*	*1,079*
Property occupied by UBS	*90*	*93*
Derivative financial instruments, counterparty UBS[3]	*76*	*128*

1 The bond credit ratings are primarily based on S&P's credit ratings. Ratings AAA to BBB– and below BBB– represent investment grade and non-investment grade ratings, respectively. In cases where credit ratings from other rating agencies were used, these were converted to the equivalent rating in S&P's rating classification. 2 Bank accounts at UBS encompass accounts in the name of the Swiss pension fund. The other positions disclosed in the table encompass both direct investments in UBS instruments and indirect investments, i.e., those made through funds that the pension fund invests in. 3 Securities lent to UBS and derivative financial instruments are presented gross of any collateral. Securities lent to UBS were fully covered by collateral as of 31 December 2022 and 31 December 2021. Net of collateral, derivative financial instruments amounted to negative USD 8m as of 31 December 2022 (31 December 2021: positive USD 43m).

Note 26 Post-employment benefit plans (continued)

Composition and fair value of plan assets (continued)

UK pension plan

	31.12.22				31.12.21			
	Fair value			Plan asset allocation %	Fair value			Plan asset allocation %
USD m	Quoted in an active market	Other	Total		Quoted in an active market	Other	Total	
Cash and cash equivalents	104	0	104	4	147	0	147	3
Bonds[1]								
Domestic, AAA to BBB–	1,729	0	1,729	69	2,605	0	2,605	61
Foreign, AAA to BBB–	297	0	297	12	372	0	372	9
Foreign, below BBB–	7	0	7	0	4	0	4	0
Investment funds								
Equity								
Domestic	19	3	22	1	44	4	47	1
Foreign	366	0	366	15	921	0	921	21
Bonds[1]								
Domestic, AAA to BBB–	367	90	457	18	532	147	679	16
Domestic, below BBB–	1	0	1	0	12	0	12	0
Foreign, AAA to BBB–	90	0	90	4	179	0	179	4
Foreign, below BBB–	114	0	114	5	115	0	115	3
Real estate								
Domestic	64	0	64	3	110	12	122	3
Foreign	6	31	36	1	6	34	40	1
Other	(280)	0	(280)	(11)	(313)	0	(313)	(7)
Repurchase agreements	(612)	0	(612)	(25)	(725)	0	(725)	(17)
Other investments	66	27	94	4	65	26	91	2
Total fair value of plan assets	2,336	151	2,488	100	4,074	223	4,297	100

1 The bond credit ratings are primarily based on S&P's credit ratings. Ratings AAA to BBB– and below BBB– represent investment grade and non-investment grade ratings, respectively. In cases where credit ratings from other rating agencies were used, these were converted to the equivalent rating in S&P's rating classification.

US and German pension plans

	31.12.22				31.12.21			
	Fair value			Plan asset allocation %	Fair value			Plan asset allocation %
USD m	Quoted in an active market	Other	Total		Quoted in an active market	Other	Total	
Cash and cash equivalents	7	0	7	1	11	0	11	1
Equity								
Domestic	55	0	55	5	79	0	79	6
Foreign	24	0	24	2	31	0	31	2
Bonds[1]								
Domestic, AAA to BBB–	359	0	359	35	486	0	486	37
Domestic, below BBB–	4	0	4	0	17	0	17	1
Foreign, AAA to BBB–	74	0	74	7	97	0	97	7
Foreign, below BBB–	3	0	3	0	6	0	6	0
Investment funds								
Equity								
Domestic	27	0	27	3	3	0	3	0
Foreign	33	0	33	3	56	0	56	4
Bonds[1]								
Domestic, AAA to BBB–	266	0	266	26	269	0	269	20
Domestic, below BBB–	109	0	109	10	147	0	147	11
Foreign, AAA to BBB–	2	0	2	0	11	0	11	1
Foreign, below BBB–	5	0	5	0	2	0	2	0
Real estate								
Domestic	0	11	11	1	0	9	9	1
Other	54	0	54	5	99	0	99	7
Other investments	5	1	6	1	5	1	6	0
Total fair value of plan assets	1,027	12	1,039	100	1,319	10	1,329	100

1 The bond credit ratings are primarily based on S&P's credit ratings. Ratings AAA to BBB– and below BBB– represent investment grade and non-investment grade ratings, respectively. In cases where credit ratings from other rating agencies were used, these were converted to the equivalent rating in S&P's rating classification.

b) Defined contribution plans

UBS sponsors a number of defined contribution plans, with the most significant plans in the US and the UK. UBS's obligation is limited to its contributions made in accordance with each plan, which may include direct contributions and matching contributions. Employer contributions to defined contribution plans are recognized as an expense and were USD 357m in 2022, USD 363m in 2021 and USD 343m in 2020.

› **Refer to Note 6 for more information**

c) Related-party disclosure

UBS is the principal provider of banking services for the pension fund of UBS in Switzerland. In this capacity, UBS is engaged to execute most of the pension fund's banking activities. These activities can include, but are not limited to, trading, securities lending and borrowing and derivative transactions. The non-Swiss UBS pension funds do not have a similar banking relationship with UBS. During 2022, UBS received USD 36m in fees for banking services from the major post-employment benefit plans (2021: USD 39m). As of 31 December 2022, the major post-employment benefit plans held USD 265m in UBS shares (31 December 2021: USD 252m).

› **Refer to the "Composition and fair value of plan assets" table in Note 26a for more information about fair value of investments in UBS instruments held by the Swiss pension fund**

Note 27 Employee benefits: variable compensation

a) Plans offered

The Group has several share-based and other deferred compensation plans that align the interests of Group Executive Board (GEB) members and other employees with the interests of investors.

Share-based awards are granted in the form of notional shares and, where permitted, carry a dividend equivalent that may be paid in notional shares or cash. Awards are settled by delivering UBS shares at vesting, except in jurisdictions where this is not permitted for legal or tax reasons.

Deferred compensation awards are generally forfeitable upon, among other circumstances, voluntary termination of employment with UBS. These compensation plans are also designed to meet regulatory requirements and include special provisions for regulated employees.

The most significant deferred compensation plans are described below.

› **Refer to Note 1a item 4 for a description of the accounting policy related to share-based and other deferred compensation plans**

Mandatory deferred compensation plans

Long-Term Incentive Plan

The Long-Term Incentive Plan (LTIP) is a mandatory deferred share-based compensation plan for GEB members for the performance year 2022. For prior performance years, LTIP was granted to senior leaders of the Group (i.e., GEB members and selected senior management).

The number of notional shares delivered at vesting depends on two equally weighted performance metrics over a three-year performance period: return on common equity tier 1 (CET1) capital and relative total shareholder return, which compares the total shareholder return (TSR) of UBS with the TSR of an index consisting of listed Global Systemically Important Banks as determined by the Financial Stability Board (excluding UBS). The final number of shares vest over three years following the performance period for GEB members, and cliff-vest in the year following the performance period for selected senior management.

Equity Ownership Plan / Fund Ownership Plan

The Equity Ownership Plan (EOP) is the deferred share-based compensation plan for employees outside of the GEB that are subject to deferral requirements. EOP awards generally vest over three years.

Certain Asset Management employees receive some or all of their EOP in the form of notional funds (Fund Ownership Plan or FOP, previously named AM EOP). This plan is generally delivered in cash and vests over three years. The amount delivered depends on the value of the underlying investment funds at the time of vesting.

Deferred Contingent Capital Plan

The Deferred Contingent Capital Plan (DCCP) is a deferred compensation plan for all employees who are subject to deferral requirements. Such employees are awarded notional additional tier 1 (AT1) capital instruments, which, at the discretion of UBS, can be settled in cash or a perpetual, marketable AT1 capital instrument. DCCP awards generally bear notional interest paid annually (except for certain regulated employees) and vest in full after five years. Awards are forfeited if a viability event occurs (i.e., if FINMA notifies the firm that the DCCP awards must be written down to mitigate the risk of insolvency, bankruptcy or failure of UBS) or if the firm receives a commitment of extraordinary support from the public sector that is necessary to prevent such an event. DCCP awards are also written down if the Group's CET1 capital ratio falls below a defined threshold. In addition, GEB members forfeit 20% of DCCP awards for each loss-making year during the vesting period.

Financial advisor variable compensation

In line with market practice for US wealth management businesses, the compensation for US financial advisors in Global Wealth Management consists of cash compensation and deferred compensation awards, determined using a formulaic approach based on production.

Cash compensation reflects a percentage of the compensable production that each financial advisor generates. Compensable production is generally based on transaction revenue and investment advisory fees and may reflect further adjustments. The percentage rate generally varies based on the level of the production and firm tenure.

Financial advisors may also be granted annual deferred compensation. These amounts generally vest over a six-year period. The annual deferred compensation amount reflects the overall percentage rate and production.

Cash compensation and deferred compensation awards may be reduced for, among other things, errors, negligence or carelessness, or failure to comply with the firm's rules, standards, practices and / or policies, and / or applicable laws and regulations.

Financial advisors may also participate in additional programs to support promoting and developing their business or supporting the transition of client relationships where appropriate. Financial advisor compensation also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements.

Share delivery obligations

Share delivery obligations related to employee share-based compensation awards were 178m shares as of 31 December 2022 (31 December 2021: 175m shares). Share delivery obligations are calculated on the basis of undistributed notional share awards, taking applicable performance conditions into account.

As of 31 December 2022, UBS held 119m treasury shares (31 December 2021: 149m) that were available to satisfy share delivery obligations.

b) Effect on the income statement

Effect on the income statement for the financial year and future periods

The table below provides information about compensation expenses related to total variable compensation that were recognized in the financial year ended 31 December 2022, as well as expenses that were deferred and will be recognized in the income statement for 2023 and later. The majority of expenses deferred to 2023 and later that are related to the 2022 performance year pertain to awards granted in February 2023. The total unamortized compensation expense for unvested share-based awards granted up to 31 December 2022 will be recognized in future periods over a weighted average period of 2.5 years.

Variable compensation

	Expenses recognized in 2022			Expenses deferred to 2023 and later[1]		
USD m	Related to the 2022 performance year	Related to prior performance years	Total	Related to the 2022 performance year	Related to prior performance years	Total
Non-deferred cash	2,276	(16)	2,260	0	0	0
Deferred compensation awards	364	581	945	605	754	1,359
of which: Equity Ownership Plan	*202*	*235*	*437*	*310*	*250*	*560*
of which: Deferred Contingent Capital Plan	*129*	*219*	*349*	*245*	*408*	*654*
of which: Long-Term Incentive Plan	*11*	*32*	*43*	*30*	*42*	*71*
of which: Fund Ownership Plan	*21*	*95*	*116*	*20*	*54*	*74*
Variable compensation – performance awards	**2,640**	**566**	**3,205**	**605**	**754**	**1,359**
Variable compensation – financial advisors[2]	**3,799**	**709**	**4,508**	**1,290**	**2,652**	**3,942**
of which: non-deferred cash	*3,481*	*0*	*3,481*	*0*	*0*	*0*
of which: deferred share-based awards	*104*	*62*	*166*	*122*	*180*	*302*
of which: deferred cash-based awards	*185*	*215*	*400*	*588*	*636*	*1,224*
of which: compensation commitments with recruited financial advisors	*29*	*432*	*461*	*580*	*1,836*	*2,416*
Variable compensation – other[3]	**169**	**71**	**241**	**237**	**193**	**430**
Total variable compensation	**6,608**	**1,346**	**7,954[4]**	**2,131**	**3,599**	**5,731**

1 Estimate as of 31 December 2022. Actual amounts to be expensed in future periods may vary; e.g., due to forfeiture of awards. 2 Financial advisor compensation consists of cash and deferred compensation awards and is based on compensable revenues and firm tenure using a formulaic approach. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 3 Consists of replacement payments, forfeiture credits, severance payments, retention plan payments and interest expense related to the Deferred Contingent Capital Plan. 4 Includes USD 703m in expenses related to share-based compensation (performance awards: USD 480m; other variable compensation: USD 56m; financial advisor compensation: USD 166m). A further USD 88m in expenses related to share-based compensation was recognized within other expense categories included in Note 6 (salaries: USD 4m, related to role-based allowances; social security: USD 61m; other personnel expenses: USD 23m related to the Equity Plus Plan). Total personnel expense related to share-based equity-settled compensation excluding social security was USD 716m.

Note 27 Employee benefits: variable compensation (continued)

Variable compensation (continued)

USD m	Expenses recognized in 2021: Related to the 2021 performance year	Expenses recognized in 2021: Related to prior performance years	Expenses recognized in 2021: Total	Expenses deferred to 2022 and later[1]: Related to the 2021 performance year	Expenses deferred to 2022 and later[1]: Related to prior performance years	Expenses deferred to 2022 and later[1]: Total
Non-deferred cash	2,383	(10)	2,373	0	0	0
Deferred compensation awards	405	412	817	797	624	1,421
of which: Equity Ownership Plan	*183*	*180*	*363*	*393*	*184*	*577*
of which: Deferred Contingent Capital Plan	*140*	*158*	*297*	*299*	*329*	*628*
of which: Long-Term Incentive Plan	*54*	*19*	*73*	*50*	*33*	*83*
of which: Fund Ownership Plan	*29*	*56*	*84*	*56*	*78*	*133*
Variable compensation – performance awards	**2,788**	**402**	**3,190**	**797**	**624**	**1,421**
Variable compensation – financial advisors[2]	**4,175**	**685**	**4,860**	**1,097**	**2,323**	**3,419**
of which: non-deferred cash	*3,858*	*(6)*	*3,853*	*0*	*0*	*0*
of which: deferred share-based awards	*106*	*51*	*157*	*123*	*146*	*269*
of which: deferred cash-based awards	*170*	*202*	*372*	*311*	*495*	*806*
of which: compensation commitments with recruited financial advisors	*41*	*438*	*479*	*662*	*1,682*	*2,344*
Variable compensation – other[3]	**191**	**38**	**229**	**215**	**182**	**397**
Total variable compensation	**7,155**	**1,125**	**8,280[4]**	**2,109**	**3,129**	**5,238**

1 Estimate as of 31 December 2021. Actual amounts expensed may vary; e.g., due to forfeiture of awards. 2 Financial advisor compensation consists of cash and deferred compensation awards and is based on compensable revenues and firm tenure using a formulaic approach. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 3 Consists of replacement payments, forfeiture credits, severance payments, retention plan payments and interest expense related to the Deferred Contingent Capital Plan. 4 Includes USD 651m in expenses related to share-based compensation (performance awards: USD 435m; other variable compensation: USD 59m; financial advisor compensation: USD 157m). A further USD 85m in expenses related to share-based compensation was recognized within other expense categories included in Note 6 (salaries: USD 5m related to role-based allowances; social security: USD 64m; other personnel expenses: USD 16m related to the Equity Plus Plan). Total personnel expense related to share-based equity-settled compensation excluding social security was USD 641m.

Variable compensation (continued)

USD m	Expenses recognized in 2020: Related to the 2020 performance year	Expenses recognized in 2020: Related to prior performance years	Expenses recognized in 2020: Total	Expenses deferred to 2021 and later[1]: Related to the 2020 performance year	Expenses deferred to 2021 and later[1]: Related to prior performance years	Expenses deferred to 2021 and later[1]: Total
Non-deferred cash	2,167	(26)	2,141	0	0	0
Deferred compensation awards	341	727	1,068	756	288	1,044
of which: Equity Ownership Plan	*137*	*327*	*463*	*306*	*69*	*376*
of which: Deferred Contingent Capital Plan	*112*	*351*	*463*	*280*	*196*	*476*
of which: Long-Term Incentive Plan	*42*	*11*	*54*	*50*	*10*	*61*
of which: Fund Ownership Plan	*49*	*39*	*88*	*120*	*12*	*132*
Variable compensation – performance awards	**2,508**	**701**	**3,209**	**756**	**288**	**1,044**
Variable compensation – financial advisors[2]	**3,378**	**713**	**4,091**	**822**	**2,284**	**3,106**
of which: non-deferred cash	*3,154*	*0*	*3,154*	*0*	*0*	*0*
of which: deferred share-based awards	*69*	*50*	*119*	*79*	*135*	*214*
of which: deferred cash-based awards	*133*	*183*	*316*	*271*	*467*	*738*
of which: compensation commitments with recruited financial advisors	*22*	*480*	*502*	*473*	*1,682*	*2,155*
Variable compensation – other[3]	**126**	**94**	**220**	**181**	**192**	**374**
Total variable compensation	**6,012**	**1,508**	**7,520[4]**	**1,760**	**2,764**	**4,524**

1 Estimate as of 31 December 2020. Actual amounts expensed may vary; e.g., due to forfeiture of awards. 2 Financial advisor compensation consists of cash and deferred compensation awards and is based on compensable revenues and firm tenure using a formulaic approach. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 3 Consists of replacement payments, forfeiture credits, severance payments, retention plan payments and interest expense related to the Deferred Contingent Capital Plan. 4 Includes USD 686m in expenses related to share-based compensation (performance awards: USD 517m; other variable compensation: USD 50m; financial advisor compensation: USD 119m). A further USD 100m in expenses related to share-based compensation was recognized within other expense categories included in Note 6 (salaries: USD 4m related to role-based allowances; social security: USD 54m; other personnel expenses: USD 42m related to the Equity Plus Plan). Total personnel expense related to share-based equity-settled compensation excluding social security was USD 691m.

Note 27 Employee benefits: variable compensation (continued)

c) Outstanding share-based compensation awards

Share and performance share awards

Movements in outstanding share-based awards to employees during 2022 and 2021 are provided in the table below.

Movements in outstanding share-based compensation awards

	Number of shares 2022	Weighted average grant date fair value (USD)	Number of shares 2021	Weighted average grant date fair value (USD)
Outstanding, at the beginning of the year	180,578,561	13	174,900,395	12
Awarded during the year	62,203,770	18	68,721,549	15
Distributed during the year	(54,639,882)	12	(52,137,287)	13
Forfeited during the year	(6,235,249)	15	(10,906,096)	13
Outstanding, at the end of the year	181,907,200	15	180,578,561	13
of which: shares vested for accounting purposes	*102,364,973*		*107,828,979*	

The total carrying amount of the liability related to cash-settled share-based awards as of 31 December 2022 and 31 December 2021 was USD 43m and USD 37m, respectively.

d) Valuation

UBS share awards

UBS measures compensation expense based on the average market price of UBS shares on the grant date as quoted on the SIX Swiss Exchange, taking into consideration post-vesting sale and hedge restrictions, non-vesting conditions and market conditions, where applicable. The fair value of the share awards subject to post-vesting sale and hedge restrictions is discounted on the basis of the duration of the post-vesting restriction and is referenced to the cost of purchasing an at-the-money European put option for the term of the transfer restriction. The grant date fair value of notional shares without dividend entitlements also includes a deduction for the present value of future expected dividends to be paid between the grant date and distribution.

Note 28 Interests in subsidiaries and other entities

a) Interests in subsidiaries

UBS defines its significant subsidiaries as those entities that, either individually or in aggregate, contribute significantly to the Group's financial position or results of operations, based on a number of criteria, including the subsidiaries' equity and contribution to the Group's total assets and profit or loss before tax, in accordance with the requirements set by IFRS 12, Swiss regulations and the rules of the US Securities and Exchange Commission (the SEC).

Individually significant subsidiaries

The two tables below list the Group's individually significant subsidiaries as of 31 December 2022. Unless otherwise stated, the subsidiaries listed below have share capital consisting solely of ordinary shares held entirely by the Group and the proportion of ownership interest held is equal to the voting rights held by the Group.

The country where the respective registered office is located is also the principal place of business. UBS AG operates through a global branch network and a significant proportion of its business activity is conducted outside Switzerland, including in the UK, the US, Singapore, the Hong Kong SAR and other countries. UBS Europe SE has branches and offices in a number of EU Member States, including Germany, Italy, Luxembourg and Spain. Share capital is provided in the currency of the legally registered office.

Note 28 Interests in subsidiaries and other entities (continued)

Individually significant subsidiaries of UBS Group AG as of 31 December 2022

Company	Registered office	Share capital in million		Equity interest accumulated in %
UBS AG	Zurich and Basel, Switzerland	CHF	385.8	100.0
UBS Business Solutions AG[1]	Zurich, Switzerland	CHF	1.0	100.0

1 UBS Business Solutions AG holds subsidiaries in China, India, Israel and Poland.

Individually significant subsidiaries of UBS AG as of 31 December 2022[1]

Company	Registered office	Primary business	Share capital in million		Equity interest accumulated in %
UBS Americas Holding LLC	Wilmington, Delaware, USA	Group Functions	USD	5,150.0[2]	100.0
UBS Americas Inc.	Wilmington, Delaware, USA	Group Functions	USD	0.0	100.0
UBS Asset Management AG	Zurich, Switzerland	Asset Management	CHF	43.2	100.0
UBS Bank USA	Salt Lake City, Utah, USA	Global Wealth Management	USD	0.0	100.0
UBS Europe SE	Frankfurt, Germany	Global Wealth Management	EUR	446.0	100.0
UBS Financial Services Inc.	Wilmington, Delaware, USA	Global Wealth Management	USD	0.0	100.0
UBS Securities LLC	Wilmington, Delaware, USA	Investment Bank	USD	1,283.1[3]	100.0
UBS Switzerland AG	Zurich, Switzerland	Personal & Corporate Banking	CHF	10.0	100.0

1 Includes direct and indirect subsidiaries of UBS AG. 2 Consists of common share capital of USD 1,000 and non-voting preferred share capital of USD 5,150,000,000. 3 Consists of common share capital of USD 100,000 and non-voting preferred share capital of USD 1,283,000,000.

Other subsidiaries

The table below lists other direct and indirect subsidiaries of UBS AG that are not individually significant but contribute to the Group's total assets and aggregated profit before tax thresholds and are thus disclosed in accordance with requirements set by the SEC.

Other subsidiaries of UBS AG as of 31 December 2022

Company	Registered office	Primary business	Share capital in million		Equity interest accumulated in %
UBS Asset Management (Americas) Inc.	Wilmington, Delaware, USA	Asset Management	USD	0.0	100.0
UBS Asset Management (Hong Kong) Limited	Hong Kong SAR, China	Asset Management	HKD	153.8	100.0
UBS Asset Management Life Ltd	London, United Kingdom	Asset Management	GBP	15.0	100.0
UBS Asset Management Switzerland AG	Zurich, Switzerland	Asset Management	CHF	0.5	100.0
UBS Business Solutions US LLC	Wilmington, Delaware, USA	Group Functions	USD	0.0	100.0
UBS Credit Corp.	Wilmington, Delaware, USA	Global Wealth Management	USD	0.0	100.0
UBS (France) S.A.	Paris, France	Global Wealth Management	EUR	197.0	100.0
UBS Fund Management (Luxembourg) S.A.	Luxembourg, Luxembourg	Asset Management	EUR	13.0	100.0
UBS Fund Management (Switzerland) AG	Basel, Switzerland	Asset Management	CHF	1.0	100.0
UBS (Monaco) S.A.	Monte Carlo, Monaco	Global Wealth Management	EUR	49.2	100.0
UBS O'Connor LLC	Wilmington, Delaware, USA	Asset Management	USD	1.0	100.0
UBS Realty Investors LLC	Boston, Massachusetts, USA	Asset Management	USD	9.0	100.0
UBS Securities Australia Ltd	Sydney, Australia	Investment Bank	AUD	0.3[1]	100.0
UBS Securities Hong Kong Limited	Hong Kong SAR, China	Investment Bank	HKD	3,354.2	100.0
UBS Securities Japan Co., Ltd.	Tokyo, Japan	Investment Bank	JPY	34,708.7	100.0
UBS SuMi TRUST Wealth Management Co., Ltd.	Tokyo, Japan	Global Wealth Management	JPY	5,165.0	51.0

1 Includes a nominal amount relating to redeemable preference shares.

Consolidated structured entities

Consolidated structured entities (SEs) include certain investment funds, securitization vehicles and client investment vehicles. UBS has no individually significant subsidiaries that are SEs.

In 2022 and 2021, the Group did not enter into any contractual obligation that could require the Group to provide financial support to consolidated SEs. In addition, the Group did not provide support, financial or otherwise, to a consolidated SE when the Group was not contractually obligated to do so, nor does the Group have any intention to do so in the future. Furthermore, the Group did not provide support, financial or otherwise, to a previously unconsolidated SE that resulted in the Group controlling the SE during the reporting period.

b) Interests in associates and joint ventures

As of 31 December 2022 and 2021, no associate or joint venture was individually material to the Group. Also, there were no significant restrictions on the ability of associates or joint ventures to transfer funds to UBS Group AG or its subsidiaries as cash dividends or to repay loans or advances made. There were no quoted market prices for any associates or joint ventures of the Group.

In 2022, UBS reclassified its minority investment (49%) in its Japanese real estate joint venture, Mitsubishi Corp.-UBS Realty Inc., of USD 44m to *Properties and other non-current assets held for sale* and sold the shareholding. The sale resulted in a pre-tax gain of USD 848m in 2022, which was recognized in *Other income*. UBS's asset management, wealth management and investment banking businesses operating in Japan were not affected by the sale.

Investments in associates and joint ventures

USD m	2022	2021
Carrying amount at the beginning of the year	1,243	1,557
Additions	3	1
Reclassifications[1]	(44)	(386)
Share of comprehensive income	(41)	150
of which: share of net profit[2]	*32*	*105*
of which: share of other comprehensive income[3]	*(73)*	*45*
Share of changes in retained earnings	0	1
Dividends received	(31)	(39)
Foreign currency translation	(30)	(39)
Carrying amount at the end of the year	1,101	1,243
of which: associates	*1,098*	*1,200*
of which: SIX Group AG, Zurich[4]	*954*	*1,043*
of which: other associates	*144*	*157*
of which: joint ventures	*3*	*43*
of which: Mitsubishi Corp.-UBS Realty Inc., Tokyo[1]		*40*
of which: other joint ventures	*3*	*3*

1 In 2022, UBS reclassified its minority investment (49%) in Mitsubishi Corp.-UBS Realty Inc. of USD 44m to Properties and other non-current assets held for sale and sold the investment in the same year. In 2021, UBS reclassified its minority investment (48.8%) in Clearstream Fund Centre AG of USD 386m to Properties and other non-current assets held for sale and sold the investment in the same year. 2 For 2022, consists of USD 27m from associates and USD 5m from joint ventures (for 2021, consists of USD 79m from associates and USD 26m from joint ventures). 3 For 2022, consists of negative USD 73m from associates (for 2021, consists of USD 44m from associates and USD 1m from joint ventures). 4 In 2022, UBS AG's equity interest amounted to 17.31%. UBS AG is represented on the Board of Directors.

c) Unconsolidated structured entities

UBS is considered to sponsor another entity if, in addition to ongoing involvement with that entity, it had a key role in establishing that entity or in bringing together relevant counterparties for a transaction facilitated by that entity. During 2022, the Group sponsored the creation of various SEs and interacted with a number of non-sponsored SEs, including securitization vehicles, client vehicles and certain investment funds, that UBS did not consolidate as of 31 December 2022 because it did not control them.

Interests in unconsolidated structured entities

The table below presents the Group's interests in and maximum exposure to loss from unconsolidated SEs, as well as the total assets held by the SEs in which UBS had an interest as of year-end, except for investment funds sponsored by third parties, for which the carrying amount of UBS's interest as of year-end has been disclosed.

Sponsored unconsolidated structured entities in which UBS did not have an interest at year-end

During 2022 and 2021, the Group did not earn material income from sponsored unconsolidated SEs in which UBS did not have an interest at year-end.

During 2022 and 2021, UBS and third parties did not transfer any assets into sponsored securitization vehicles created in the year. UBS and third parties transferred assets, alongside deposits and debt issuances (which are assets from the perspective of the vehicle), of USD 1bn and USD 3bn, respectively, into sponsored client vehicles created in 2022 (2021: USD 1bn and USD 2bn, respectively). For sponsored investment funds, transfers arose during the period as investors invested and redeemed positions, thereby changing the overall size of the funds, which, when combined with market movements, resulted in a total closing net asset value of USD 38bn (31 December 2021: USD 46bn).

Interests in unconsolidated structured entities

	31.12.22				
USD m, except where indicated	Securitization vehicles	Client vehicles	Investment funds	Total	Maximum exposure to loss[1]
Financial assets at fair value held for trading	278	81	5,884	6,243	6,243
Derivative financial instruments	3	160	115	278	278
Loans and advances to customers			119	119	119
Financial assets at fair value not held for trading			225	225	225
Financial assets measured at fair value through other comprehensive income[2]					
Other financial assets measured at amortized cost[2]	837	4,977[3]	2	5,817	6,066
Total assets	1,118[4]	5,219	6,345	12,681	
Derivative financial instruments	1	35	763	798	2
Total liabilities	1	35	763	798	
Assets held by the unconsolidated structured entities in which UBS had an interest (USD bn)	50[5]	107[6]	139[7]		

	31.12.21				
USD m, except where indicated	Securitization vehicles	Client vehicles	Investment funds	Total	Maximum exposure to loss[1]
Financial assets at fair value held for trading	246	162	6,743	7,151	7,151
Derivative financial instruments	5	45	155	205	205
Loans and advances to customers			125	125	125
Financial assets at fair value not held for trading	35		222	257	257
Financial assets measured at fair value through other comprehensive income	324	4,525		4,849	4,849
Other financial assets measured at amortized cost		0[3]	0	1	250
Total assets	610[4]	4,732	7,247	12,588	
Derivative financial instruments	2	11	281	294	
Total liabilities	2	11	281	294	
Assets held by the unconsolidated structured entities in which UBS had an interest (USD bn)	30[5]	81[6]	158[7]		

1 For the purpose of this disclosure, maximum exposure to loss amounts do not consider the risk-reducing effects of collateral or other credit enhancements. 2 Effective 1 April 2022, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost. Refer to Note 1b for more information. 3 Includes the carrying amount of loan commitments. The maximum exposure to loss for these instruments is equal to the notional amount. 4 As of 31 December 2022, USD 0.1bn of the USD 1.1bn (31 December 2021: USD 0.1bn of the USD 0.6bn) was held in Group Functions – Non-core and Legacy Portfolio. 5 Represents the principal amount outstanding. 6 Represents the market value of total assets. 7 Represents the net asset value of the investment funds sponsored by UBS and the carrying amount of UBS's interests in the investment funds not sponsored by UBS.

The Group retains or purchases interests in unconsolidated SEs in the form of direct investments, financing, guarantees, letters of credit and derivatives, as well as through management contracts. The Group's maximum exposure to loss is generally equal to the carrying amount of the Group's interest in the given SE, with this subject to change over time with market movements. Guarantees, letters of credit and credit derivatives are an exception, with the given contract's notional amount, adjusted for losses already incurred, representing the maximum loss that the Group is exposed to.

The maximum exposure to loss disclosed in the table above does not reflect the Group's risk management activities, including effects from financial instruments that may be used to economically hedge risks inherent in the given unconsolidated SE or risk-reducing effects of collateral or other credit enhancements.

In 2022 and 2021, the Group did not provide support, financial or otherwise, to any unconsolidated SE when not contractually obligated to do so, nor does the Group have any intention to do so in the future.

In 2022 and 2021, income and expenses from interests in unconsolidated SEs primarily resulted from mark-to-market movements recognized in *Other net income from financial instruments measured at fair value through profit or loss*, which were generally hedged with other financial instruments, as well as fee and commission income received from UBS-sponsored funds.

Interests in securitization vehicles

As of 31 December 2022 and 31 December 2021, the Group held interests, both retained and acquired, in various securitization vehicles that relate to financing, underwriting, secondary market and derivative trading activities.

The numbers outlined in the table above may differ from the securitization positions presented in the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors,* for the following reasons: (i) exclusion of synthetic securitizations transacted with entities that are not SEs and transactions in which the Group did not have an interest because it did not absorb any risk; (ii) a different measurement basis in certain cases (e.g., IFRS carrying amount within the previous table compared with net exposure amount at default for Pillar 3 disclosures); and (iii) different classification of vehicles viewed as sponsored by the Group versus sponsored by third parties.

› **Refer to the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors,* for more information**

Interests in client vehicles

Client vehicles are established predominantly for clients to gain exposure to specific assets or risk exposures. Such vehicles may enter into derivative agreements, with UBS or a third party, to align the cash flows of the entity with the investor's intended investment objective, or to introduce other desired risk exposures.

As of 31 December 2022 and 31 December 2021, the Group retained interests in client vehicles sponsored by UBS and third parties that relate to financing, secondary market and derivative trading activities, and to hedge structured product offerings.

Interests in investment funds

Investment funds have a collective investment objective, and are either passively managed, so that any decision-making does not have a substantive effect on variability, or are actively managed and investors or their governing bodies do not have substantive voting or similar rights.

The Group holds interests in a number of investment funds, primarily resulting from seed investments or in order to hedge structured product offerings. In addition to the interests disclosed in the table above, the Group manages the assets of various pooled investment funds and receives fees based, in whole or in part, on the net asset value of the fund and / or the performance of the fund. The specific fee structure is determined based on various market factors and considers the fund's nature and the jurisdiction of incorporation, as well as fee schedules negotiated with clients. These fee contracts represent an interest in the fund, as they align the Group's exposure with investors, providing a variable return based on the performance of the entity. Depending on the structure of the fund, these fees may be collected directly from the fund's assets and / or from the investors. Any amounts due are collected on a regular basis and are generally backed by the fund's assets. Therefore, interest in such funds is not represented by the on-balance sheet fee receivable but rather by the future exposure to variable fees. The total assets of such funds were USD 292bn and USD 370bn as of 31 December 2022 and 31 December 2021, respectively, and have been excluded from the table above. The Group did not have any material exposure to loss from these interests as of 31 December 2022 or as of 31 December 2021.

Note 29 Changes in organization and acquisitions and disposals of subsidiaries and businesses

Disposals of subsidiaries and businesses

Sale of UBS Swiss Financial Advisers AG

In the third quarter of 2022, UBS completed the sale of its wholly owned subsidiary UBS Swiss Financial Advisers AG (SFA) to Vontobel. UBS continues to refer US clients that want to have discretionary portfolio management or investment advisory services booked in Switzerland to Vontobel SFA. Upon completion of the sale, UBS recorded a pre-tax gain of USD 86m in 2022, which was recognized in *Other income*.

Prior to completion of the sale, the assets and liabilities that were subject to the transaction were presented as a disposal group held for sale within *Other non-financial assets* and *Other non-financial liabilities* (31 December 2021: USD 446m and USD 475m, respectively).

Sale of wealth management business in Spain

UBS completed the sale of its domestic wealth management business in Spain to Singular Bank in the third quarter of 2022. The sale included the transition of employees, client relationships, products and services of the wealth management business of UBS in Spain and resulted in a pre-tax gain of USD 133m in 2022, which was recognized in *Other income*.

Prior to completion of the sale, the assets and liabilities that were subject to the transaction were presented as a disposal group held for sale within *Other non-financial assets* and *Other non-financial liabilities* (31 December 2021: USD 647m and USD 823m, respectively).

Sale of US alternative investments administration business

In the fourth quarter of 2022, UBS sold its US alternative investments administration business and recorded a pre-tax gain of USD 41m gain in *Other income*.

Sale of investments in associates and joint ventures

UBS sold its minority investment (49%) in its Japanese real estate joint venture, Mitsubishi Corp.-UBS Realty Inc., in 2022.

› **Refer to Note 28b for more information**

Acquisitions of subsidiaries and businesses

Wealthfront

In August 2022, UBS and Wealthfront mutually agreed to terminate their merger agreement, under which Wealthfront was to be acquired by UBS Americas Inc. In the third quarter of 2022, UBS purchased a USD 69.7m note convertible into Wealthfront shares.

Note 30 Related parties

UBS defines related parties as associates (entities that are significantly influenced by UBS), joint ventures (entities in which UBS shares control with another party), post-employment benefit plans for UBS employees, key management personnel, close family members of key management personnel and entities that are, directly or indirectly, controlled or jointly controlled by key management personnel or their close family members. Key management personnel is defined as members of the Board of Directors (the BoD) and Group Executive Board (the GEB).

a) Remuneration of key management personnel

The Vice Chairman of the BoD has a specific management employment contract and receives pension benefits upon retirement. Total remuneration of the Chairman and the Vice Chairman of the BoD and all GEB members is included in the table below.

Remuneration of key management personnel

USD m, except where indicated	31.12.22	31.12.21	31.12.20
Base salaries and other cash payments[1]	27	31	33
Incentive awards – cash[2]	17	17	18
Annual incentive award under DCCP	25	26	27
Employer's contributions to retirement benefit plans	2	3	3
Benefits in kind, fringe benefits (at market value)	1	1	1
Share-based compensation[3]	45	45	47
Total	118	124	129
Total (CHF m)[4]	114	113	121

1 May include role-based allowances in line with market practice and regulatory requirements. 2 The cash portion may also include blocked shares in line with regulatory requirements. 3 Compensation expense is based on the share price on grant date taking into account performance conditions. Refer to Note 27 for more information. For GEB members, share-based compensation for 2022, 2021 and 2020 was entirely composed of LTIP awards. For the Chairman of the BoD the share-based compensation for 2022, 2021 and 2020 was entirely composed of UBS shares. 4 Swiss franc amounts disclosed represent the respective US dollar amounts translated at the applicable performance award currency exchange rates (2022: USD / CHF 0.96; 2021: USD / CHF 0.92; 2020: USD / CHF 0.94).

The independent members of the BoD, including the Chairman, do not have employment or service contracts with UBS, and thus are not entitled to benefits upon termination of their service on the BoD. Payments to these individuals for their services as independent members of the BoD amounted to USD 11.1m (CHF 10.7m) in 2022, USD 7.5m (CHF 6.9m) in 2021 and USD 7.0m (CHF 6.6m) in 2020.

b) Equity holdings of key management personnel

Equity holdings of key management personnel[1]

	31.12.22	31.12.21
Number of UBS Group AG shares held by members of the BoD, GEB and parties closely linked to them[2]	3,009,686	4,597,006

1 No options were held in 2022 and 2021 by non-independent members of the BoD and any GEB member or any of its related parties. 2 Excludes shares granted under variable compensation plans with forfeiture provisions.

Of the share totals above, no shares were held by close family members of key management personnel on 31 December 2022 and 31 December 2021. No shares were held by entities that are directly or indirectly controlled or jointly controlled by key management personnel or their close family members on 31 December 2022 and 31 December 2021. As of 31 December 2022, no member of the BoD or GEB was the beneficial owner of more than 1% of the shares in UBS Group AG.

c) Loans, advances and mortgages to key management personnel

The non-independent members of the BoD and GEB members are granted loans, fixed advances and mortgages in the ordinary course of business on substantially the same terms and conditions that are available to other employees, including interest rates and collateral, and neither involve more than the normal risk of collectability nor contain any other unfavorable features for the firm. Independent BoD members are granted loans and mortgages in the ordinary course of business at general market conditions.

Movements in the loan, advances and mortgage balances are as follows.

Loans, advances and mortgages to key management personnel[1]

USD m, except where indicated	2022	2021
Balance at the beginning of the year	34	38
Additions	8	11
Reductions	(9)	(15)
Balance at the end of the year[2]	**33**	**34**
Balance at the end of the year (CHF m)[2, 3]	**31**	**31**

1 All loans are secured loans. 2 There were no unused uncommitted credit facilities as of 31 December 2022 and 31 December 2021. 3 Swiss franc amounts disclosed represent the respective US dollar amounts translated at the relevant year-end closing exchange rate.

d) Other related-party transactions with entities controlled by key management personnel

In 2022 and 2021, UBS did not enter into transactions with entities that are directly or indirectly controlled or jointly controlled by UBS's key management personnel or their close family members and as of 31 December 2022, 31 December 2021 and 31 December 2020, there were no outstanding balances related to such transactions. Furthermore, in 2022 and 2021, entities controlled by key management personnel did not sell any goods or provide any services to UBS, and therefore did not receive any fees from UBS. UBS also did not provide services to such entities in 2022 and 2021, and therefore also received no fees.

e) Transactions with associates and joint ventures

Loans to and outstanding receivables from associates and joint ventures

USD m	2022	2021
Carrying amount at the beginning of the year	251	630
Additions	402	133
Reductions	(438)	(497)
Foreign currency translation	1	(14)
Carrying amount at the end of the year	217	251
of which: unsecured loans and receivables	*209*	*243*

Other transactions with associates and joint ventures

	As of or for the year ended	
USD m	31.12.22	31.12.21
Payments to associates and joint ventures for goods and services received	138	157
Fees received for services provided to associates and joint ventures	4	104
Liabilities to associates and joint ventures	90	127
Commitments and contingent liabilities to associates and joint ventures	7	7

› **Refer to Note 28 for an overview of investments in associates and joint ventures**

Note 31 Invested assets and net new money

The following disclosures provide a breakdown of UBS's invested assets and a presentation of their development, including net new money, as required by the Swiss Financial Market Supervisory Authority (FINMA).

Invested assets

Invested assets consist of all client assets managed by or deposited with UBS for investment purposes. Invested assets include managed fund assets, managed institutional assets, discretionary and advisory wealth management portfolios, fiduciary deposits, time deposits, savings accounts, and wealth management securities or brokerage accounts. All assets held for purely transactional purposes and custody-only assets, including corporate client assets held for cash management and transactional purposes, are excluded from invested assets, as the Group only administers the assets and does not offer advice on how they should be invested. Also excluded are non-bankable assets (e.g., art collections) and deposits from third-party banks for funding or trading purposes.

Note 31 Invested assets and net new money (continued)

Discretionary assets are defined as client assets that UBS decides how to invest. Other invested assets are those where the client ultimately decides how the assets are invested. When a single product is created in one business division and sold in another, it is counted in both the business division managing the investment and the one distributing it. This results in double counting within UBS's total invested assets and net new money, as both business divisions are independently providing a service to their respective clients, and both add value and generate revenue.

Net new money

Net new money in a reporting period is the amount of invested assets entrusted to UBS by new and existing clients, less those withdrawn by existing clients and clients who terminated relationships with UBS.

Net new money is calculated using the direct method, under which inflows and outflows to / from invested assets are determined at the client level, based on transactions. Interest and dividend income from invested assets are not counted as net new money inflows. Market and currency movements, as well as fees, commissions and interest on loans charged, are excluded from net new money, as are effects resulting from any acquisition or divestment of a UBS subsidiary or business. Reclassifications between invested assets and custody-only assets as a result of a change in service level delivered are generally treated as net new money flows. However, where the change in service level directly results from an externally imposed regulation or a strategic decision by UBS to exit a market or specific service offering, the one-time net effect is reported as *Other effects*.

The Investment Bank does not track invested assets and net new money. However, when a client is transferred from the Investment Bank to another business division, this may produce net new money even though the client's assets were already with UBS.

Invested assets and net new money

	As of or for the year ended	
USD bn	31.12.22	31.12.21
Fund assets managed by UBS	390	419
Discretionary assets	1,440	1,705
Other invested assets	2,127	2,472
Total invested assets[1]	3,957	4,596
of which: double counts	*340*	*356*
Net new money[1]	68	159

1 Includes double counts.

Development of invested assets

USD bn	2022	2021
Total invested assets at the beginning of the year[1]	4,596	4,187
Net new money	68	159
Market movements[2]	(595)	339
Foreign currency translation	(72)	(65)
Other effects	(40)	(24)
of which: acquisitions / (divestments)	*(19)*	*(5)*
Total invested assets at the end of the year[1]	3,957	4,596

1 Includes double counts. 2 Includes interest and dividend income.

Note 32 Currency translation rates

The following table shows the rates of the main currencies used to translate the financial information of UBS's operations with a functional currency other than the US dollar into US dollars.

	Closing exchange rate		Average rate[1]		
	As of		For the year ended		
	31.12.22	31.12.21	31.12.22	31.12.21	31.12.20
1 CHF	1.08	1.10	1.05	1.09	1.07
1 EUR	1.07	1.14	1.05	1.18	1.15
1 GBP	1.21	1.35	1.23	1.37	1.29
100 JPY	0.76	0.87	0.76	0.91	0.94

1 Monthly income statement items of operations with a functional currency other than the US dollar are translated into US dollars using month-end rates. Disclosed average rates for a year represent an average of twelve month-end rates, weighted according to the income and expense volumes of all operations of the Group with the same functional currency for each month. Weighted average rates for individual business divisions may deviate from the weighted average rates for the Group.

Note 33 Main differences between IFRS and Swiss GAAP

The consolidated financial statements of UBS Group AG are prepared in accordance with International Financial Reporting Standards (IFRS). The Swiss Financial Market Supervisory Authority (FINMA) requires financial groups presenting financial statements under IFRS to provide a narrative explanation of the main differences between IFRS and Swiss generally accepted accounting principles (GAAP) (the FINMA Accounting Ordinance, FINMA Circular 2020/1 "Accounting – banks" and the Banking Ordinance (the BO)). Included in this Note are the significant differences in the recognition and measurement between IFRS and the provisions of the BO and the guidelines of FINMA governing true and fair view financial statement reporting pursuant to Art. 25 to Art. 42 of the BO.

1. Consolidation

Under IFRS, all entities that are controlled by the holding entity are consolidated. Under Swiss GAAP controlled entities deemed immaterial to a group or those held only temporarily are exempt from consolidation, but instead are recorded as participations accounted for under the equity method of accounting or as financial investments measured at the lower of cost or market value.

2. Classification and measurement of financial assets

Under IFRS, debt instruments are measured at amortized cost, fair value through other comprehensive income (FVOCI) or fair value through profit or loss (FVTPL), depending on the nature of the business model within which the particular asset is held and the characteristics of the contractual cash flows of the asset. Equity instruments are accounted for at FVTPL by UBS. Under Swiss GAAP, trading assets and derivatives are measured at FVTPL, in line with IFRS. However, non-trading debt instruments are generally measured at amortized cost, even when the assets are managed on a fair value basis. In addition, the measurement of financial assets in the form of securities depends on the nature of the asset: debt instruments not held to maturity, i.e., instruments available for sale, and equity instruments with no permanent holding intent, are classified as *Financial investments* and measured at the lower of (amortized) cost or market value. Market value adjustments up to the original cost amount and realized gains or losses upon disposal of the investment are recorded in the income statement as *Other income from ordinary activities.* Equity instruments with a permanent holding intent are classified as participations in *Non-consolidated investments in subsidiaries and other participations* and are measured at cost less impairment. Impairment losses are recorded in the income statement as *Impairment of investments in non-consolidated subsidiaries and other participations.* Reversals of impairments up to the original cost amount and realized gains or losses upon disposal of the investment are recorded as *Extraordinary income / Extraordinary expenses*.

3. Fair value option applied to financial liabilities

Under IFRS, UBS applies the fair value option to certain financial liabilities not held for trading. Instruments for which the fair value option is applied are accounted for at FVTPL. The amount of change in the fair value attributable to changes in UBS's own credit is presented in *Other comprehensive income* directly within *Retained earnings*. The fair value option is applied primarily to issued structured debt instruments, certain non-structured debt instruments, certain payables under repurchase agreements and cash collateral on securities lending agreements, amounts due under unit-linked investment contracts, and brokerage payables.

Under Swiss GAAP, the fair value option can only be applied to structured debt instruments consisting of a debt host contract and one or more embedded derivatives that do not relate to own equity. Furthermore, unrealized changes in fair value attributable to changes in UBS's own credit are not recognized, whereas realized own credit is recognized in *Net trading income*.

4. Allowances and provisions for credit losses

Swiss GAAP permit use of IFRS for accounting for allowances and provisions for credit losses based on an expected credit loss (ECL) model. UBS has chosen to apply the IFRS 9 ECL approach to those exposures that are in the ECL scope of both frameworks, IFRS and Swiss GAAP.

For the small residual exposures within the scope of Swiss GAAP ECL requirements, which are not subject to ECL under IFRS due to classification differences, UBS applies alternative approaches.

- For exposures for which Pillar 1 internal ratings-based models are applied to measure credit risk, ECL is determined by the regulatory expected loss (EL), with an add-on for scaling up to the residual maturity of exposures maturing beyond the next 12 months, as appropriate. For detailed information on regulatory EL, refer to the "Risk management and control" section of this report.
- For exposures for which the Pillar 1 standardized approach is used to measure credit risk, ECL is determined using a portfolio approach that derives a conservative probability of default (PD) and a conservative loss given default (LGD) for the entire portfolio.

5. Hedge accounting

Under IFRS, when cash flow hedge accounting is applied, the fair value gain or loss on the effective portion of a derivative designated as a cash flow hedge is recognized initially in equity and reclassified to the income statement when certain conditions are met. When fair value hedge accounting is applied, the fair value change of the hedged item attributable to the hedged risk is reflected in the measurement of the hedged item and is recognized in the income statement along with the change in the fair value of the hedging derivative. Under Swiss GAAP, the effective portion of the fair value change of a derivative instrument designated as a cash flow or as a fair value hedge is deferred on the balance sheet as *Other assets* or *Other liabilities*. The carrying amount of the hedged item designated in fair value hedges is not adjusted for fair value changes attributable to the hedged risk.

6. Goodwill and intangible assets

Under IFRS, goodwill acquired in a business combination is not amortized but tested annually for impairment. Intangible assets with an indefinite useful life are also not amortized but tested annually for impairment. Under Swiss GAAP, goodwill and intangible assets with indefinite useful lives are amortized over a period not exceeding five years, unless a longer useful life, which may not exceed 10 years, can be justified. In addition, these assets are tested annually for impairment.

7. Post-employment benefit plans

Swiss GAAP permit the use of IFRS or Swiss accounting standards for post-employment benefit plans, with the election made on a plan-by-plan basis.

UBS has elected to apply IFRS (IAS 19) for the non-Swiss defined benefit plans in the UBS AG standalone financial statements and Swiss GAAP (FER 16) for the Swiss pension plan in the UBS AG and the UBS Switzerland AG standalone financial statements. The requirements of Swiss GAAP are better aligned with the specific nature of Swiss pension plans, which are hybrid in that they combine elements of defined contribution and defined benefit plans, but are treated as defined benefit plans under IFRS. Key differences between Swiss GAAP and IFRS include the treatment of dynamic elements, such as future salary increases and future interest credits on retirement savings, which are not considered under the static method used in accordance with Swiss GAAP. Also, the discount rate used to determine the defined benefit obligation in accordance with IFRS is based on the yield of high-quality corporate bonds of the market in the respective pension plan country. The discount rate used in accordance with Swiss GAAP (i.e., the technical interest rate) is determined by the Pension Foundation Board based on the expected returns of the Board’s investment strategy.

For defined benefit plans, IFRS require the full defined benefit obligation net of the plan assets to be recorded on the balance sheet subject to the asset ceiling rules, with changes resulting from remeasurements recognized directly in equity. However, for non-Swiss defined benefit plans for which IFRS accounting is elected, changes due to remeasurements are recognized in the income statement of UBS AG standalone under Swiss GAAP.

Swiss GAAP require employer contributions to the pension fund to be recognized as personnel expenses in the income statement. Swiss GAAP also require an assessment of whether, based on the pension fund’s financial statements prepared in accordance with Swiss accounting standards (FER 26), an economic benefit to, or obligation of, the employer arises from the pension fund that is recognized in the balance sheet when conditions are met. Conditions for recording a pension asset or liability would be met if, for example, an employer contribution reserve is available or the employer is required to contribute to the reduction of a pension deficit (on an FER 26 basis).

8. Leasing

Under IFRS, a single lease accounting model applies that requires UBS to record a right-of-use (RoU) asset and a corresponding lease liability on the balance sheet when UBS is a lessee in a lease arrangement. The RoU asset and the lease liability are recognized when UBS acquires control of the physical use of the asset. The lease liability is measured based on the present value of the lease payments over the lease term, discounted using UBS’s unsecured borrowing rate. The RoU asset is recorded at an amount equal to the lease liability but is adjusted for rent prepayments, initial direct costs, any costs to refurbish the leased asset and / or lease incentives received. The RoU asset is depreciated over the shorter of the lease term or the useful life of the underlying asset.

Under Swiss GAAP, leases that transfer substantially all the risks and rewards, but not necessarily legal title in the underlying assets, are classified as finance leases. All other leases are classified as operating leases. Whereas finance leases are recognized on the balance sheet and measured in line with IFRS, operating leases are not recognized on the balance sheet, with payments recognized as *General and administrative expenses* on a straight-line basis over the lease term, which commences with control of the physical use of the asset. Lease incentives are treated as a reduction of rental expense and recognized on a consistent basis over the lease term.

9. Netting of derivative assets and liabilities

Under IFRS, derivative assets, derivative liabilities and related cash collateral not settled to market are reported on a gross basis unless the restrictive IFRS netting requirements are met: (i) existence of master netting agreements and related collateral arrangements that are unconditional and legally enforceable, in both the normal course of business and the event of default, bankruptcy or insolvency of UBS and its counterparties; and (ii) UBS's intention to either settle on a net basis or to realize the asset and settle the liability simultaneously. Under Swiss GAAP, derivative assets, derivative liabilities and related cash collateral not settled to market are generally reported on a net basis, provided the master netting and the related collateral agreements are legally enforceable in the event of default, bankruptcy or insolvency of UBS's counterparties.

10. Negative interest

Under IFRS, negative interest income arising on a financial asset does not meet the definition of interest income and, therefore, negative interest on financial assets and negative interest on financial liabilities are presented within interest expense and interest income, respectively. Under Swiss GAAP, negative interest on financial assets is presented within interest income and negative interest on financial liabilities is presented within interest expense.

11. Extraordinary income and expense

Certain non-recurring and non-operating income and expense items, such as realized gains or losses from the disposal of participations, fixed and intangible assets, and reversals of impairments of participations and fixed assets, are classified as extraordinary items under Swiss GAAP. This distinction is not available under IFRS. ▲

UBS AG consolidated financial information

This section contains a comparison of selected financial and capital information between UBS Group AG consolidated and UBS AG consolidated. Information for UBS AG consolidated does not differ materially from UBS Group AG on a consolidated basis.

Comparison between UBS Group AG consolidated and UBS AG consolidated

The accounting policies applied under International Financial Reporting Standards (IFRS) to both the UBS Group AG and the UBS AG consolidated financial statements are identical. However, there are certain scope and presentation differences as noted below:

- Assets, liabilities, revenues, operating expenses and tax expenses / (benefits) relating to UBS Group AG and its directly held subsidiaries, including UBS Business Solutions AG, are reflected in the consolidated financial statements of UBS Group AG but not of UBS AG. UBS AG's assets, liabilities, revenues and operating expenses related to transactions with UBS Group AG and its directly held subsidiaries, including UBS Business Solutions AG and other shared services subsidiaries, are not subject to elimination in the UBS AG consolidated financial statements, but are eliminated in the UBS Group AG consolidated financial statements.
- Differences in net profit between UBS Group AG consolidated and UBS AG consolidated mainly arise as UBS Business Solutions AG and other shared services subsidiaries of UBS Group AG charge other legal entities within the UBS AG consolidation scope for services provided, including a markup on costs incurred. In addition, and to a lesser extent, differences arise as a result of certain compensation-related matters, including pensions.
- The equity of UBS Group AG consolidated was USD 0.3bn higher than the equity of UBS AG consolidated as of 31 December 2022. This difference was mainly driven by higher dividends paid by UBS AG to UBS Group AG compared with the dividend distributions of UBS Group AG, as well as higher retained earnings in the UBS Group AG consolidated financial statements, largely related to the aforementioned markup charged by shared services subsidiaries of UBS Group AG to other legal entities in the UBS AG scope of consolidation. In addition, UBS Group AG is the grantor of the majority of the compensation plans of the Group and recognizes share premium for equity-settled awards granted. These effects were largely offset by treasury shares acquired as part of our share repurchase programs and those held to hedge share delivery obligations associated with Group compensation plans, as well as additional share premium recognized at the UBS AG consolidated level related to the establishment of UBS Group AG and UBS Business Solutions AG, a wholly owned subsidiary of UBS Group AG.
- The going concern capital of UBS Group AG consolidated was USD 3.6bn higher than the going concern capital of UBS AG consolidated as of 31 December 2022, reflecting higher common equity tier 1 (CET1) capital of USD 2.5bn and going concern loss-absorbing additional tier 1 (AT1) capital of USD 1.0bn.
- The CET1 capital of UBS Group AG consolidated was USD 2.5bn higher than that of UBS AG consolidated as of 31 December 2022, primarily due to lower UBS Group AG accruals for dividends to shareholders and USD 0.3bn higher UBS Group AG consolidated IFRS equity. The aforementioned factors were partly offset by compensation-related regulatory capital accruals at the UBS Group AG level.
- The going concern loss-absorbing AT1 capital of UBS Group AG consolidated was USD 1.0bn higher than that of UBS AG consolidated as of 31 December 2022, mainly reflecting Deferred Contingent Capital Plan awards granted at the Group level to eligible employees for the performance years 2017 to 2021, partly offset by four loss-absorbing AT1 capital instruments on-lent by UBS Group AG to UBS AG.

UBS AG consolidated key figures

	As of or for the year ended		
USD m, except where indicated	31.12.22	31.12.21	31.12.20
Results			
Total revenues	34,915	35,828	33,474
Credit loss expense / (release)	29	(148)	695
Operating expenses	25,927	27,012	25,081
Operating profit / (loss) before tax	8,960	8,964	7,699
Net profit / (loss) attributable to shareholders	7,084	7,032	6,196
Profitability and growth[1]			
Return on equity (%)	12.6	12.3	10.9
Return on tangible equity (%)	14.2	13.9	12.4
Return on common equity tier 1 capital (%)	16.8	17.6	16.6
Return on leverage ratio denominator, gross (%)[2]	3.4	3.4	3.4
Cost / income ratio (%)	74.3	75.4	74.9
Net profit growth (%)	0.7	13.5	56.3
Resources[1]			
Total assets	1,105,436	1,116,145	1,125,327
Equity attributable to shareholders	56,598	58,102	57,754
Common equity tier 1 capital[3]	42,929	41,594	38,181
Risk-weighted assets[3]	317,823	299,005	286,743
Common equity tier 1 capital ratio (%)[3]	13.5	13.9	13.3
Going concern capital ratio (%)[3]	17.2	18.5	18.3
Total loss-absorbing capacity ratio (%)[3]	32.0	33.3	34.2
Leverage ratio denominator[2,3]	1,029,561	1,067,679	1,036,771
Common equity tier 1 leverage ratio (%)[2,3]	4.17	3.90	3.68
Other			
Invested assets (USD bn)[4]	3,957	4,596	4,187
Personnel (full-time equivalents)	47,628	47,067	47,546

1 Refer to the "Targets, aspirations and capital guidance" section of this report for more information about our performance measurement. 2 Leverage ratio denominators and leverage ratios for year 2020 do not reflect the effects of the temporary exemption that applied from 25 March 2020 until 1 January 2021 and was granted by FINMA in connection with COVID-19. Refer to the "Regulatory and legal developments" section of our Annual Report 2020 for more information. 3 Based on the Swiss systemically relevant bank framework as of 1 January 2020. Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information. 4 Consists of invested assets for Global Wealth Management, Asset Management and Personal & Corporate Banking. Refer to "Note 31 Invested assets and net new money" in the "Consolidated financial statements" section of this report for more information.

Comparison between UBS Group AG consolidated and UBS AG consolidated

	As of or for the year ended 31.12.22			As of or for the year ended 31.12.21		
USD m, except where indicated	UBS Group AG consolidated	UBS AG consolidated	Difference (absolute)	UBS Group AG consolidated	UBS AG consolidated	Difference (absolute)
Income statement						
Total revenues	34,563	34,915	(353)	35,393	35,828	(434)
Credit loss expense / (release)	29	29	0	(148)	(148)	0
Operating expenses	24,930	25,927	(997)	26,058	27,012	(955)
Operating profit / (loss) before tax	9,604	8,960	644	9,484	8,964	520
of which: Global Wealth Management	*4,977*	*4,894*	*83*	*4,783*	*4,706*	*77*
of which: Personal & Corporate Banking	*1,812*	*1,790*	*21*	*1,731*	*1,726*	*4*
of which: Asset Management	*1,397*	*1,396*	*1*	*1,030*	*1,023*	*7*
of which: Investment Bank	*1,897*	*1,839*	*58*	*2,630*	*2,592*	*38*
of which: Group Functions	*(480)*	*(960)*	*480*	*(689)*	*(1,083)*	*394*
Net profit / (loss)	7,661	7,116	546	7,486	7,061	425
of which: net profit / (loss) attributable to shareholders	*7,630*	*7,084*	*546*	*7,457*	*7,032*	*425*
of which: net profit / (loss) attributable to non-controlling interests	*32*	*32*	*0*	*29*	*29*	*0*
Statement of comprehensive income						
Other comprehensive income	(4,494)	(4,396)	(98)	(2,367)	(2,235)	(131)
of which: attributable to shareholders	*(4,481)*	*(4,383)*	*(98)*	*(2,351)*	*(2,220)*	*(131)*
of which: attributable to non-controlling interests	*(14)*	*(14)*	*0*	*(16)*	*(16)*	*0*
Total comprehensive income	3,167	2,719	448	5,119	4,826	293
of which: attributable to shareholders	*3,149*	*2,701*	*448*	*5,106*	*4,813*	*293*
of which: attributable to non-controlling interests	*18*	*18*	*0*	*13*	*13*	*0*
Balance sheet						
Total assets	1,104,364	1,105,436	(1,072)	1,117,182	1,116,145	1,037
Total liabilities	1,047,146	1,048,496	(1,349)	1,056,180	1,057,702	(1,522)
Total equity	57,218	56,940	278	61,002	58,442	2,559
of which: equity attributable to shareholders	*56,876*	*56,598*	*278*	*60,662*	*58,102*	*2,559*
of which: equity attributable to non-controlling interests	*342*	*342*	*0*	*340*	*340*	*0*
Capital information						
Common equity tier 1 capital	45,457	42,929	2,528	45,281	41,594	3,687
Going concern capital	58,321	54,770	3,551	60,488	55,434	5,054
Risk-weighted assets	319,585	317,823	1,762	302,209	299,005	3,204
Common equity tier 1 capital ratio (%)	14.2	13.5	0.7	15.0	13.9	1.1
Going concern capital ratio (%)	18.2	17.2	1.0	20.0	18.5	1.5
Total loss-absorbing capacity ratio (%)	33.0	32.0	0.9	34.7	33.3	1.3
Leverage ratio denominator	1,028,461	1,029,561	(1,100)	1,068,862	1,067,679	1,183
Common equity tier 1 leverage ratio (%)	4.42	4.17	0.25	4.24	3.90	0.34

Management's report on internal control over financial reporting

Management's responsibility for internal control over financial reporting

The Board of Directors and management of UBS AG are responsible for establishing and maintaining adequate internal control over financial reporting. UBS AG's internal control over financial reporting is designed to provide reasonable assurance regarding the preparation and fair presentation of published financial statements in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

UBS AG's internal control over financial reporting includes those policies and procedures that:

– pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of assets;
– provide reasonable assurance that transactions are recorded as necessary to permit preparation and fair presentation of financial statements, and that receipts and expenditures of the company are being made only in accordance with authorizations of UBS AG management; and
– provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management's assessment of internal control over financial reporting as of 31 December 2022

UBS AG management has assessed the effectiveness of UBS AG's internal control over financial reporting as of 31 December 2022 based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control – Integrated Framework (2013 Framework). Based on this assessment, management believes that, as of 31 December 2022, UBS AG's internal control over financial reporting was effective.

The effectiveness of UBS AG's internal control over financial reporting as of 31 December 2022 has been audited by Ernst & Young Ltd, UBS AG's independent registered public accounting firm, as stated in their ***Report of the independent registered public accounting firm on internal control over financial reporting,*** which expresses an unqualified opinion on the effectiveness of UBS AG's internal control over financial reporting as of 31 December 2022.

Ernst & Young Ltd
Aeschengraben 27
P.O. Box
4002 Basel

Phone: +41 58 286 86 86
www.ey.com/ch

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of UBS AG

Opinion on Internal Control over Financial Reporting

We have audited UBS AG and subsidiaries' internal control over financial reporting as of 31 December 2022, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, UBS AG and subsidiaries ("the Group") maintained, in all material respects, effective internal control over financial reporting as of 31 December 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Group as of 31 December 2022 and 2021, the related consolidated income statements, statements of comprehensive income, statements of changes in equity and statements of cash flows for each of the three years in the period ended 31 December 2022, and the related notes and our report dated 3 March 2023 expressed an unqualified opinion thereon.

Basis for Opinion

The Group's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Group's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Group in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Ernst & Young Ltd

Ernst & Young Ltd
Basel, 3 March 2023

Building a better working world

Ernst & Young Ltd
Aeschengraben 27
P.O. Box
4002 Basel

Phone: +41 58 286 86 86
www.ey.com/ch

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of UBS AG

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of UBS AG and subsidiaries ("the Group") as of 31 December 2022 and 2021, the related consolidated income statements, statements of comprehensive income, statements of changes in equity and statements of cash flows for each of the three years in the period ended 31 December 2022, and the related notes to the consolidated financial statements, including the information identified as "audited" as described in Note 1 (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Group at 31 December 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended 31 December 2022, in conformity with the International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Group's internal control over financial reporting as of 31 December 2022, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated 3 March 2023 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Group's Board of Directors. Our responsibility is to express an opinion on the Group's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Group in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Building a better working world

Valuation of complex or illiquid instruments at fair value

Description of the Matter	At 31 December 2022, as explained in Notes 1 and 20 to the consolidated financial statements, the Group held financial assets and liabilities measured at fair value of USD 341,858 million and USD 333,382 million, including financial instruments that did not trade in active markets. These instruments are reported within the following accounts: financial assets and liabilities at fair value held for trading, derivative financial instruments, financial assets at fair value not held for trading, debt issued designated at fair value, and other financial liabilities designated at fair value. In determining the fair value of these financial instruments, the Group used valuation techniques, modelling assumptions, and estimates of unobservable market inputs which required significant management judgment. Auditing management's judgments and assumptions used in the estimation of the fair value of these instruments was complex due to the highly judgmental nature of valuation techniques, key modelling assumptions and significant unobservable inputs. Auditing the valuation of complex or illiquid instruments at fair value included consideration of any incremental risks arising from the impact of current macroeconomic influences on valuation techniques and inputs, such as geopolitics, inflation, and the ongoing COVID-19 pandemic. The valuation techniques that required especially complex judgement were comprised of discounted cash flow and earnings-based valuation techniques. Highly judgmental modelling assumptions result from a range of different models or model calibrations used by market participants. Valuation inputs which were particularly complex and subjective included those with a limited degree of observability and the associated extrapolation, interpolation or calibration of curves using limited and proxy data points. Examples of such inputs included unobservable credit spreads and bond prices, volatility, and correlation.
How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design and tested the operating effectiveness of the controls over management's financial instruments valuation processes, including controls over market data inputs, model and methodology governance, and valuation adjustments. We tested the valuation techniques, models and methodologies, and the inputs used in those models, as outlined above, by performing an independent revaluation of certain complex or illiquid financial assets and liabilities with the support of specialists. We used independent models and inputs, and compared inputs to available market data among other procedures. We also independently challenged key judgments in relation to a sample of fair value adjustments. We also assessed management's disclosures regarding fair value measurement (within Notes 1 and 20 to the consolidated financial statements).

Recognition of deferred tax assets

Description of the Matter	At 31 December 2022, the Group's deferred tax assets ("DTA") were USD 9,354 million (see Note 8 to the consolidated financial statements). DTAs are recognized to the extent it is probable that taxable profits will be available, against which, the applicable deductible temporary differences or the carryforward of unused tax losses within the loss carryforward period can be utilized. There is significant judgment exercised when estimating future taxable income that is not based on the reversal of taxable temporary differences. Management's estimate of future taxable profits is based on its strategic plan that is sensitive to the assumptions made in estimating future taxable income. Auditing management's assessment of the recognition of the Group's DTAs was complex due to the highly judgmental nature of estimating future taxable profits over the life of underlying tax loss carryforwards. Estimating future profitability is inherently subjective as it is sensitive to future economic, market and other conditions, which are difficult to predict, such as the impact of geopolitics, inflation, interest rates, and the ongoing COVID-19 pandemic. Specifically, some of the more subjective key macro-economic assumptions used included gross domestic product growth rates, equity market performance, and interest rate expectations.
How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design, and tested the operating effectiveness of management's controls over DTA valuation, which included the assumptions used in developing the strategic plans and estimating future taxable income. We assessed the completeness and accuracy of the data used for the estimations of future taxable income. This included recalculating the outputs of models applied to the recognition process for DTAs. We involved specialists to assist in assessing the key economic assumptions embedded in the strategic plans. We compared key assumptions used to forecast future taxable income to externally available historical and prospective data and assumptions, and assessed the sensitivity of the outcomes using reasonably possible changes in assumptions. We also assessed management's disclosure regarding recognized and unrecognized deferred tax assets (within Note 8 to the consolidated financial statements).

Expected credit losses

Description of the Matter	At 31 December 2022, the Group's allowances and provisions for expected credit losses ("ECL") were USD 1,091 million. As explained in Notes 1, 9 and 19 to the consolidated financial statements, ECL is recognized for financial assets measured at amortized cost, financial assets measured at fair value through other comprehensive income, fee and lease receivables, financial guarantees and irrevocable loan commitments. ECL is also recognized on the undrawn portion of revolving revocable credit lines, which include the Group's credit card limits and master credit facilities. The allowances and provisions for ECL consists of exposures that are in default which are individually evaluated for impairment (stage 3), as well

as losses inherent in the loan portfolio that are not specifically identified (stage 1 and stage 2). Management's ECL estimates represent the difference between contractual cash flows and those the Group expects to receive, discounted at the effective interest rate. The method used to calculate ECL is based on a combination of the following principal factors: probability of default ("PD"), loss given default ("LGD") and exposure at default ("EAD").

Auditing management's estimate of the allowances and provisions for ECL was complex due to the highly judgmental nature of forward-looking economic scenarios that form the basis of the ECL calculation, their probability weightings, and the credit risk models used to estimate stage 1 and stage 2 ECL. The geopolitical tensions and macroeconomic developments during 2022, such as the Russian invasion into Ukraine, US/China developments, inflation, including emerging stagflation risks and monetary policy challenges, and continued restrictions in certain locations due to the ongoing COVID-19 pandemic contribute to further uncertainty, and as a consequence additional complexity in estimating ECL. As a result, the ECL estimation requires higher management judgement, specifically within the following two areas: (i) scenario selection, including assumptions about the scenario severity, the possible geopolitical developments and macroeconomic and market developments and the number of scenarios necessary to sufficiently cover the bandwidth of potential outcomes, as well as related scenario weights and post-model adjustments; and, (ii) credit risk models, since the output from historic data based models may not be indicative of current or future conditions.

Additionally, auditing the measurement of individual ECL for stage 3 was complex due to the high degree of judgment involved in management's process for estimating ECL based on assumptions. These assumptions take into account expected future cash flows from collateral and other credit enhancements or expected payouts from bankruptcy proceedings for unsecured claims and, where applicable, time to realization of collateral and the seniority of claims.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of management's controls over the ECL estimate, including management's choice of forward-looking economic scenarios used to measure ECL and the probability weighting assigned to such scenarios. We evaluated management's methodologies and governance controls for developing and monitoring the economic scenarios used and the probability weightings assigned to them, and related post-model adjustment. Supported by specialists, we assessed the key macroeconomic variables used in the forward-looking scenarios, such as real gross domestic product growth, unemployment rate, interest rates and house price indices, and evaluated the modelled correlation and translation of those macroeconomic factors to the ECL estimate. We further assessed the appropriateness of the post-model adjustments by considering management's governance process, assumptions used and sensitivity analysis.

We also obtained an understanding, evaluated the design and tested the operating effectiveness of controls over credit risk models used in the ECL estimate, including controls over the completeness and accuracy of model input data, calculation logic, and output data used in the overall ECL calculation. With the support of specialists, on a sample basis, we performed an evaluation of management's models and tested the model outcomes by inspecting model documentation, reperforming model calculations, and comparing data used as inputs to management's forecast to external sources, among other procedures.

For the measurement of stage 3, we obtained an understanding, evaluated the design and tested the operating effectiveness of controls over management's process, including an evaluation of the assumptions used by management regarding the future cash flows from debtors' continuing operations and/or the liquidation of collateral. Supported by specialists in certain areas, we additionally tested collateral valuation, cash flow assumptions and exit strategies by performing inquiries of management, inspecting underlying documents, such as loan contracts, financial statements, covenants, budgets and business plans, and by re-performing discounted cash flow calculations among other procedures, on a sample basis.

We also assessed management's disclosures regarding financial assets at amortized cost and other positions in scope of expected credit loss measurement (within Notes 1, 9 and 19 to the consolidated financial statements).

Ernst & Young Ltd

Ernst & Young Ltd

We have served as the Group's auditor since 1998.

Basel, Switzerland

3 March 2023

Ernst & Young Ltd
Aeschengraben 27
P.O. Box
CH-4002 Basel

Phone: +41 58 286 86 86
www.ey.com/ch

To the General Meeting of

UBS AG, Zurich & Basel

Basel, 3 March 2023

Statutory auditor's report on the audit of the consolidated financial statements

Opinion

We have audited the consolidated financial statements of UBS AG and its subsidiaries ("the Group"), which comprise the consolidated balance sheets as of 31 December 2022 and 31 December 2021, and the consolidated income statements, statements of comprehensive income, statements of changes in equity and statements of cash flows for each of the three years in the period ended 31 December 2022, and the related notes to the consolidated financial statements, including the information identified as "audited" as described in Note 1 (collectively referred to as the "consolidated financial statements").

In our opinion, the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2022 and 31 December 2021, and the consolidated financial performance and its consolidated cash flows for each of the three years in the period ended 31 December 2022 in accordance with International Financial Reporting Standards (IFRS) and comply with Swiss law.

Basis for opinion

We conducted our audit in accordance with Swiss law, International Standards on Auditing (ISAs) and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report.

We are independent of the Group in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession, as well as the International Code of Ethics for Professional Accountants (including International Independence Standards) of the International Ethics Standards Board for Accountants (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

Valuation of complex or illiquid instruments at fair value

Area of focus	At 31 December 2022, as explained in Notes 1 and 20 to the consolidated financial statements, the Group held financial assets and liabilities measured at fair value of USD 341,858 million and USD 333,382 million, including financial instruments that did not trade in active markets. These instruments are reported within the following accounts: financial assets and liabilities at fair value held for trading, derivative financial instruments, financial assets at fair value not held for trading, debt issued designated at fair value, and other financial liabilities designated at fair value. In determining the fair value of these financial instruments, the Group used valuation techniques, modelling assumptions, and estimates of unobservable market inputs which required significant management judgment. Auditing management's judgments and assumptions used in the estimation of the fair value of these instruments was complex due to the highly judgmental nature of valuation techniques, key modelling assumptions and significant unobservable inputs. Auditing the valuation of complex or illiquid instruments at fair value included consideration of any incremental risks arising from the impact of current macroeconomic influences on valuation techniques and inputs, such as geopolitics, inflation, and the ongoing COVID-19 pandemic. The valuation techniques that required especially complex judgement were comprised of discounted cash flow and earnings-based valuation techniques. Highly judgmental modelling assumptions result from a range of different models or model calibrations used by market participants. Valuation inputs which were particularly complex and subjective included those with a limited degree of observability and the associated extrapolation, interpolation or calibration of curves using limited and proxy data points. Examples of such inputs included unobservable credit spreads and bond prices, volatility, and correlation.
Our audit response	We obtained an understanding, evaluated the design and tested the operating effectiveness of the controls over management's financial instruments valuation processes, including controls over market data inputs, model and methodology governance, and valuation adjustments. We tested the valuation techniques, models and methodologies, and the inputs used in those models, as outlined above, by performing an independent revaluation of certain complex or illiquid financial assets and liabilities with the support of specialists. We used independent models and inputs, and compared inputs to available market data among other procedures. We also independently challenged key judgments in relation to a sample of fair value adjustments. We also assessed management's disclosures regarding fair value measurement (within Notes 1 and 20 to the consolidated financial statements).

Recognition of deferred tax assets

Area of focus

At 31 December 2022, the Group's deferred tax assets ("DTA") were USD 9,354 million (see Note 8 to the consolidated financial statements). DTAs are recognized to the extent it is probable that taxable profits will be available, against which, the applicable deductible temporary differences or the carryforward of unused tax losses within the loss carryforward period can be utilized. There is significant judgment exercised when estimating future taxable income that is not based on the reversal of taxable temporary differences. Management's estimate of future taxable profits is based on its strategic plan that is sensitive to the assumptions made in estimating future taxable income.

Auditing management's assessment of the recognition of the Group's DTAs was complex due to the highly judgmental nature of estimating future taxable profits over the life of underlying tax loss carryforwards. Estimating future profitability is inherently subjective as it is sensitive to future economic, market and other conditions, which are difficult to predict, such as the impact of geopolitics, inflation, interest rates, and the ongoing COVID-19 pandemic. Specifically, some of the more subjective key macro-economic assumptions used included gross domestic product growth rates, equity market performance, and interest rate expectations.

Our audit response

We obtained an understanding, evaluated the design, and tested the operating effectiveness of management's controls over DTA valuation, which included the assumptions used in developing the strategic plans and estimating future taxable income.

We assessed the completeness and accuracy of the data used for the estimations of future taxable income. This included recalculating the outputs of models applied to the recognition process for DTAs.

We involved specialists to assist in assessing the key economic assumptions embedded in the strategic plans. We compared key assumptions used to forecast future taxable income to externally available historical and prospective data and assumptions, and assessed the sensitivity of the outcomes using reasonably possible changes in assumptions.

We also assessed management's disclosure regarding recognized and unrecognized deferred tax assets (within Note 8 to the consolidated financial statements).

Expected credit losses

Area of focus

At 31 December 2022, the Group's allowances and provisions for expected credit losses ("ECL") were USD 1,091 million. As explained in Notes 1, 9 and 19 to the consolidated financial statements, ECL is recognized for financial assets measured at amortized cost, financial assets measured at fair value through other comprehensive income, fee and lease receivables, financial guarantees and irrevocable loan commitments. ECL is also recognized on the undrawn portion of revolving revocable credit lines, which include the Group's credit card limits and master credit facilities. The allowances and provisions for ECL consists of exposures that are in default which are individually evaluated for impairment (stage 3), as well as losses inherent in the loan portfolio that are not specifically identified (stage 1 and stage 2). Management's ECL estimates represent the difference between contractual cash flows and those the Group expects to receive, discounted at the effective interest rate. The method used to calculate ECL is based on a combination of the following principal factors: probability of default (“PD”), loss given default (“LGD”) and exposure at default (“EAD”).

Auditing management’s estimate of the allowances and provisions for ECL was complex due to the highly judgmental nature of forward-looking economic scenarios that form the basis of the ECL calculation, their probability weightings, and the credit risk models used to estimate stage 1 and stage 2 ECL. The geopolitical tensions and macroeconomic developments during 2022, such as the Russian invasion into Ukraine, US/China developments, inflation, including emerging stagflation risks and monetary policy challenges, and continued restrictions in certain locations due to the ongoing COVID-19 pandemic contribute to further uncertainty, and as a consequence additional complexity in estimating ECL. As a result, the ECL estimation requires higher management judgement, specifically within the following two areas: (i) scenario selection, including assumptions about the scenario severity, the possible geopolitical developments and macroeconomic and market developments, and the number of scenarios necessary to sufficiently cover the bandwidth of potential outcomes, as well as related scenario weights and post-model adjustments; and, (ii) credit risk models, since the output from historic data based models may not be indicative of current or future conditions.

Additionally, auditing the measurement of individual ECL for stage 3 was complex due to the high degree of judgment involved in management’s process for estimating ECL based on assumptions. These assumptions take into account expected future cash flows from collateral and other credit enhancements or expected payouts from bankruptcy proceedings for unsecured claims and, where applicable, time to realization of collateral and the seniority of claims.

Our audit response

We obtained an understanding, evaluated the design and tested the operating effectiveness of management’s controls over the ECL estimate, including management’s choice of forward-looking economic scenarios used to measure ECL and the probability weighting assigned to such scenarios. We evaluated management’s methodologies and governance controls for developing and monitoring the economic scenarios used and the probability weightings assigned to them, and related post-model adjustments. Supported by specialists, we assessed the key macroeconomic variables used in the forward-looking scenarios, such as real gross domestic product growth, unemployment rate, interest rates and house price indices, and evaluated the modelled correlation and translation of those macroeconomic factors to the ECL estimate. We further assessed the appropriateness of the post-model adjustments by considering management’s governance process, assumptions used and sensitivity analysis.

We also obtained an understanding, evaluated the design and tested the operating effectiveness of controls over credit risk models used in the ECL estimate, including controls over the completeness and accuracy of model input data, calculation logic, and output data used in the overall ECL calculation. With the support of specialists, on a sample basis, we performed an evaluation of management’s models and tested the model outcomes by inspecting model documentation, reperforming model calculations, and comparing data used as inputs to management’s forecast to external sources, among other procedures.

For the measurement of stage 3, we obtained an understanding, evaluated the design and tested the operating effectiveness of controls over management's process, including an evaluation of the assumptions used by management regarding the future cash flows from debtors' continuing operations and/or the liquidation of collateral. Supported by specialists in certain areas, we additionally tested collateral valuation, cash flow assumptions and exit strategies by performing inquiries of management, inspecting underlying documents, such as loan contracts, financial statements, covenants, budgets and business plans, and by re-performing discounted cash flow calculations among other procedures, on a sample basis.

We also assessed management's disclosures regarding financial assets at amortized cost and other positions in scope of expected credit loss measurement (within Notes 1, 9 and 19 to the consolidated financial statements).

Other information in the annual report

The Board of Directors is responsible for the other information in the annual report. The other information comprises all information included in the annual report, but does not include the consolidated financial statements, the stand-alone financial statements of UBS AG, the compensation report[1], and our auditor's reports thereon.

Our opinions on the consolidated financial statements, the standalone financial statements of UBS AG and the compensation report[1] do not cover the other information in the annual report and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information in the annual report and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibility of the Board of Directors for the consolidated financial statements

The Board of Directors is responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRS and the provisions of Swiss law, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

[1] Specifically, the following tables in the compensation report: "Share ownership/entitlements of GEB members," "Total of all vested and unvested shares of GEB members," "Number of shares of BoD members," and "Total of all blocked and unblocked shares of BoD Members."

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law, ISAs and Swiss Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

A further description of our responsibilities for the audit of the consolidated financial statements is located at the website of EXPERTsuisse: http://www.expertsuisse.ch/en/audit-report-for-public-companies. This description forms part of our auditor's report.

Report on other legal and regulatory requirements

In accordance with article 728a para. 1 item 3 CO and the Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

Ernst & Young Ltd

Maurice McCormick Licensed audit expert (Auditor in charge)	Robert E. Jacob, Jr. Certified Public Accountant (U.S.)

UBS AG consolidated financial statements

Primary financial statements and share information

Audited |

Income statement

		For the year ended		
USD m	Note	31.12.22	31.12.21	31.12.20
Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income	3	11,803	8,534	8,816
Interest expense from financial instruments measured at amortized cost	3	(6,696)	(3,366)	(4,333)
Net interest income from financial instruments measured at fair value through profit or loss and other	3	1,410	1,437	1,305
Net interest income	3	6,517	6,605	5,788
Other net income from financial instruments measured at fair value through profit or loss	3	7,493	5,844	6,930
Fee and commission income	4	20,846	24,422	20,982
Fee and commission expense	4	(1,823)	(1,985)	(1,775)
Net fee and commission income	4	19,023	22,438	19,207
Other income	5	1,882	941	1,549
Total revenues		34,915	35,828	33,474
Credit loss expense / (release)	19	29	(148)	695
Personnel expenses	6	15,080	15,661	14,686
General and administrative expenses	7	9,001	9,476	8,486
Depreciation, amortization and impairment of non-financial assets	11,12	1,845	1,875	1,909
Operating expenses		25,927	27,012	25,081
Operating profit / (loss) before tax		8,960	8,964	7,699
Tax expense / (benefit)	8	1,844	1,903	1,488
Net profit / (loss)		7,116	7,061	6,211
Net profit / (loss) attributable to non-controlling interests		32	29	15
Net profit / (loss) attributable to shareholders		7,084	7,032	6,196

Statement of comprehensive income

		For the year ended		
USD m	Note	31.12.22	31.12.21	31.12.20
Comprehensive income attributable to shareholders				
Net profit / (loss)		7,084	7,032	6,196
Other comprehensive income that may be reclassified to the income statement				
Foreign currency translation				
Foreign currency translation movements related to net assets of foreign operations, before tax		(869)	(1,046)	2,040
Effective portion of changes in fair value of hedging instruments designated as net investment hedges, before tax		319	492	(938)
Foreign currency translation differences on foreign operations reclassified to the income statement		32	(1)	(7)
Effective portion of changes in fair value of hedging instruments designated as net investment hedges reclassified to the income statement		(4)	10	2
Income tax relating to foreign currency translations, including the effect of net investment hedges		4	35	(67)
Subtotal foreign currency translation, net of tax		(519)	(510)	1,030
Financial assets measured at fair value through other comprehensive income				
Net unrealized gains / (losses), before tax		(440)	(203)	223
Net realized (gains) / losses reclassified to the income statement from equity		1	(9)	(40)
Reclassification of financial assets to Other financial assets measured at amortized cost[1]		449		
Income tax relating to net unrealized gains / (losses)		(3)	55	(48)
Subtotal financial assets measured at fair value through other comprehensive income, net of tax		6	(157)	136
Cash flow hedges of interest rate risk	25			
Effective portion of changes in fair value of derivative instruments designated as cash flow hedges, before tax		(5,758)	(992)	2,012
Net (gains) / losses reclassified to the income statement from equity		(159)	(1,073)	(770)
Income tax relating to cash flow hedges		1,124	390	(231)
Subtotal cash flow hedges, net of tax		(4,793)[2]	(1,675)	1,011
Cost of hedging	25			
Cost of hedging, before tax		45	(32)	(13)
Income tax relating to cost of hedging		0	6	0
Subtotal cost of hedging, net of tax		45	(26)	(13)
Total other comprehensive income that may be reclassified to the income statement, net of tax		(5,260)	(2,368)	2,165
Other comprehensive income that will not be reclassified to the income statement				
Defined benefit plans	26			
Gains / (losses) on defined benefit plans, before tax		40	133	(222)
Income tax relating to defined benefit plans		41	(31)	88
Subtotal defined benefit plans, net of tax		81	102	(134)
Own credit on financial liabilities designated at fair value	20			
Gains / (losses) from own credit on financial liabilities designated at fair value, before tax		867	46	(293)
Income tax relating to own credit on financial liabilities designated at fair value		(71)	0	0
Subtotal own credit on financial liabilities designated at fair value, net of tax		796	46	(293)
Total other comprehensive income that will not be reclassified to the income statement, net of tax		877	148	(427)
Total other comprehensive income		(4,383)	(2,220)	1,738
Total comprehensive income attributable to shareholders		2,701	4,813	7,934
Comprehensive income attributable to non-controlling interests				
Net profit / (loss)		32	29	15
Total other comprehensive income that will not be reclassified to the income statement, net of tax		(14)	(16)	21
Total comprehensive income attributable to non-controlling interests		18	13	36
Total comprehensive income				
Net profit / (loss)		7,116	7,061	6,211
Other comprehensive income		(4,396)	(2,235)	1,759
of which: other comprehensive income that may be reclassified to the income statement		*(5,260)*	*(2,368)*	*2,165*
of which: other comprehensive income that will not be reclassified to the income statement		*864*	*132*	*(406)*
Total comprehensive income		2,719	4,826	7,970

1 Effective 1 April 2022, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost. Refer to Note 1b for more information. 2 Mainly reflects net unrealized losses on US dollar hedging derivatives resulting from significant increases in the relevant US dollar long-term interest rates.

Balance sheet

USD m	Note	31.12.22	31.12.21
Assets			
Cash and balances at central banks		169,445	192,817
Loans and advances to banks	9	14,671	15,360
Receivables from securities financing transactions measured at amortized cost	9, 21	67,814	75,012
Cash collateral receivables on derivative instruments	9, 21	35,033	30,514
Loans and advances to customers	9	390,027	398,693
Other financial assets measured at amortized cost	9, 13a	53,389	26,236
Total financial assets measured at amortized cost		730,379	738,632
Financial assets at fair value held for trading	20	108,034	131,033
of which: assets pledged as collateral that may be sold or repledged by counterparties		*36,742*	*43,397*
Derivative financial instruments	10, 20, 21	150,109	118,145
Brokerage receivables	20	17,576	21,839
Financial assets at fair value not held for trading	20	59,408	59,642
Total financial assets measured at fair value through profit or loss		335,127	330,659
Financial assets measured at fair value through other comprehensive income	19, 20	2,239	8,844
Investments in associates	28b	1,101	1,243
Property, equipment and software	11	11,316	11,712
Goodwill and intangible assets	12	6,267	6,378
Deferred tax assets	8	9,354	8,839
Other non-financial assets	13b	9,652	9,836
Total assets		1,105,436	1,116,145
Liabilities			
Amounts due to banks		11,596	13,101
Payables from securities financing transactions measured at amortized cost	21	4,202	5,533
Cash collateral payables on derivative instruments	21	36,436	31,801
Customer deposits	14	527,171	544,834
Funding from UBS Group AG measured at amortized cost	14b	56,147	57,295
Debt issued measured at amortized cost	16	59,499	82,432
Other financial liabilities measured at amortized cost	18a	10,391	9,765
Total financial liabilities measured at amortized cost		705,442	744,762
Financial liabilities at fair value held for trading	20	29,515	31,688
Derivative financial instruments	10, 20, 21	154,906	121,309
Brokerage payables designated at fair value	20	45,085	44,045
Debt issued designated at fair value	15, 20	71,842	71,460
Other financial liabilities designated at fair value	18b, 20	32,033	32,414
Total financial liabilities measured at fair value through profit or loss		333,382	300,916
Provisions	17a	3,183	3,452
Other non-financial liabilities	18c	6,489	8,572
Total liabilities		1,048,496	1,057,702
Equity			
Share capital		338	338
Share premium		24,648	24,653
Retained earnings		31,746	27,912
Other comprehensive income recognized directly in equity, net of tax		(133)	5,200
Equity attributable to shareholders		56,598	58,102
Equity attributable to non-controlling interests		342	340
Total equity		56,940	58,442
Total liabilities and equity		1,105,436	1,116,145

Statement of changes in equity

USD m	Share capital	Share premium	Retained earnings
Balance as of 31 December 2019	**338**	**24,659**	**23,419**
Premium on shares issued and warrants exercised		(4)[2]	
Tax (expense) / benefit		1	
Dividends			(3,848)
Translation effects recognized directly in retained earnings			(49)
Share of changes in retained earnings of associates and joint ventures			(40)
New consolidations / (deconsolidations) and other increases / (decreases)[3]		(76)	
Total comprehensive income for the year			5,769
of which: net profit / (loss)			*6,196*
of which: OCI, net of tax			*(427)*
Balance as of 31 December 2020	**338**	**24,580**	**25,251**
Premium on shares issued and warrants exercised		(7)[2]	
Tax (expense) / benefit		(102)	
Dividends			(4,539)
Translation effects recognized directly in retained earnings			18
Share of changes in retained earnings of associates and joint ventures			1
New consolidations / (deconsolidations) and other increases / (decreases)[4]		182	
Total comprehensive income for the year			7,180
of which: net profit / (loss)			*7,032*
of which: OCI, net of tax			*148*
Balance as of 31 December 2021	**338**	**24,653**	**27,912**
Premium on shares issued and warrants exercised		(14)[2]	
Tax (expense) / benefit		5	
Dividends			(4,200)
Translation effects recognized directly in retained earnings			69
Share of changes in retained earnings of associates and joint ventures			0
New consolidations / (deconsolidations) and other increases / (decreases)		4	3
Total comprehensive income for the year			7,961
of which: net profit / (loss)			*7,084*
of which: OCI, net of tax			*877*
Balance as of 31 December 2022	338	24,648	31,746

1 Excludes other comprehensive income related to defined benefit plans and own credit, which is recorded directly in Retained earnings. 2 Includes decreases related to recharges by UBS Group AG for share-based compensation awards granted to employees of UBS AG or its subsidiaries. 3 Mainly relates to the establishment of a banking partnership with Banco do Brasil. In 2020, UBS AG issued a 49.99% stake in UBS Brasil Serviços in exchange for exclusive access to Banco do Brasil's corporate clients. Upon completion of the transaction in 2020, equity attributable to non-controlling interests increased by USD 115m, with no material effect on equity attributable to shareholders. 4 Includes the effects related to the launch of UBS AG's new operational partnership entity with Sumitomo Mitsui Trust Holdings, Inc in 2021.

Other comprehensive income recognized directly in equity, net of tax[1]	*of which: foreign currency translation*	*of which: financial assets at fair value through OCI*	*of which: cash flow hedges*	Total equity attributable to shareholders	Non-controlling interests	Total equity
5,306	***4,032***	***14***	***1,260***	**53,722**	**174**	**53,896**
				(4)		(4)
				1		1
				(3,848)	(6)	(3,854)
49		*0*	*49*	0		0
				(40)		(40)
65	*65*			(12)	115	103
2,165	*1,030*	*136*	*1,011*	7,934	36	7,970
				6,196	*15*	*6,211*
2,165	*1,030*	*136*	*1,011*	*1,738*	*21*	*1,759*
7,585	***5,126***	***151***	***2,321***	**57,754**	**319**	**58,073**
				(7)		(7)
				(102)		(102)
				(4,539)	(4)	(4,542)
(18)		*0*	*(18)*	0		0
				1		1
				182	12	193
(2,368)	*(510)*	*(157)*	*(1,675)*	4,813	13	4,826
				7,032	*29*	*7,061*
(2,368)	*(510)*	*(157)*	*(1,675)*	*(2,220)*	*(16)*	*(2,235)*
5,200	***4,617***	***(7)***	***628***	**58,102**	**340**	**58,442**
				(14)		(14)
				5		5
				(4,200)	(9)	(4,209)
(69)		*0*	*(69)*	0		0
				0		0
(3)		*(3)*		4	(7)	(3)
(5,260)	*(519)*	*6*	*(4,793)*	2,701	18	2,719
				7,084	*32*	*7,116*
(5,260)	*(519)*	*6*	*(4,793)*	*(4,383)*	*(14)*	*(4,396)*
(133)	*4,098*	*(4)*	*(4,234)*	56,598	342	56,940

Ordinary share capital

As of 31 December 2022, UBS AG had 3,858,408,466 issued shares (31 December 2021: 3,858,408,466 shares) with a nominal value of CHF 0.10 each, leading to a share capital of CHF 385,840,846.60. The shares were entirely held by UBS Group AG.

Following revisions to Swiss Corporate Law that are effective from 1 January 2023, the Board of Directors (the BoD) will propose at the 2023 Annual General Meeting (the AGM) that the shareholders approve the conversion of the share capital currency of UBS AG from the Swiss franc to the US dollar. This would align the share capital currency with the financial statement presentation currency of UBS AG. If the change is approved, the share capital of UBS AG will be slightly reduced to a nominal value per share of USD 0.10 (from CHF 0.10 currently), with the amount of the reduction allocated to the capital contribution reserve (presented as *Share premium* in the consolidated financial statements). Total equity reported for UBS AG consolidated will not change.

Conditional share capital

As of 31 December 2022, the following conditional share capital was available to UBS AG's BoD:

– A maximum of CHF 38,000,000 represented by up to 380,000,000 fully paid registered shares with a nominal value of CHF 0.10 each, to be issued through the voluntary or mandatory exercise of conversion rights and / or warrants granted in connection with the issuance of bonds or similar financial instruments on national or international capital markets. This conditional capital allowance was approved at the AGM of UBS AG on 14 April 2010. The BoD has not made use of such allowance.

Authorized share capital

UBS AG had no authorized capital available to issue on 31 December 2022.

Earnings per share

In 2015, UBS AG shares were delisted from the SIX Swiss Exchange and the New York Stock Exchange. As of 31 December 2022, 100% of UBS AG's issued shares were held by UBS Group AG and therefore were not publicly traded. Accordingly, earnings per share information is not provided for UBS AG.

Statement of cash flows

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Cash flow from / (used in) operating activities			
Net profit / (loss)	7,116	7,061	6,211
Non-cash items included in net profit and other adjustments:			
Depreciation, amortization and impairment of non-financial assets	1,845	1,875	1,909
Credit loss expense / (release)	29	(148)	695
Share of net profits of associates and joint ventures and impairment related to associates	(32)	(105)	(84)
Deferred tax expense / (benefit)	491	432	355
Net loss / (gain) from investing activities	(1,515)	(230)	(698)
Net loss / (gain) from financing activities	(16,587)	100	3,246
Other net adjustments	5,792	3,790	(8,061)
Net change in operating assets and liabilities:			
Loans and advances to banks and amounts due to banks	(1,088)	2,148	3,586
Securities financing transactions measured at amortized cost	4,444	(2,316)	9,588
Cash collateral on derivative instruments	73	(3,311)	(3,486)
Loans and advances to customers and customer deposits	(7,756)	2,406	18,934
Financial assets and liabilities at fair value held for trading and derivative financial instruments	8,173	(10,635)	11,326
Brokerage receivables and payables	6,019	8,115	(5,199)
Financial assets at fair value not held for trading and other financial assets and liabilities	5,557	19,793	392
Provisions and other non-financial assets and liabilities	(437)	2,617	(1,213)
Income taxes paid, net of refunds	(1,495)	(1,026)	(919)
Net cash flow from / (used in) operating activities	**10,630**	**30,563**	**36,581**
Cash flow from / (used in) investing activities			
Purchase of subsidiaries, associates and intangible assets	(3)	(1)	(46)
Disposal of subsidiaries, associates and intangible assets	1,729[1]	593	674
Purchase of property, equipment and software	(1,478)	(1,581)	(1,573)
Disposal of property, equipment and software	161	295	364
Purchase of financial assets measured at fair value through other comprehensive income	(4,783)	(5,802)	(6,290)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	4,084	5,052	4,530
Net (purchase) / redemption of debt securities measured at amortized cost	(11,993)	(415)	(4,166)
Net cash flow from / (used in) investing activities	**(12,283)**	**(1,860)**	**(6,506)**

Table continues below.

Statement of cash flows (continued)

Table continued from above.

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Cash flow from / (used in) financing activities			
Net short-term debt issued / (repaid)	(12,249)	(3,093)	23,845
Distributions paid on UBS AG shares	(4,200)	(4,539)	(3,848)
Issuance of debt designated at fair value and long-term debt measured at amortized cost[2]	79,457	98,619	80,153
Repayment of debt designated at fair value and long-term debt measured at amortized cost[2]	(67,670)	(79,799)	(87,099)
Net cash flows from other financing activities	(595)	(261)	(553)
Net cash flow from / (used in) financing activities	(5,257)	10,927	12,498
Total cash flow			
Cash and cash equivalents at the beginning of the year	207,755	173,430	119,804
Net cash flow from / (used in) operating, investing and financing activities	(6,911)	39,630	42,573
Effects of exchange rate differences on cash and cash equivalents	(5,645)	(5,306)	11,053
Cash and cash equivalents at the end of the year[3]	195,200	207,755	173,430
of which: cash and balances at central banks[4]	*169,363*	*192,706*	*158,088*
of which: loans and advances to banks	*13,329*	*13,822*	*13,928*
of which: money market paper[5]	*12,508*	*1,227*	*1,415*
Additional information			
Net cash flow from / (used in) operating activities includes:			
Interest received in cash	15,730	11,170	11,929
Interest paid in cash	8,315	4,802	6,414
Dividends on equity investments, investment funds and associates received in cash[6]	1,907	2,531	1,901

1 Includes cash proceeds from the sales of: UBS AG's shareholding in Mitsubishi Corp.-UBS Realty Inc.; UBS AG's wholly owned subsidiary UBS Swiss Financial Advisers AG; UBS AG's US alternative investments administration business; and UBS AG's domestic wealth management business in Spain. Refer to Note 29 for more information. Also includes dividends received from associates. 2 Includes funding from UBS Group AG measured at amortized cost (recognized in Funding from UBS Group AG measured at amortized cost in the balance sheet) and measured at fair value (recognized in Other financial liabilities designated at fair value in the balance sheet). 3 USD 4,253m, USD 3,408m and USD 3,828m of cash and cash equivalents (mainly reflected in Loans and advances to banks) were restricted as of 31 December 2022, 31 December 2021 and 31 December 2020, respectively. Refer to Note 22 for more information. 4 Includes only balances with an original maturity of three months or less. 5 Money market paper is included in the balance sheet under Financial assets at fair value held for trading (31 December 2022: USD 2m; 31 December 2021: USD 20m; 31 December 2020: USD 117m), Financial assets measured at fair value through other comprehensive income (31 December 2022: USD 0m; 31 December 2021: USD 0m; 31 December 2020: USD 178m), Financial assets at fair value not held for trading (31 December 2022: USD 6,048m; 31 December 2021: USD 1,066m; 31 December 2020: USD 536m), and Other financial assets measured at amortized cost (31 December 2022: USD 6,459m; 31 December 2021: USD 141m; 31 December 2020: USD 584m). 6 Includes dividends received from associates reported within Net cash flow from / (used in) investing activities.

Changes in liabilities arising from financing activities

USD m	Debt issued measured at amortized cost	*of which: short-term[1]*	*of which: long-term[2]*	Debt issued designated at fair value	Over-the-counter debt instruments[3]	Funding from UBS Group AG[4]	Total
Balance as of 1 January 2021	85,351	*46,666*	*38,685*	59,868	2,060	55,354	202,633
Cash flows	(550)	*(3,093)*	*2,543*	9,075	126	7,076	15,727
Non-cash changes	(2,369)	*(475)*	*(1,894)*	2,516	(58)	(2,795)	(2,705)
of which: foreign currency translation	*(1,841)*	*(475)*	*(1,366)*	*(1,611)*	*(65)*	*(1,340)*	*(4,857)*
of which: fair value changes				*4,127*	*7*	*(30)*	*4,104*
of which: hedge accounting and other effects	*(528)*		*(528)*			*(1,425)*	*(1,953)*
Balance as of 31 December 2021	82,432	*43,098*	*39,334*	71,460	2,128	59,635	215,655
Cash flows	(19,390)	*(12,249)*	*(7,141)*	13,277	(251)	5,903	(461)
Non-cash changes	(3,543)	*(1,173)*	*(2,370)*	(12,895)	(193)	(7,595)	(24,225)
of which: foreign currency translation	*(2,233)*	*(1,173)*	*(1,061)*	*(1,405)*	*(113)*	*(1,285)*	*(5,036)*
of which: fair value changes				*(11,490)*	*(80)*	*(1,060)*	*(12,629)*
of which: hedge accounting and other effects	*(1,310)*		*(1,310)*			*(5,250)*	*(6,560)*
Balance as of 31 December 2022	59,499	*29,676*	*29,823*	71,842	1,684	57,943	190,968

1 Debt with an original contractual maturity of less than one year. 2 Debt with an original maturity greater than or equal to one year. The classification of debt issued into short-term and long-term does not consider any early redemption features. 3 Included in balance sheet line Other financial liabilities designated at fair value. 4 Includes funding from UBS Group AG measured at amortized cost (refer to Note 14b) and measured at fair value (refer to Note 18b).

Notes to the UBS AG consolidated financial statements

Note 1 Summary of material accounting policies

The following table provides an overview of information included in this Note.

a) Material accounting policies

This Note describes the material accounting policies applied in the preparation of the consolidated financial statements (the Financial Statements) of UBS AG and its subsidiaries (UBS AG). On 23 February 2023, the Financial Statements were authorized for issue by the Board of Directors (the BoD).

Basis of accounting

The Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (the IASB), and are presented in US dollars (USD).

Disclosures marked as audited in the "Risk, capital, liquidity and funding, and balance sheet" section of this report form an integral part of the Financial Statements. These disclosures relate to requirements under IFRS 7, *Financial Instruments: Disclosures,* and IAS 1, *Presentation of Financial Statements,* and are not repeated in this section.

The accounting policies described in this Note have been applied consistently in all years presented unless otherwise stated in Note 1b.

Critical accounting estimates and judgments

Preparation of these Financial Statements under IFRS requires management to apply judgment and make estimates and assumptions that affect reported amounts of assets, liabilities, income and expenses and disclosure, of contingent assets and liabilities, and may involve significant uncertainty at the time they are made. Such estimates and assumptions are based on the best available information. UBS AG regularly reassesses such estimates and assumptions, which encompass historical experience, expectations of the future and other pertinent factors, to determine their continuing relevance based on current conditions, updating them as necessary. Changes in those estimates and assumptions may have a significant effect on the Financial Statements. Furthermore, actual results may differ significantly from UBS AG's estimates, which could result in significant losses to UBS AG, beyond what was anticipated or provided for.

The following areas contain estimation uncertainty or require critical judgment and have a significant effect on amounts recognized in the Financial Statements:
- expected credit loss measurement (refer to item 2g in this Note and to Note 19);
- fair value measurement (refer to item 2f in this Note and to Note 20);
- income taxes (refer to item 6 in this Note and to Note 8);
- provisions and contingent liabilities (refer to item 9 in this Note and to Note 17);
- post-employment benefit plans (refer to item 5 in this Note and to Note 26);
- goodwill (refer to item 8 in this Note and to Note 12); and
- consolidation of structured entities (refer to item 1 in this Note and to Note 28).

1) Consolidation

The Financial Statements include the financial statements of the UBS AG and its subsidiaries, presented as a single economic entity; intercompany transactions and balances have been eliminated. UBS AG consolidates all entities that it controls, including structured entities (SEs), which is the case when it has: (i) power over the relevant activities of the entity; (ii) exposure to an entity's variable returns; and (iii) the ability to use its power to affect its own returns.

Consideration is given to all facts and circumstances to determine whether UBS AG has power over another entity, i.e., the current ability to direct the relevant activities of an entity when decisions about those activities need to be made.

Subsidiaries, including SEs, are consolidated from the date when control is gained and deconsolidated from the date when control ceases. Control, or the lack thereof, is reassessed if facts and circumstances indicate that there is a change to one or more elements required to establish that control is present.

Business combinations are accounted for using the acquisition method. The amount of any non-controlling interest is measured at the non-controlling interest's proportionate share of the acquiree's identifiable net assets.

› **Refer to Note 28 for more information**

Critical accounting estimates and judgments

Each individual entity is assessed for consolidation in line with the aforementioned consolidation principles. The assessment of control can be complex and requires the use of significant judgment, in particular in determining whether UBS AG has power over the entity. As the nature and extent of UBS AG's involvement is unique for each entity, there is no uniform consolidation outcome by entity. Certain entities within a class may be consolidated while others may not. When carrying out the consolidation assessment, judgment is exercised considering all the relevant facts and circumstances, including the nature and activities of the investee, as well as the substance of voting and similar rights.

› **Refer to Note 28 for more information**

2) Financial instruments

a. Recognition

UBS AG recognizes financial instruments when it becomes a party to contractual provisions of an instrument. UBS AG applies settlement date accounting to all standard purchases and sales of non-derivative financial instruments.

In transactions where UBS AG acts as a transferee, to the extent the financial asset transfer does not qualify for derecognition by the transferor, UBS AG does not recognize the transferred instrument as its asset.

UBS AG also acts in a fiduciary capacity, which results in it holding or placing assets on behalf of individuals, trusts, retirement benefit plans and other institutions. Unless these items meet the definition of an asset and the recognition criteria are satisfied, they are not recognized on UBS AG's balance sheet and the related income is excluded from the Financial Statements.

Client cash balances associated with derivatives clearing and execution services are not recognized on the balance sheet if, through contractual agreement, regulation or practice, UBS AG neither obtains benefits from nor controls such cash balances.

b. Classification, measurement and presentation

Financial assets

Where the contractual terms of a debt instrument result in cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding, the debt instrument is classified as measured at amortized cost if it is held within a business model that has an objective of holding financial assets to collect contractual cash flows, or at fair value through other comprehensive income (FVOCI) if it is held within a business model with the objective being achieved by both collecting contractual cash flows and selling financial assets.

All other financial assets are measured at fair value through profit or loss (FVTPL), including those held for trading or those managed on a fair value basis, except for derivatives designated in a hedge relationship, in which case hedge accounting requirements apply (refer to item 2j in this Note for more information).

Business model assessment and contractual cash flow characteristics
UBS AG determines the nature of a business model by considering the way financial assets are managed to achieve a particular business objective.

In assessing whether contractual cash flows are SPPI, the UBS AG considers whether the contractual terms of the financial asset contain a term that could change the timing or amount of contractual cash flows arising over the life of the instrument. This assessment includes contractual cash flows that may vary due to environmental, social and governance (ESG) triggers.

Financial liabilities

Financial liabilities measured at amortized cost
Financial liabilities measured at amortized cost include *Debt issued measured at amortized cost* and *Funding from UBS Group AG measured at amortized cost*. The latter includes contingent capital instruments issued to UBS Group AG containing contractual provisions under which the principal amounts would be written down or converted into equity upon either a specified common equity tier 1 (CET1) ratio breach or a determination by the Swiss Financial Market Supervisory Authority (FINMA) that a viability event has occurred. Such contractual provisions are not derivatives, as the underlying is deemed to be a non-financial variable specific to a party to the contract.

If a debt were to be written down or converted into equity in a future period, it would be partially or fully derecognized, with the difference between its carrying amount and the fair value of any equity issued recognized in the income statement.

A gain or loss is recognized in *Other income* when debt issued is subsequently repurchased for market-making or other activities. A subsequent sale of own bonds in the market is treated as a reissuance of debt.

Financial liabilities measured at fair value through profit or loss
UBS AG designates certain issued debt instruments as financial liabilities at fair value through profit or loss, on the basis that such financial instruments include non-closely-related embedded derivatives that significantly impact the cash flows of the instrument and / or are managed on a fair value basis (refer to the table below for more information). Financial instruments including embedded derivatives arise predominantly from the issuance of certain structured debt instruments.

Measurement and presentation

After initial recognition, UBS AG classifies, measures and presents its financial assets and liabilities in accordance with IFRS 9, as described in the table below.

Classification, measurement and presentation of financial assets

Financial assets classification		Significant items included	Measurement and presentation
Measured at amortized cost		This classification includes: – cash and balances at central banks; – loans and advances to banks; – receivables from securities financing transactions; – cash collateral receivables on derivative instruments; – residential and commercial mortgages; – corporate loans; – secured loans, including Lombard loans, and unsecured loans; – loans to financial advisors; and – debt securities held as high-quality liquid assets (HQLA).	Measured at amortized cost using the effective interest method less allowances for expected credit losses (ECL) (refer to items 2d and 2g in this Note for more information). The following items are recognized in the income statement: – interest income, which is accounted for in accordance with item 2d in this Note; – ECL and reversals; and – foreign exchange (FX) translation gains and losses. When a financial asset at amortized cost is derecognized, the gain or loss is recognized in the income statement. For amounts arising from settlement of certain derivatives, see below in this table.
Measured at FVOCI	Debt instruments measured at FVOCI	This classification primarily includes debt securities and certain asset-backed securities held as HQLA.	Measured at fair value, with unrealized gains and losses reported in *Other comprehensive income,* net of applicable income taxes, until such investments are derecognized. Upon derecognition, any accumulated balances in *Other comprehensive income* are reclassified to the income statement and reported within *Other income.* The following items, which are determined on the same basis as for financial assets measured at amortized cost, are recognized in the income statement: – interest income, which is accounted for in accordance with item 2d in this Note; – ECL and reversals; and – FX translation gains and losses.

Classification, measurement and presentation of financial assets

<table>
<tr><th colspan="2">Financial assets classification</th><th>Significant items included</th><th>Measurement and presentation</th></tr>
<tr><td rowspan="2">Measured at FVTPL</td><td>Held for trading</td><td>Financial assets held for trading include:
– all derivatives with a positive replacement value, except those that are designated and effective hedging instruments; and
– other financial assets acquired principally for the purpose of selling or repurchasing in the near term, or that are part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking. Included in this category are debt instruments (including those in the form of securities, money market paper, and traded corporate and bank loans) and equity instruments.</td><td rowspan="2">Measured at fair value, with changes recognized in the income statement.

Derivative assets (including derivatives that are designated and effective hedging instruments) are generally presented as Derivative financial instruments, except those exchange-traded derivatives (ETD) and over-the-counter (OTC)-cleared derivatives that are legally settled on a daily basis or economically net settled on a daily basis, which are presented within Cash collateral receivables on derivative instruments.

Changes in fair value, initial transaction costs, dividends and gains and losses arising on disposal or redemption are recognized in Other net income from financial instruments measured at fair value through profit or loss, except interest income on instruments other than derivatives (refer to item 2d in this Note), interest on derivatives designated as hedging instruments in hedges of interest rate risk and forward points on certain short- and long-duration FX contracts acting as economic hedges, which are reported in Net interest income.

Changes in the fair value of derivatives that are designated and effective hedging instruments are presented either in the income statement or Other comprehensive income, depending on the type of hedge relationship (refer to item 2j in this Note for more information).</td></tr>
<tr><td>Mandatorily measured at FVTPL – Other</td><td>This classification includes financial assets mandatorily measured at FVTPL that are not held for trading, as follows:
– certain structured loans, certain commercial loans, and receivables from securities financing transactions that are managed on a fair value basis;
– loans managed on a fair value basis, including those hedged with credit derivatives;
– certain debt securities held as HQLA and managed on a fair value basis;
– certain investment fund holdings and assets held to hedge delivery obligations related to cash-settled employee compensation plans;
– brokerage receivables, for which contractual cash flows do not meet the SPPI criterion because the aggregate balance is accounted for as a single unit of account, with interest being calculated on the individual components;
– auction rate securities, for which contractual cash flows do not meet the SPPI criterion because interest may be reset at rates that contain leverage;
– equity instruments; and
– assets held under unit-linked investment contracts.</td></tr>
</table>

Note 1 Summary of material accounting policies (continued)

Classification, measurement and presentation of financial liabilities

Financial liabilities classification		Significant items included	Measurement and presentation
Measured at amortized cost		This classification includes: – demand and time deposits; – retail savings / deposits; – sweep deposits; – payables from securities financing transactions; – non-structured debt issued; – subordinated debt; – commercial paper and certificates of deposit; – obligations against funding from UBS Group AG; and – cash collateral payables on derivative instruments.	Measured at amortized cost using the effective interest method. When a financial liability at amortized cost is derecognized, the gain or loss is recognized in the income statement. Interest Income generated from client deposits derecognized pursuant to certain deposit sweep programs is presented within *Net interest income from financial instruments measured at fair value through profit or loss and other*.
Measured at FVTPL	Held for trading	Financial liabilities held for trading include: – all derivatives with a negative replacement value (including certain loan commitments), except those that are designated and effective hedging instruments; and – obligations to deliver financial instruments, such as debt and equity instruments, that UBS AG has sold to third parties but does not own (short positions).	Measurement and presentation of financial liabilities classified at FVTPL follow the same principles as for financial assets classified at FVTPL, except that the amount of change in the fair value of a financial liability designated at FVTPL that is attributable to changes in UBS AG's own credit risk is presented in *Other comprehensive income* directly within *Retained earnings* and is never reclassified to the income statement. Derivative liabilities (including derivatives that are designated and effective hedging instruments) are generally presented as *Derivative financial instruments,* except those exchange-traded and OTC-cleared derivatives that are legally settled on a daily basis or economically net settled on a daily basis, which are presented within *Cash collateral payables on derivative instruments.*
	Designated at FVTPL	UBS AG designates at FVTPL the following financial liabilities: – issued hybrid debt instruments that primarily include equity-linked, credit-linked and rates-linked bonds or notes; – issued debt instruments managed on a fair value basis; – obligations against funding from UBS Group AG managed on a fair value basis; – certain payables from securities financing transactions; – amounts due under unit-linked investment contracts, the cash flows of which are linked to financial assets measured at FVTPL and eliminate an accounting mismatch; and – brokerage payables, which arise in conjunction with brokerage receivables and are measured at FVTPL to achieve measurement consistency.	

c. Loan commitments and financial guarantees

Loan commitments are arrangements to provide credit under defined terms and conditions. Irrevocable loan commitments are classified as: (i) derivative loan commitments measured at fair value through profit or loss; (ii) loan commitments designated at fair value through profit or loss; or (iii) loan commitments not measured at fair value. Financial guarantee contracts are contracts that require UBS AG to make specified payments to reimburse the holder for an incurred loss because a specified debtor fails to make payments when due in accordance with the terms of a specified debt instrument.

d. Interest income and expense

Interest income and expense are recognized in the income statement based on the effective interest method. When calculating the effective interest rate (the EIR) for financial instruments (other than credit-impaired financial instruments), UBS AG estimates future cash flows considering all contractual terms of the instrument, but not expected credit losses, with the EIR applied to the gross carrying amount of the financial asset or the amortized cost of a financial liability. However, when a financial asset becomes credit-impaired after initial recognition, interest income is determined by applying the EIR to the amortized cost of the instrument, which represents the gross carrying amount adjusted for any credit loss allowance.

Upfront fees, including fees on loan commitments not measured at fair value where a loan is expected to be issued, and direct costs are included within the initial measurement of a financial instrument measured at amortized cost or FVOCI and recognized over the expected life of the instrument as part of its EIR.

Fees related to loan commitments where no loan is expected to be issued, as well as loan syndication fees where UBS AG does not retain a portion of the syndicated loan or where UBS AG does retain a portion of the syndicated loan at the same effective yield for comparable risk as other participants, are included in *Net fee and commission income* and either recognized over the life of the commitment or when syndication occurs.

› **Refer to item 3 in this Note for more information**

Interest income on financial assets, excluding derivatives, is included in interest income when positive and in interest expense when negative. Similarly, interest expense on financial liabilities, excluding derivatives, is included in interest expense, except when interest rates are negative, in which case it is included in interest income.

› **Refer to item 2b in this Note and Note 3 for more information**

e. Derecognition

Financial assets

UBS AG derecognizes a transferred financial asset, or a portion of a financial asset, if the purchaser has received substantially all the risks and rewards of the asset or a significant part of the risks and rewards combined with a practical ability to sell or pledge the asset.

Where financial assets have been pledged as collateral or in similar arrangements, they are considered to have been transferred if the counterparty has received the contractual rights to the cash flows of the pledged assets, as may be evidenced by, for example, the counterparty's right to sell or repledge the assets. In transfers where control over the financial asset is retained, UBS AG continues to recognize the asset to the extent of its continuing involvement, determined by the extent to which it is exposed to changes in the value of the transferred asset following the transfer.

› **Refer to Note 22 for more information**

Financial liabilities

UBS AG derecognizes a financial liability when it is extinguished, i.e., when the obligation specified in the contract is discharged, canceled or expires. When an existing financial liability is exchanged for a new one from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, the original liability is derecognized and a new liability recognized with any difference in the respective carrying amounts recorded in the income statement.

Certain OTC derivative contracts and most exchange-traded futures and option contracts cleared through central clearing counterparties and exchanges are considered to be settled on a daily basis, as the payment or receipt of variation margin on a daily basis represents legal or economic settlement, which results in derecognition of the associated derivatives.

› **Refer to Note 21 for more information**

f. Fair value of financial instruments

UBS AG accounts for a significant portion of its assets and liabilities at fair value. Fair value is the price on the measurement date that would be received for the sale of an asset or paid to transfer a liability in an orderly transaction between market participants in the principal market, or in the most advantageous market in the absence of a principal market.

› **Refer to Note 20 for more information**

Critical accounting estimates and judgments

The use of valuation techniques, modeling assumptions and estimates of unobservable market inputs in the fair valuation of financial instruments requires significant judgment and could affect the amount of gain or loss recorded for a particular position. Valuation techniques that rely more heavily on unobservable inputs and sophisticated models inherently require a higher level of judgment and may require adjustment to reflect factors that market participants would consider in estimating fair value, such as close-out costs, which are presented in Note 20d.

UBS AG's governance framework over fair value measurement is described in Note 20b, and UBS AG provides a sensitivity analysis of the estimated effects arising from changing significant unobservable inputs in Level 3 financial instruments to reasonably possible alternative assumptions in Note 20f.

› **Refer to Note 20 for more information**

g. Allowances and provisions for expected credit losses

ECL are recognized for financial assets measured at amortized cost, financial assets measured at FVOCI, fee and lease receivables, financial guarantees, and loan commitments not measured at fair value. ECL are also recognized on the undrawn portion of committed unconditionally revocable credit lines, which include UBS AG's credit card limits and master credit facilities, as UBS AG is exposed to credit risk because the borrower has the ability to draw down funds before UBS AG can take credit risk mitigation actions.

Recognition of expected credit losses

ECL are recognized on the following basis.

- Stage 1 instruments: Maximum 12-month ECL are recognized from initial recognition, reflecting the portion of lifetime cash shortfalls that would result if a default occurs in the 12 months after the reporting date, weighted by the risk of a default occurring.
- Stage 2 instruments: Lifetime ECL are recognized if a significant increase in credit risk (an SICR) is observed subsequent to the instrument's initial recognition, reflecting lifetime cash shortfalls that would result from all possible default events over the expected life of a financial instrument, weighted by the risk of a default occurring. When an SICR is no longer observed, the instrument will move back to stage 1.
- Stage 3 instruments: Lifetime ECL are always recognized for credit-impaired financial instruments, as determined by the occurrence of one or more loss events, by estimating expected cash flows based on a chosen recovery strategy. Credit-impaired exposures may include positions for which no allowance has been recognized, for example because they are expected to be fully recoverable through collateral held.
- Changes in lifetime ECL since initial recognition are also recognized for assets that are purchased or originated credit-impaired (POCI). POCI financial instruments include those that are purchased at a deep discount or newly originated with a defaulted counterparty; they remain a separate category until derecognition.

All or part of a financial asset is written off if it is deemed uncollectible or forgiven. Write-offs reduce the principal amount of a claim and are charged against related allowances for credit losses. Recoveries, in part or in full, of amounts previously written off are generally credited to *Credit loss expense / (release)*.

ECL are recognized in the income statement in *Credit loss expense / (release)*. A corresponding ECL allowance is reported as a decrease in the carrying amount of financial assets measured at amortized cost on the balance sheet. For financial assets that are measured at FVOCI, the carrying amount is not reduced, but an accumulated amount is recognized in *Other comprehensive income*. For off-balance sheet financial instruments and other credit lines, provisions for ECL are presented in *Provisions.*

Default and credit impairment

UBS AG applies a single definition of default for credit risk management purposes, regulatory reporting and ECL, with a counterparty classified as defaulted based on quantitative and qualitative criteria.

› **Refer to "Credit policies for distressed assets" in the "Risk management and control" section of this report for more information**

Measurement of expected credit losses

IFRS 9 ECL reflect an unbiased, probability-weighted estimate based on loss expectations resulting from default events. The method used to calculate ECL applies the following principal factors: probability of default (PD), loss given default (LGD) and exposure at default (EAD). Parameters are generally determined on an individual financial asset level. Based on the materiality of the portfolio, for credit card exposures and personal account overdrafts in Switzerland, a portfolio approach is applied that derives an average PD and LGD for the entire portfolio. PDs and LGDs used in the ECL calculation are point-in-time (PIT)-based for key portfolios and consider both current conditions and expected cyclical changes. For material portfolios, PDs and LGDs are determined for different scenarios, whereas EAD projections are treated as scenario independent.

For the purpose of determining the ECL-relevant parameters, UBS AG leverages its Basel III advanced internal ratings-based (A-IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models. Adjustments have been made to these models and IFRS 9-related models have been developed that consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based, as opposed to the corresponding Basel III through-the-cycle (TTC) parameters. All models that are relevant for measuring expected credit losses are subject to UBS AG's model validation and oversight processes.

Probability of default: PD represents the probability of a default over a specified time period. A 12-month PD represents the probability of default determined for the next 12 months and a lifetime PD represents the probability of default over the remaining lifetime of the instrument. PIT PDs are derived from TTC PDs and scenario forecasts. The modeling is region, industry and client segment specific and considers both macroeconomic scenario dependencies and client-idiosyncratic information.

Exposure at default: EAD represents an estimate of the exposure to credit risk at the time of a potential default occurring, considering expected repayments, interest payments and accruals, discounted at the EIR. Future drawdowns on facilities are considered through a credit conversion factor (a CCF) that is reflective of historical drawdown and default patterns and the characteristics of the respective portfolios.

Loss given default: LGD represents an estimate of the loss at the time of a potential default occurring, taking into account expected future cash flows from collateral and other credit enhancements, or expected payouts from bankruptcy proceedings for unsecured claims and, where applicable, time to realization of collateral and the seniority of claims. LGD is commonly expressed as a percentage of EAD.

Estimation of expected credit losses

Number of scenarios and estimation of scenario weights
Determination of probability-weighted ECL requires evaluating a range of diverse and relevant future economic conditions, especially with a view to modeling the non-linear effect of assumptions about macroeconomic factors on the estimate.

To accommodate this requirement, UBS AG uses different economic scenarios in the ECL calculation. Each scenario is represented by a specific scenario narrative, which is relevant considering the exposure of key portfolios to economic risks, and for which a set of consistent macroeconomic variables is determined. The estimation of the appropriate weights for these scenarios is predominantly judgment-based. The assessment is based on a holistic review of the prevailing economic or political conditions, which may exhibit different levels of uncertainty. It takes into account the impact of changes in the nature and severity of the underlying scenario narratives and the projected economic variables.

The determined weights constitute the probabilities that the respective set of macroeconomic conditions will occur and not that the chosen particular narratives with the related macroeconomic variables will materialize.

Macroeconomic and other factors
The range of macroeconomic, market and other factors that is modeled as part of the scenario determination is wide, and historical information is used to support the identification of the key factors. As the forecast horizon increases, the availability of information decreases, requiring an increase in judgment. For cycle-sensitive PD and LGD determination purposes, UBS AG projects the relevant economic factors for a period of three years before reverting, over a specified period, to cycle-neutral PD and LGD for longer-term projections.

Factors relevant for ECL calculation vary by type of exposure. Regional and client-segment characteristics are generally taken into account, with specific focus on Switzerland and the US, considering UBS AG's key ECL-relevant portfolios.

For UBS AG, the following forward-looking macroeconomic variables represent the most relevant factors for ECL calculation:
- GDP growth rates, given their significant effect on borrowers' performance;
- unemployment rates, given their significant effect on private clients' ability to meet contractual obligations;
- house price indices, given their significant effect on mortgage collateral valuations;
- interest rates, given their significant effect on counterparties' abilities to service debt;
- consumer price indices, given their overall relevance for companies' performance, private clients' purchasing power and economic stability; and
- equity indices, given that they are an important factor in our corporate rating tools.

Scenario generation, review process and governance
A team of economists, which is part of Group Risk Control, develop the forward-looking macroeconomic assumptions with involvement from a broad range of experts.

The scenarios, their weight and the key macroeconomic and other factors are subject to a critical assessment by the IFRS 9 Scenario Sounding Sessions and ECL Management Forum, which include senior management from Group Risk and Group Finance. Important aspects for the review include whether there may be particular credit risk concerns that may not be capable of being addressed systematically and require post-model adjustments for stage allocation and ECL allowance.

The Group Model Governance Committee (the GMGC), as the highest authority under UBS AG's model governance framework, ratifies the decisions taken by the ECL Management Forum.

› **Refer to Note 19 for more information**

ECL measurement period

The period for which lifetime ECL are determined is based on the maximum contractual period that UBS AG is exposed to credit risk, taking into account contractual extension, termination and prepayment options. For irrevocable loan commitments and financial guarantee contracts, the measurement period represents the maximum contractual period for which UBS AG has an obligation to extend credit.

Additionally, some financial instruments include both an on-demand loan and a revocable undrawn commitment, where the contractual cancellation right does not limit UBS AG's exposure to credit risk to the contractual notice period, as the client has the ability to draw down funds before UBS AG can take risk-mitigating actions. In such cases UBS AG is required to estimate the period over which it is exposed to credit risk. This applies to UBS AG's credit card limits, which do not have a defined contractual maturity date, are callable on demand and where the drawn and undrawn components are managed as one exposure. The exposure arising from UBS AG's credit card limits is not significant and is managed at a portfolio level, with credit actions triggered when balances are past due. An ECL measurement period of seven years is applied for credit card limits, capped at 12 months for stage 1 balances, as a proxy for the period that UBS AG is exposed to credit risk.

Customary master credit agreements in the Swiss corporate market also include on-demand loans and revocable undrawn commitments. For smaller commercial facilities, a risk-based monitoring (RbM) approach is in place that highlights negative trends as risk events, at an individual facility level, based on a combination of continuously updated risk indicators. The risk events trigger additional credit reviews by a risk officer, enabling informed credit decisions to be taken. Larger corporate facilities are not subject to RbM, but are reviewed at least annually through a formal credit review. UBS AG has assessed these credit risk management practices and considers both the RbM approach and formal credit reviews as substantive credit reviews resulting in a re-origination of the given facility. Following this, a 12-month measurement period from the reporting date is used for both types of facilities as an appropriate proxy of the period over which UBS AG is exposed to credit risk, with 12 months also used as a look-back period for assessing SICR, always from the respective reporting date.

Significant increase in credit risk

Financial instruments subject to ECL are monitored on an ongoing basis. To determine whether the recognition of a maximum 12-month ECL continues to be appropriate, an assessment is made as to whether an SICR has occurred since initial recognition of the financial instrument, applying both quantitative and qualitative factors.

Primarily, UBS AG assesses changes in an instrument's risk of default on a quantitative basis by comparing the annualized forward-looking and scenario-weighted lifetime PD of an instrument determined at two different dates:
– at the reporting date; and
– at inception of the instrument.

If, based on UBS AG's quantitative modeling, an increase exceeds a set threshold, an SICR is deemed to have occurred and the instrument is transferred to stage 2 with lifetime ECL recognized.

The threshold applied varies depending on the original credit quality of the borrower, with a higher SICR threshold set for those instruments with a low PD at inception. The SICR assessment based on PD changes is made at an individual financial asset level. A high-level overview of the SICR trigger, which is a multiple of the annualized remaining lifetime PIT PD expressed in rating downgrades, is provided in the "SICR thresholds" table below. The actual SICR thresholds applied are defined on a more granular level by interpolating between the values shown in the table.

SICR thresholds

Internal rating at origination of the instrument	Rating downgrades / SICR trigger
0–3	3
4–8	2
9–13	1

› **Refer to the "Risk management and control" section of this report for more details about UBS AG's internal grading system**

Irrespective of the SICR assessment based on default probabilities, credit risk is generally deemed to have significantly increased for an instrument if the contractual payments are more than 30 days past due. For certain less material portfolios, specifically the Swiss credit card portfolio, the 30-day past due criterion is used as the primary indicator of an SICR. Where instruments are transferred to stage 2 due to the 30-day past due criterion, a minimum period of six months is applied before a transfer back to stage 1 can be triggered. For instruments in Personal & Corporate Banking and Global Wealth Management Region Switzerland that are between 90 and 180 days past due but have not been reclassified to stage 3, a one-year period is applied before a transfer back to stage 1 can be triggered.

Additionally, based on individual counterparty-specific indicators, external market indicators of credit risk or general economic conditions, counterparties may be moved to a watch list, which is used as a secondary qualitative indicator for an SICR. Exception management is further applied, allowing for individual and collective adjustments on exposures sharing the same credit risk characteristics to take account of specific situations that are not otherwise fully reflected.

In general, the overall SICR determination process does not apply to Lombard loans, securities financing transactions and certain other asset-based lending transactions, because of the risk management practices adopted, including daily monitoring processes with strict margining. If margin calls are not satisfied, a position is closed out and classified as a stage 3 position. In exceptional cases, an individual adjustment and a transfer into stage 2 may be made to take account of specific facts.

Credit risk officers are responsible for the identification of an SICR, which for accounting purposes is in some respects different from internal credit risk management processes. This difference mainly arises because ECL accounting requirements are instrument-specific, such that a borrower can have multiple exposures allocated to different stages, and maturing loans in stage 2 will migrate to stage 1 upon renewal irrespective of the actual credit risk at that time. Under a risk-based approach, a holistic counterparty credit assessment and the absolute level of risk at any given date will determine what risk-mitigating actions may be warranted.

› **Refer to the "Risk management and control" section of this report for more information**

Critical accounting estimates and judgments

The calculation of ECL requires management to apply significant judgment and make estimates and assumptions that can result in significant changes to the timing and amount of ECL recognized.

Determination of a significant increase in credit risk
IFRS 9 does not include a definition of what constitutes an SICR, with UBS AG's assessment considering qualitative and quantitative criteria. An IFRS 9 ECL Management Forum has been established to review and challenge the SICR results.

Scenarios, scenario weights and macroeconomic variables
ECL reflect an unbiased and probability-weighted amount, which UBS AG determines by evaluating a range of possible outcomes. Management selects forward-looking scenarios that include relevant macroeconomic variables and management's assumptions around future economic conditions. IFRS 9 Scenario Sounding Sessions, in addition to the IFRS 9 ECL Management Forum, are in place to derive, review and challenge the scenario selection and weights, and to determine whether any additional post-model adjustments are required that may significantly affect ECL.

ECL measurement period
Lifetime ECL are generally determined based upon the contractual maturity of the transaction, which significantly affects ECL. For credit card limits and Swiss callable master credit facilities, judgment is required, as UBS AG must determine the period over which it is exposed to credit risk. A seven-year period is applied for credit card limits, capped at 12 months for stage 1 positions, and a 12-month period applied for master credit facilities.

Modeling and post-model adjustments
A number of complex models have been developed or modified to calculate ECL, with additional post-model adjustments required which may significantly affect ECL. The models are governed by UBS AG's model validation controls and approved by the GMGC. The post-model adjustments are approved by the ECL Management Forum and endorsed by the GMGC.

A sensitivity analysis covering key macroeconomic variables, scenario weights and SICR trigger points on ECL measurement is provided in Note 19f.

› **Refer to Note 19 for more information**

h. Restructured and modified financial assets

When payment default is expected, or where default has already occurred, UBS AG may grant concessions to borrowers in financial difficulties that it would not consider in the normal course of its business, such as preferential interest rates, extension of maturity, modifying the schedule of repayments, debt / equity swap, subordination, etc.

› **Refer to the "Risk management and control" section of this report for more information**

Modifications result in an alteration of future contractual cash flows and can occur within UBS AG's normal risk tolerance or as part of a credit restructuring where a counterparty is in financial difficulties. The restructuring or modification of a financial asset could lead to a substantial change in the terms and conditions, resulting in the original financial asset being derecognized and a new financial asset being recognized. Where the modification does not result in a derecognition, any difference between the modified contractual cash flows discounted at the original EIR and the existing gross carrying amount of the given financial asset is recognized in the income statement as a modification gain or loss.

i. Offsetting

UBS AG presents financial assets and liabilities on its balance sheet net if (i) it has a legally enforceable right to set off the recognized amounts and (ii) it intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. Netted positions include, for example, certain derivatives and repurchase and reverse repurchase transactions with various counterparties, exchanges and clearing houses.

In assessing whether UBS AG intends to either settle on a net basis, or to realize the asset and settle the liability simultaneously, emphasis is placed on the effectiveness of operational settlement mechanics in eliminating substantially all credit and liquidity exposure between the counterparties. This condition precludes offsetting on the balance sheet for substantial amounts of UBS AG's financial assets and liabilities, even though they may be subject to enforceable netting arrangements. Repurchase arrangements and securities financing transactions are presented net only to the extent that the settlement mechanism eliminates, or results in insignificant, credit and liquidity risk, and processes the receivables and payables in a single settlement process or cycle.

› **Refer to Note 21 for more information**

j. Hedge accounting

UBS AG applies hedge accounting requirements of IFRS 9 where the criteria for documentation and hedge effectiveness are met. If a hedge relationship no longer meets the criteria for hedge accounting, hedge accounting is discontinued. Voluntary discontinuation of hedge accounting is not permitted under IFRS 9.

Fair value hedges of interest rate risk related to debt instruments and loan assets
The fair value change of the hedged item attributable to a hedged risk is reflected as an adjustment to the carrying amount of the hedged item and recognized in the income statement along with the change in the fair value of the hedging instrument.

Fair value hedges of FX risk related to debt instruments
The fair value change of the hedged item attributable to the hedged risk is reflected in the measurement of the hedged item and recognized in the income statement along with the change in the fair value of the hedging instrument. The foreign currency basis spread of cross-currency swaps designated as hedging derivatives is excluded from the designation and accounted for as a cost of hedging with amounts deferred in *Other comprehensive income* within *Equity*. These amounts are released to the income statement over the term of the hedged item.

Discontinuation of fair value hedges
Discontinuations for reasons other than derecognition of the hedged item result in an adjustment to the carrying amount, which is amortized to the income statement over the remaining life of the hedged item using the effective interest method. If the hedged item is derecognized, the unamortized fair value adjustment or deferred cost of hedging amount is recognized immediately in the income statement as part of any derecognition gain or loss.

Cash flow hedges of forecast transactions
Fair value gains or losses associated with the effective portion of derivatives designated as cash flow hedges for cash flow repricing risk are recognized initially in *Other comprehensive income* within *Equity* and reclassified to *Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income* or *Interest expense from financial instruments measured at amortized cost* in the periods when the hedged forecast cash flows affect profit or loss, including discontinued hedges for which forecast cash flows are expected to occur. If the forecast transactions are no longer expected to occur, the deferred gains or losses are immediately reclassified to the income statement.

Hedges of net investments in foreign operations
Gains or losses on the hedging instrument relating to the effective portion of a hedge are recognized directly in *Other comprehensive income* within *Equity,* while any gains or losses relating to the ineffective and / or undesignated portion (for example, the interest element of a forward contract) are recognized in the income statement. Upon disposal or partial disposal of the foreign operation, the cumulative value of any such gains or losses recognized in *Equity* associated with the entity is reclassified to *Other income*.

Interest Rate Benchmark Reform
UBS AG continues hedge accounting during the period of uncertainty before existing interest rate benchmarks are replaced with alternative risk-free interest rates. During this period, UBS AG assumes that the current benchmark rates will continue to exist, such that forecast transactions are considered highly probable and hedge relationships remain, with little or no consequential impact on the financial statements. Upon replacement of existing interest rate benchmarks by alternative risk-free interest rates, UBS AG applies the requirements of *Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 (Interest Rate Benchmark Reform – Phase 2),* where applicable.

› **Refer to Note 25 for more information**

3) Fee and commission income and expenses

UBS AG earns fee income from the diverse range of services it provides to its clients. Fee income can be divided into two broad categories: fees earned from services that are provided over a certain period of time, such as management of clients' assets, custody services and certain advisory services; and fees earned from point-in-time services, such as underwriting fees, deal-contingent merger and acquisitions fees, and brokerage fees (e.g., securities and derivatives execution and clearing). UBS AG recognizes fees earned from PIT services when it has fully provided the service to the client. Where the contract requires services to be provided over time, income is recognized on a systematic basis over the life of the agreement.

Consideration received is allocated to the separately identifiable performance obligations in a contract. Owing to the nature of UBS AG's business, contracts that include multiple performance obligations are typically those that are considered to include a series of similar performance obligations fulfilled over time with the same pattern of transfer to the client, e.g., management of client assets and custodial services. As a consequence, UBS AG is not required to apply significant judgment in allocating the consideration received across the various performance obligations.

PIT services are generally for a fixed price or dependent on deal size, e.g., a fixed number of basis points of trade size, where the amount of revenue is known when the performance obligation is met. Fixed-over-time fees are recognized on a straight-line basis over the performance period. Custodial and asset management fees can be variable through reference to the size of the customer portfolio. However, they are generally billed on a monthly or quarterly basis once the customer's portfolio size is known or known with near certainty and therefore also recognized ratably over the performance period. UBS AG does not recognize performance fees related to management of clients' assets or fees related to contingencies beyond UBS AG's control until such uncertainties are resolved.

UBS AG's fees are generally earned from short-term contracts. As a result, UBS AG's contracts do not include a financing component or result in the recognition of significant receivables or prepayment assets. Furthermore, due to the short-term nature of such contracts, UBS AG has not capitalized any material costs to obtain or fulfill a contract or generated any significant contract assets or liabilities.

UBS AG presents expenses primarily in line with their nature in the income statement, differentiating between expenses that are directly attributable to the satisfaction of specific performance obligations associated with the generation of revenues, which are generally presented within *Total revenues* as *Fee and commission expense*, and those that are related to personnel, general and administrative expenses, which are presented within *Operating expenses*. For derivatives execution and clearing services (where UBS AG acts as an agent), UBS AG only records its specific fees in the income statement, with fees payable to other parties not recognized as an expense but instead directly offset against the associated income collected from the given client.

› **Refer to Note 4 for more information, including the disaggregation of revenues**

4) Share-based and other deferred compensation plans

UBS AG recognizes expenses for deferred compensation awards over the period that the employee is required to provide service to become entitled to the award. Where the service period is shortened, for example in the case of employees affected by restructuring programs or mutually agreed termination provisions, recognition of such expense is accelerated to the termination date. Where no future service is required, such as for employees who are eligible for retirement or who have met certain age and length-of-service criteria, the services are presumed to have been received and compensation expense is recognized over the performance year or, in the case of off-cycle awards, immediately on the grant date.

Share-based compensation plans

UBS Group AG is the grantor of and maintains the obligation to settle share-based compensation plans that are awarded to employees of UBS AG. As a consequence, UBS AG classifies the awards of UBS Group AG shares as equity-settled share-based payment transactions. UBS AG recognizes the fair value of awards granted to its employees by reference to the fair value of UBS Group AG's equity instruments on the date of grant, taking into account the terms and conditions inherent in the award, including, where relevant, dividend rights, transfer restrictions in effect beyond the vesting date, market conditions, and non-vesting conditions.

For equity-settled awards, fair value is not remeasured unless the terms of the award are modified such that there is an incremental increase in value. Expenses are recognized, on a per-tranche basis, over the service period based on an estimate of the number of instruments expected to vest and are adjusted to reflect the actual outcomes of service or performance conditions.

For equity-settled awards, forfeiture events resulting from a breach of a non-vesting condition (i.e., one that does not relate to a service or performance condition) do not result in any adjustment to the share-based compensation expense.

For cash-settled share-based awards, fair value is remeasured at each reporting date, so that the cumulative expense recognized equals the cash distributed.

Other deferred compensation plans

Compensation expense for other deferred compensation plans is recognized on a per-tranche or straight-line basis, depending on the nature of the plan. The amount recognized is measured based on the present value of the amount expected to be paid under the plan and is remeasured at each reporting date, so that the cumulative expense recognized equals the cash or the fair value of respective financial instruments distributed.

› **Refer to Note 27 for more information**

5) Post-employment benefit plans

Defined benefit plans

Defined benefit plans specify an amount of benefit that an employee will receive, which usually depends on one or more factors, such as age, years of service and compensation. The defined benefit liability recognized in the balance sheet is the present value of the defined benefit obligation, measured using the projected unit credit method, less the fair value of the plan's assets at the balance sheet date, with changes resulting from remeasurements recorded immediately in *Other comprehensive income*. If the fair value of the plan's assets is higher than the present value of the defined benefit obligation, the recognition of the resulting net asset is limited to the present value of economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. Calculation of the net defined benefit obligation or asset takes into account the specific features of each plan, including risk sharing between employee and employer, and is calculated periodically by independent qualified actuaries.

Critical accounting estimates and judgments

The net defined benefit liability or asset at the balance sheet date and the related personnel expense depend on the expected future benefits to be provided, determined using a number of economic and demographic assumptions. A range of assumptions could be applied, and different assumptions could significantly alter the defined benefit liability or asset and pension expense recognized. The most significant assumptions include life expectancy, discount rate, expected salary increases, pension increases and interest credits on retirement savings account balances. Sensitivity analysis for reasonable possible movements in each significant assumption for UBS AG's post-employment obligations is provided in Note 26.

› **Refer to Note 26 for more information**

Defined contribution plans

A defined contribution plan pays fixed contributions into a separate entity from which post-employment and other benefits are paid. UBS AG has no legal or constructive obligation to pay further amounts if the plan does not hold sufficient assets to pay employees the benefits relating to employee service in the current and prior periods. Compensation expense is recognized when the employees have rendered services in exchange for contributions. This is generally in the year of contribution. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

6) Income taxes

UBS AG is subject to the income tax laws of Switzerland and those of the non-Swiss jurisdictions in which UBS AG has business operations.

UBS AG's provision for income taxes is composed of current and deferred taxes. Current income taxes represent taxes to be paid or refunded for the current period or previous periods.

Deferred tax assets (DTAs) and deferred tax liabilities (DTLs) are recognized for temporary differences between the carrying amounts and tax bases of assets and liabilities that will result in deductible or taxable amounts, respectively in future periods. DTAs may also arise from other sources, including unused tax losses and unused tax credits. DTAs and DTLs are measured using the applicable tax rates and laws that have been enacted or substantively enacted by the end of the reporting period and that will be in effect when such differences are expected to reverse.

DTAs are recognized only to the extent it is probable that sufficient taxable profits will be available against which these differences can be used. When an entity or tax group has a history of recent losses, DTAs are only recognized to the extent there are sufficient taxable temporary differences or there is convincing other evidence that sufficient taxable profit will be available against which the unused tax losses can be utilized.

Deferred and current tax assets and liabilities are offset when: (i) they arise in the same tax reporting group; (ii) they relate to the same tax authority; (iii) the legal right to offset exists; and (iv) with respect to current taxes they are intended to be settled net or realized simultaneously.

Current and deferred taxes are recognized as income tax benefit or expense in the income statement, except for current and deferred taxes recognized in relation to: (i) the acquisition of a subsidiary (for which such amounts would affect the amount of goodwill arising from the acquisition); (ii) gains and losses on the sale of treasury shares (for which the tax effects are recognized directly in *Equity*); (iii) unrealized gains or losses on financial instruments that are classified at FVOCI; (iv) changes in fair value of derivative instruments designated as cash flow hedges; (v) remeasurements of defined benefit plans; or (vi) certain foreign currency translations of foreign operations. Amounts relating to points (iii) through (vi) above are recognized in *Other comprehensive income* within *Equity*.

UBS AG reflects the potential effect of uncertain tax positions for which acceptance by the relevant tax authority is not considered probable by adjusting current or deferred taxes, as applicable, using either the most likely amount or expected value methods, depending on which method is deemed a better predictor of the basis on which, and extent to which, the uncertainty will be resolved.

Critical accounting estimates and judgments

Tax laws are complex, and judgment and interpretations about the application of such laws are required when accounting for income taxes. UBS AG considers the performance of its businesses and the accuracy of historical forecasts and other factors when evaluating the recoverability of its DTAs, including the remaining tax loss carry-forward period, and its assessment of expected future taxable profits in the forecast period used for recognizing DTAs. Estimating future profitability and business plan forecasts is inherently subjective and is particularly sensitive to future economic, market and other conditions.

Forecasts are reviewed annually, but adjustments may be made at other times, if required. If recent losses have been incurred, convincing evidence is required to prove there is sufficient future profitability given that the value of UBS AG's DTAs may be affected, with effects primarily recognized through the income statement.

In addition, judgment is required to assess the expected value of uncertain tax positions and the related probabilities, including interpretation of tax laws, the resolution of any income tax-related appeals and litigation.

› **Refer to Note 8 for more information**

7) Property, equipment and software

Property, equipment and software is measured at cost less accumulated depreciation and impairment losses. Software development costs are capitalized only when the costs can be measured reliably and it is probable that future economic benefits will arise. Depreciation of property, equipment and software begins when they are available for use and is calculated on a straight line basis over an asset's estimated useful life.

Property, equipment and software are generally tested for impairment at the appropriate cash-generating unit level, alongside goodwill and intangible assets as described in item 8 in this Note. An impairment charge is recognized for such assets if the recoverable amount is below its carrying amount. The recoverable amounts of such assets, other than property that has a market price, are generally determined using a replacement cost approach that reflects the amount that would be currently required by a market participant to replace the service capacity of the asset. If such assets are no longer used, they are tested individually for impairment.

› **Refer to Note 11 for more information**

8) Goodwill

Goodwill represents the excess of the consideration over the fair value of identifiable assets, liabilities and contingent liabilities acquired that arises in a business combination. Goodwill is not amortized, but is assessed for impairment at the end of each reporting period, or when indicators of impairment exist. UBS AG tests goodwill for impairment annually, irrespective of whether there is any indication of impairment.

An impairment charge is recognized in the income statement if the carrying amount exceeds the recoverable amount of a cash-generating unit.

Critical accounting estimates and judgments

UBS AG's methodology for goodwill impairment testing is based on a model that is most sensitive to the following key assumptions: (i) forecasts of earnings available to shareholders in years one to three; (ii) changes in the discount rates; and (iii) changes in the long-term growth rate.

Earnings available to shareholders are estimated on the basis of forecast results, which are part of the business plan approved by the BoD. The discount rates and growth rates are determined using external information, and also considering inputs from both internal and external analysts and the view of management.

The key assumptions used to determine the recoverable amounts of each cash-generating unit are tested for sensitivity by applying reasonably possible changes to those assumptions.

› **Refer to Notes 2 and 12 for more information**

9) Provisions and contingent liabilities

Provisions are liabilities of uncertain timing or amount, and are generally recognized in accordance with IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*, when: (i) UBS AG has a present obligation as a result of a past event; (ii) it is probable that an outflow of resources will be required to settle the obligation; and (iii) a reliable estimate of the amount of the obligation can be made.

The majority of UBS AG's provisions relate to litigation, regulatory and similar matters, restructuring, and employee benefits. Restructuring provisions are generally recognized as a consequence of management agreeing to materially change the scope of the business or the manner in which it is conducted, including changes in management structures. Provisions for employee benefits relate mainly to service anniversaries and sabbatical leave, and are recognized in accordance with measurement principles set out in item 4 in this Note. In addition, UBS AG presents expected credit loss allowances within *Provisions* if they relate to a loan commitment, financial guarantee contract or a revolving revocable credit line.

IAS 37 provisions are measured considering the best estimate of the consideration required to settle the present obligation at the balance sheet date.

When conditions required to recognize a provision are not met, a contingent liability is disclosed, unless the likelihood of an outflow of resources is remote. Contingent liabilities are also disclosed for possible obligations that arise from past events, the existence of which will be confirmed only by uncertain future events not wholly within the control of UBS AG.

Critical accounting estimates and judgments

Recognition of provisions often involves significant judgment in assessing the existence of an obligation that results from past events and in estimating the probability, timing and amount of any outflows of resources. This is particularly the case for litigation, regulatory and similar matters, which, due to their nature, are subject to many uncertainties, making their outcome difficult to predict.

The amount of any provision recognized is sensitive to the assumptions used and there could be a wide range of possible outcomes for any particular matter.

Management regularly reviews all the available information regarding such matters, including legal advice, to assess whether the recognition criteria for provisions have been satisfied and to determine the timing and amount of any potential outflows.

› **Refer to Note 17 for more information**

10) Foreign currency translation

Transactions denominated in a foreign currency are translated into the functional currency of the reporting entity at the spot exchange rate on the date of the transaction. At the balance sheet date, all monetary assets, including those at FVOCI, and monetary liabilities denominated in foreign currency are translated into the functional currency using the closing exchange rate. Translation differences are reported in *Other net income from financial instruments measured at fair value through profit or loss*.

Non-monetary items measured at historical cost are translated at the exchange rate on the date of the transaction.

Upon consolidation, assets and liabilities of foreign operations are translated into US dollars, UBS AG's presentation currency, at the closing exchange rate on the balance sheet date, and income and expense items and other comprehensive income are translated at the average rate for the period. The resulting foreign currency translation differences are recognized in *Equity* and reclassified to the income statement when UBS AG disposes of, partially or in its entirety, the foreign operation and UBS AG no longer controls the foreign operation.

Share capital issued, share premium and treasury shares held are translated at the historic average rate, with the difference between the historic average rate and the spot rate realized upon repayment of share capital or disposal of treasury shares reported as *Share premium.* Cumulative amounts recognized in *Other comprehensive income* in respect of cash flow hedges and financial assets measured at FVOCI are translated at the closing exchange rate as of the balance sheet dates, with any translation effects adjusted through *Retained earnings*.

› **Refer to Note 32 for more information**

11) Contracts on UBS Group AG shares

Contracts involving UBS Group AG shares that require net cash settlement, or provide the counterparty or UBS AG with a settlement option that includes a choice of settling net in cash, are classified as derivatives held for trading.

b) Changes in accounting policies, comparability and other adjustments

Changes to the presentation of the financial statements

During 2022, UBS AG made several changes to simplify the presentation of the income statement alongside other primary financial statements and disclosure notes, and to align them with management information. In particular, *Total operating income* has been renamed *Total revenues* and excludes *Credit loss expense / (release)*, which is now separately presented below *Total revenues*.

Reclassification of a portfolio from *Financial assets measured at fair value through other comprehensive income* to *Other financial assets measured at amortized cost*

Effective from 1 April 2022, UBS AG has reclassified a portfolio of financial assets from *Financial assets measured at fair value through other comprehensive income* with a fair value of USD 6.9bn (the Portfolio) to *Other financial assets measured at amortized cost*, in line with the principles in IFRS 9, *Financial Instruments*, which require a reclassification when an entity changes its business model for managing financial assets.

The Portfolio's cumulative fair value losses of USD 449m pre-tax and USD 333m post-tax, previously recognized in *Other comprehensive income*, have been removed from equity and adjusted against the value of the assets on the reclassification date, so that the Portfolio is measured as if the assets had always been classified at amortized cost, with a value of USD 7.4bn as on 1 April 2022. The reclassification had no effect on the income statement.

The reclassified Portfolio is made up of high-quality liquid assets, primarily US government treasuries and US government agency mortgage-backed securities, held and separately managed by UBS Bank USA (BUSA).

The accounting reclassification has arisen as a direct result of the transformation of UBS AG's Global Wealth Management Americas business, which has significantly impacted BUSA. This includes initiatives approved by the Group Executive Board to significantly grow and extend the business, as disclosed on 1 February 2022 during UBS's fourth quarter 2021 earnings presentation. Over the two years preceding the reclassification date, BUSA's deposit base grew by more than 100% generating substantial cash balances, with a number of new products being launched, including new deposit types that are longer in duration, additional lending and a broader range of customer segments targeted.

Following the commencement of these activities and the announcement made in the first quarter of 2022, the Portfolio is no longer held in a business model to collect the contractual cash flows and sell the assets, but is instead solely held to collect the contractual cash flows until the assets mature, requiring a reclassification of the Portfolio in line with IFRS 9 with effect from 1 April 2022.

The fair value of the Portfolio as on 31 December 2022 was USD 5.8bn. A pre-tax fair value loss of USD 981m would have been recognized in *Other comprehensive income* during 2022 if the Portfolio had not been reclassified.

› **Refer to the Statement of changes in equity and Note 20 for more information about the effects from the reclassification of the Portfolio**

Accounting for obligations to safeguard crypto-assets an entity holds for platform users (SAB 121)

In March 2022, the US Security and Exchange Commission (the SEC) issued Staff Accounting Bulletin (SAB) 121, "Accounting for obligations to safeguard crypto-assets an entity holds for platform users." SAB 121 adds interpretive guidance requiring SEC registrants, including foreign private issuers that apply IFRS, to recognize a liability on their balance sheets to reflect the obligation to safeguard any digital asset that is issued or transferred using distributed ledger or blockchain technology and held for their platform users, along with a corresponding asset. The guidance is effective for UBS AG for annual reporting from 2022 onwards. Amounts that would be recognized as liabilities, with corresponding assets, under this guidance are not material to UBS AG.

c) International Financial Reporting Standards and Interpretations to be adopted in 2023 and later and other changes

IFRS 17, *Insurance Contracts*

In May 2017, the IASB issued IFRS 17, *Insurance Contracts*, which sets out the accounting requirements for contractual rights and obligations that arise from insurance contracts issued and reinsurance contracts held. IFRS 17 is effective from 1 January 2023. Adoption on 1 January 2023 will have no effect on UBS AG's financial statements. UBS AG does not provide insurance services in any market.

Other amendments to IFRS

The IASB has issued a number of minor amendments to IFRS, effective from 1 January 2023 and in later years. These amendments are not expected to have a significant effect on UBS AG when they are adopted.

Note 2a Segment reporting

UBS AG's businesses are organized globally into four business divisions: Global Wealth Management, Personal & Corporate Banking, Asset Management and the Investment Bank. All four business divisions are supported by Group Functions and qualify as reportable segments for the purpose of segment reporting. Together with Group Functions, the four business divisions reflect the management structure of UBS AG.

- **Global Wealth Management** provides financial services, advice and solutions to private wealth clients. Its offering ranges from investment management to estate planning and corporate finance advice, in addition to specific wealth management and banking products and services.
- **Personal & Corporate Banking** serves its private, corporate, and institutional clients' needs, from banking to retirement, financing, investments and strategic transactions, in Switzerland, through its branch network and digital channels.
- **Asset Management** is a global, large-scale and diversified asset manager. It offers investment capabilities and styles across all major traditional and alternative asset classes, as well as advisory support to institutions, wholesale intermediaries and wealth management clients.
- The **Investment Bank** provides a range of services to institutional, corporate and wealth management clients globally, to help them raise capital, grow their businesses, invest and manage risks. Its offering includes research, advisory services, facilitating clients raising debt and equity from the public and private markets and capital markets, cash and derivatives trading across equities and fixed income, and financing.
- **Group Functions** is made up of the following major areas: Group Services (which consists of Chief Digital and Information Office, Communications & Branding, Compliance, Finance, Group Sustainability and Impact, Human Resources, Group Legal, Regulatory & Governance, and Risk Control), Group Treasury and Non-core and Legacy Portfolio.

Financial information about the four business divisions and Group Functions is presented separately in internal management reports to the Executive Board, which is considered the "chief operating decision maker" pursuant to IFRS 8, *Operating Segments*.

UBS AG's internal accounting policies, which include management accounting policies and service level agreements, determine the revenues and expenses directly attributable to each reportable segment. Transactions between the reportable segments are carried out at internally agreed rates and are reflected in the operating results of the reportable segments. Revenue-sharing agreements are used to allocate external client revenues to reportable segments where several reportable segments are involved in the value creation chain. Total intersegment revenues for UBS AG are immaterial, as the majority of the revenues are allocated across the segments by means of revenue-sharing agreements. Interest income earned from managing UBS AG's consolidated equity is allocated to the reportable segments based on average attributed equity and currency composition. Assets and liabilities of the reportable segments are funded through and invested with Group Functions, and the net interest margin is reflected in the results of each reportable segment.

Segment assets are based on a third-party view and do not include intercompany balances. This view is in line with internal reporting to management. If one operating segment is involved in an external transaction together with another operating segment or Group Functions, additional criteria are considered to determine the segment that will report the associated assets. This will include a consideration of which segment's business needs are being addressed by the transaction and which segment is providing the funding and / or resources. Allocation of liabilities follows the same principles.

Non-current assets disclosed for segment reporting purposes represent assets that are expected to be recovered more than 12 months after the reporting date, excluding financial instruments, deferred tax assets and post-employment benefits.

Note 2a Segment reporting (continued)

USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	UBS AG
For the year ended 31 December 2022						
Net interest income	5,274	2,192	(19)	(241)	(688)	6,517
Non-interest income	13,689	2,113	2,980[1]	8,958	659	28,398
Total revenues	18,963	4,304	2,961	8,717	(30)	34,915
Credit loss expense / (release)	0	39	0	(12)	3	29
Operating expenses	14,069	2,475	1,565	6,890	928	25,927
Operating profit / (loss) before tax	4,894	1,790	1,396	1,839	(960)	8,960
Tax expense / (benefit)						1,844
Net profit / (loss)						7,116
Additional information						
Total assets	388,624	235,330	16,971	391,495	73,016	1,105,436
Additions to non-current assets	42	13	1	33	1,773	1,862

USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	UBS AG
For the year ended 31 December 2021						
Net interest income	4,244	2,120	(15)	481	(226)	6,605
Non-interest income	15,175	2,144	2,632	8,978	294	29,222
Total revenues	19,419	4,264	2,617	9,459	68	35,828
Credit loss expense / (release)	(29)	(86)	1	(34)	0	(148)
Operating expenses	14,743	2,623	1,593	6,902	1,151	27,012
Operating profit / (loss) before tax	**4,706**	**1,726**	**1,023**	**2,592**	**(1,083)**	**8,964**
Tax expense / (benefit)						1,903
Net profit / (loss)						**7,061**
Additional information						
Total assets[2]	395,235	225,425	25,202	346,641	123,641	1,116,145
Additions to non-current assets	56	16	1	30	1,689	1,791

USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	UBS AG
For the year ended 31 December 2020						
Net interest income	4,027	2,049	(17)	284	(555)	5,788
Non-interest income[3]	13,107	1,859	2,993	9,224	504	27,686
Total revenues	17,134	3,908	2,975	9,508	(52)	33,474
Credit loss expense / (release)	88	257	2	305	42	695
Operating expenses	13,080	2,390	1,520	6,762	1,329	25,081
Operating profit / (loss) before tax	**3,965**	**1,261**	**1,454**	**2,441**	**(1,423)**	**7,699**
Tax expense / (benefit)						1,488
Net profit / (loss)						**6,211**
Additional information						
Total assets	367,714	231,710	28,266	369,778	127,858	1,125,327
Additions to non-current assets	5	12	385	150	1,971	2,524

1 Includes an USD 848m gain in Asset Management related to the sale of UBS AG's shareholding in Mitsubishi Corp.-UBS Realty Inc. 2 During 2022, UBS AG refined the methodology applied to allocate balance sheet resources from Group Functions to the business divisions, with prospective effect. If the new methodology had been applied as of 31 December 2021, balance sheet assets allocated to business divisions would have been USD 26bn higher, of which USD 14bn related to the Investment Bank. 3 Includes a USD 631m net gain on the sale of a majority stake in Fondcenter AG (now Clearstream Fund Centre AG), of which USD 571m was recognized in Asset Management and USD 60m was recognized in Global Wealth Management.

Note 2b Segment reporting by geographic location

The operating regions shown in the table below correspond to the regional management structure of UBS AG. The allocation of total revenues to these regions reflects, and is consistent with, the basis on which the business is managed and its performance is evaluated. These allocations involve assumptions and judgments that management considers to be reasonable, and may be refined to reflect changes in estimates or management structure. The main principles of the allocation methodology are that client revenues are attributed to the domicile of the given client and trading and portfolio management revenues are attributed to the country where the risk is managed. This revenue attribution is consistent with the mandate of the regional Presidents. Certain revenues, such as those related to Non-core and Legacy Portfolio in Group Functions, are managed at a Group level. These revenues are included in the *Global* line.

The geographic analysis of non-current assets is based on the location of the entity in which the given assets are recorded.

For the year ended 31 December 2022

	Total revenues[1]		Total non-current assets	
	USD bn	Share %	USD bn	Share %
Americas[2]	13.8	40	9.0	48
Asia Pacific	5.6	16	1.5	8
Europe, Middle East and Africa (excluding Switzerland)	7.0	20	2.6	14
Switzerland	7.7	22	5.6	30
Global	0.8	2	0.0	0
Total	34.9	100	18.7	100

For the year ended 31 December 2021

	Total revenues[1]		Total non-current assets	
	USD bn	Share %	USD bn	Share %
Americas[2]	14.5	40	9.0	47
Asia Pacific	6.5	18	1.4	7
Europe, Middle East and Africa (excluding Switzerland)	7.0	20	2.6	13
Switzerland	7.8	22	6.3	33
Global	0.1	0	0.0	0
Total	**35.8**	**100**	**19.3**	**100**

For the year ended 31 December 2020

	Total revenues[1]		Total non-current assets	
	USD bn	Share %	USD bn	Share %
Americas[2]	13.2	39	9.0	45
Asia Pacific	6.1	18	1.4	7
Europe, Middle East and Africa (excluding Switzerland)	6.5	20	2.7	14
Switzerland	7.1	21	6.9	34
Global	0.5	2	0.0	0
Total	**33.5**	**100**	**20.0**	**100**

1 During 2022, UBS AG changed the presentation of its Income statement. Total operating income was renamed Total revenues and excludes Credit loss expense / (release). Note 2b, including prior-period information, has been updated to reflect the new presentation structure, with the disclosure of Total revenues instead of Total operating income. Refer to Note 1b for more information. 2 Predominantly related to the USA.

Note 3 Net interest income and other net income from financial instruments measured at fair value through profit or loss

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Net interest income from financial instruments measured at fair value through profit or loss and other	1,410	1,437	1,305
Other net income from financial instruments measured at fair value through profit or loss	7,493	5,844	6,930
of which: net gains / (losses) from financial liabilities designated at fair value [1]	*17,036*	*(6,457)*	*1,625*
Total net income from financial instruments measured at fair value through profit or loss and other	**8,903**	**7,281**	**8,235**
Net interest income			
Interest income from loans and deposits[2]	9,634	6,489	6,696
Interest income from securities financing transactions measured at amortized cost[3]	1,378	513	862
Interest income from other financial instruments measured at amortized cost	545	284	335
Interest income from debt instruments measured at fair value through other comprehensive income	74	115	101
Interest income from derivative instruments designated as cash flow hedges	173	1,133	822
Total interest income from financial instruments measured at amortized cost and fair value through other comprehensive income	**11,803**	**8,534**	**8,816**
Interest expense on loans and deposits[4]	4,488	1,655	2,440
Interest expense on securities financing transactions measured at amortized cost[5]	1,089	1,102	870
Interest expense on debt issued	1,031	512	918
Interest expense on lease liabilities	88	98	105
Total interest expense from financial instruments measured at amortized cost	**6,696**	**3,366**	**4,333**
Total net interest income from financial instruments measured at amortized cost and fair value through other comprehensive income	**5,108**	**5,168**	**4,483**
Total net interest income from financial instruments measured at fair value through profit or loss and other	**1,410**	**1,437**	**1,305**
Total net interest income	**6,517**	**6,605**	**5,788**

1 Excludes fair value changes of hedges related to financial liabilities designated at fair value and foreign currency translation effects arising from translating foreign currency transactions into the respective functional currency, both of which are reported within Other net income from financial instruments measured at fair value through profit or loss. 2022 included net gains of USD 4,112m (net losses of USD 2,068m and USD 72m in 2021 and 2020, respectively), driven by financial liabilities related to unit-linked investment contracts, which are designated at fair value through profit or loss. This was offset by net losses of USD 4,112m (net gains of USD 2,068m and USD 72m in 2021 and 2020, respectively), related to financial assets for unit-linked investment contracts that are mandatorily measured at fair value through profit or loss not held for trading. 2 Consists of interest income from cash and balances at central banks, loans and advances to banks and customers, and cash collateral receivables on derivative instruments, as well as negative interest on amounts due to banks, customer deposits, and cash collateral payables on derivative instruments. 3 Includes negative interest, including fees, on payables from securities financing transactions measured at amortized cost. 4 Consists of interest expense on amounts due to banks, cash collateral payables on derivative instruments, customer deposits, and funding from UBS Group AG measured at amortized cost, as well as negative interest on cash and balances at central banks, loans and advances to banks, and cash collateral receivables on derivative instruments. 5 Includes negative interest, including fees, on receivables from securities financing transactions measured at amortized cost.

Note 4 Net fee and commission income

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Underwriting fees	633	1,512	1,104
M&A and corporate finance fees	804	1,102	736
Brokerage fees	3,487	4,383	4,132
Investment fund fees	4,942	5,790	5,289
Portfolio management and related services	9,059	9,762	8,009
Other	1,921	1,874	1,712
Total fee and commission income[1]	**20,846**	**24,422**	**20,982**
of which: recurring	*14,229*	*15,410*	*13,010*
of which: transaction-based	*6,550*	*8,743*	*7,512*
of which: performance-based	*68*	*269*	*461*
Fee and commission expense	**1,823**	**1,985**	**1,775**
Net fee and commission income	**19,023**	**22,438**	**19,207**

1 For the year ended 31 December 2022, reflects third-party fee and commission income of USD 12,990m for Global Wealth Management, USD 1,657m for Personal & Corporate Banking, USD 2,840m for Asset Management, USD 3,350m for the Investment Bank and USD 10m for Group Functions (for the year ended 31 December 2021: USD 14,545m for Global Wealth Management, USD 1,645m for Personal & Corporate Banking, USD 3,337m for Asset Management, USD 4,863m for the Investment Bank and USD 33m for Group Functions; for the year ended 31 December 2020: USD 12,475m for Global Wealth Management, USD 1,427m for Personal & Corporate Banking, USD 3,129m for Asset Management, USD 3,901m for the Investment Bank and USD 50m for Group Functions).

Note 5 Other income

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Associates, joint ventures and subsidiaries			
Net gains / (losses) from acquisitions and disposals of subsidiaries[1]	148	(11)	635[2]
Net gains / (losses) from disposals of investments in associates and joint ventures	844[3]	41	0
Share of net profits of associates and joint ventures	32	105	84
Total	1,024	134	719
Net gains / (losses) from disposals of financial assets measured at fair value through other comprehensive income	(1)	9	40
Income from properties[4]	20	22	25
Net gains / (losses) from properties held for sale	71	100[5]	76[6]
Income from shared services provided to UBS Group AG or its subsidiaries	460	451	422
Other	308[7]	224[8]	267[9]
Total other income	1,882	941	1,549

1 Includes foreign exchange gains / (losses) reclassified from other comprehensive income related to the disposal or closure of foreign operations. Refer to Note 29 for more information about UBS AG's acquisitions and disposals of subsidiaries and businesses. 2 Includes a USD 631m net gain on the sale of a majority stake in Fondcenter AG (now Clearstream Fund Centre AG). 3 Includes an USD 848m gain related to the sale of UBS AG's shareholding in Mitsubishi Corp.-UBS Realty Inc. Refer to Note 28b for more information. 4 Includes rent received from third parties. 5 Mainly relates to the sale of a property in Basel. 6 Includes net gains of USD 140m arising from sale-and-leaseback transactions, primarily related to a property in Geneva, partly offset by remeasurement losses relating to properties that were reclassified as held for sale. 7 Mainly relates to a portion of the total USD 133m gain on the sale of UBS AG's domestic wealth management business in Spain of USD 111m (with the remaining amount disclosed within Net gains / (losses) from acquisitions and disposals of subsidiaries), income of USD 111m related to a legacy litigation settlement and a legacy bankruptcy claim, as well as gains of USD 23m related to the repurchase of UBS's own debt instruments (compared with losses of USD 17m in 2021). 8 Includes a gain of USD 100m from the sale of UBS AG's domestic wealth management business in Austria. 9 Includes a USD 215m gain on the sale of intellectual property rights associated with the Bloomberg Commodity Index family.

Note 6 Personnel expenses

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Salaries[1]	5,528	5,723	5,535
Variable compensation[2]	7,636	7,973	7,246
of which: performance awards	*2,910*	*2,916*	*2,953*[3]
of which: financial advisors[4]	*4,508*	*4,860*	*4,091*
of which: other	*217*	*196*	*201*
Contractors	119	142	138
Social security	730	762	704[3]
Post-employment benefit plans[5]	555	582	597
of which: defined benefit plans	*256*	*280*	*306*
of which: defined contribution plans	*299*	*303*	*291*
Other personnel expenses	513	479	466[3]
Total personnel expenses	15,080	15,661	14,686

1 Includes role-based allowances. 2 Refer to Note 27 for more information. 3 During 2020, UBS AG modified the conditions for continued vesting of certain outstanding deferred compensation awards for qualifying employees, resulting in an expense of approximately USD 270m, of which USD 240m is disclosed within Variable compensation – performance awards, USD 20m within Social security and USD 10m within Other personnel expenses. 4 Consists of cash and deferred compensation awards and is based on compensable revenues and firm tenure using a formulaic approach. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 5 Refer to Note 26 for more information. Includes curtailment gains of USD 13m for the year ended 31 December 2022 (for the year ended 31 December 2021: USD 49m; for the year ended 31 December 2020: USD 0m), which represent a reduction in the defined benefit obligation related to the Swiss pension plan resulting from a decrease in headcount following restructuring activities.

Note 7 General and administrative expenses

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Outsourcing costs	451	426	466
Technology costs	502	490	449
Consulting, legal and audit fees	494	465	566
Real estate and logistics costs	507	530	563
Market data services	367	367	361
Marketing and communication	195	171	162
Travel and entertainment	156	66	77
Litigation, regulatory and similar matters[1]	348	910	197
Other	5,981	6,051	5,646
of which: shared services costs charged by UBS Group AG or its subsidiaries	*5,264*	*5,321*	*4,939*
Total general and administrative expenses	9,001	9,476	8,486

1 Reflects the net increase in provisions for litigation, regulatory and similar matters recognized in the income statement. Refer to Note 17 for more information.

Note 8 Income taxes

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Tax expense / (benefit)			
Swiss			
Current	664	614	417
Deferred	(22)	26	107
Total Swiss	642	640	524
Non-Swiss			
Current	689	857	715
Deferred	513	406	248
Total non-Swiss	1,202	1,263	963
Total income tax expense / (benefit) recognized in the income statement	1,844	1,903	1,488

Income tax recognized in the income statement

The Swiss current tax expenses related to taxable profits of UBS Switzerland AG and other Swiss entities.

The non-Swiss current tax expenses related to taxable profits of non-Swiss subsidiaries and branches. The non-Swiss deferred tax expenses include expenses of USD 678m that primarily related to the amortization of deferred tax assets (DTAs) previously recognized in relation to tax losses carried forward and deductible temporary differences of UBS Americas Inc., which were partly offset by a benefit of USD 169m in respect of net upward revaluations of DTAs for certain entities, primarily in connection with our business planning process.

The effective tax rate for the year of 20.6% is lower than our projected rate for the year of 24%, primarily as a result of the aforementioned deferred tax benefit of USD 169m in respect of net upward revaluations of DTAs and because no tax expenses were recognized in respect of pre-tax gains from dispositions of UBS subsidiaries in 2022.

› **Refer to Note 29 for more information about disposals of subsidiaries**

	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Operating profit / (loss) before tax	8,960	8,964	7,699
of which: Swiss	*4,052*	*2,983*	*3,042*
of which: non-Swiss	*4,907*	*5,981*	*4,657*
Income taxes at Swiss tax rate of 18% for 2022, 18.5% for 2021 and 19.5% for 2020	1,613	1,658	1,501
Increase / (decrease) resulting from:			
Non-Swiss tax rates differing from Swiss tax rate	267	217	96
Tax effects of losses not recognized	74	124	144
Previously unrecognized tax losses now utilized	(217)	(179)	(212)
Non-taxable and lower-taxed income	(316)	(252)	(381)
Non-deductible expenses and additional taxable income	414	487	373
Adjustments related to prior years, current tax	(33)	(38)	(66)
Adjustments related to prior years, deferred tax	19	(3)	18
Change in deferred tax recognition	(217)	(341)	(383)
Adjustments to deferred tax balances arising from changes in tax rates	0	(1)	235
Other items	240	230	163
Income tax expense / (benefit)	1,844	1,903	1,488

Note 8 Income taxes (continued)

The components of operating profit before tax, and the differences between income tax expense reflected in the financial statements and the amounts calculated at the Swiss tax rate, are provided in the table above and explained below.

Component	Description
Non-Swiss tax rates differing from the Swiss tax rate	To the extent that UBS AG profits or losses arise outside Switzerland, the applicable local tax rate may differ from the Swiss tax rate. This item reflects, for such profits, an adjustment from the tax expense that would arise at the Swiss tax rate to the tax expense that would arise at the applicable local tax rate. Similarly, it reflects, for such losses, an adjustment from the tax benefit that would arise at the Swiss tax rate to the tax benefit that would arise at the applicable local tax rate.
Tax effects of losses not recognized	This item relates to tax losses of entities arising in the year that are not recognized as DTAs and where no tax benefit arises in relation to those losses. Therefore, the tax benefit calculated by applying the local tax rate to those losses as described above is reversed.
Previously unrecognized tax losses now utilized	This item relates to taxable profits of the year that are offset by tax losses of previous years for which no DTAs were previously recorded. Consequently, no current tax or deferred tax expense arises in relation to those taxable profits and the tax expense calculated by applying the local tax rate on those profits is reversed.
Non-taxable and lower-taxed income	This item relates to tax deductions for the year in respect of permanent differences. These include deductions in respect of profits that are either not taxable or are taxable at a lower rate of tax than the local tax rate. They also include deductions made for tax purposes, which are not reflected in the accounts.
Non-deductible expenses and additional taxable income	This item relates to additional taxable income for the year in respect of permanent differences. These include income that is recognized for tax purposes by an entity but is not included in its profit that is reported in the financial statements, as well as expenses for the year that are non-deductible (e.g., client entertainment costs are not deductible in certain locations).
Adjustments related to prior years, current tax	This item relates to adjustments to current tax expense for prior years (e.g., if the tax payable for a year is agreed with the tax authorities in an amount that differs from the amount previously reflected in the financial statements).
Adjustments related to prior years, deferred tax	This item relates to adjustments to deferred tax positions recognized in prior years (e.g., if a tax loss for a year is fully recognized and the amount of the tax loss agreed with the tax authorities is expected to differ from the amount previously recognized as DTAs in the accounts).
Change in deferred tax recognition	This item relates to changes in DTAs, including changes in DTAs previously recognized resulting from reassessments of expected future taxable profits. It also includes changes in temporary differences in the year, for which deferred tax is not recognized.
Adjustments to deferred tax balances arising from changes in tax rates	This item relates to remeasurements of DTAs and liabilities recognized due to changes in tax rates. These have the effect of changing the future tax saving that is expected from tax losses or deductible tax differences and therefore the amount of DTAs recognized or, alternatively, changing the tax cost of additional taxable income from taxable temporary differences and therefore the deferred tax liability.
Other items	Other items include other differences between profits or losses at the local tax rate and the actual local tax expense or benefit, including movements in provisions for uncertain positions in relation to the current year and other items.

Income tax recognized directly in equity

A net tax benefit of USD 1,095m was recognized in *Other comprehensive income* (2021: net benefit of USD 455m) and a net tax benefit of USD 5m was recognized in *Share premium* (2021: net expense of USD 102m).

Deferred tax assets and liabilities

UBS AG has gross DTAs, valuation allowances and recognized DTAs related to tax loss carry-forwards and deductible temporary differences, as well as deferred tax liabilities in respect of taxable temporary differences, as shown in the table below. The valuation allowances reflect DTAs that were not recognized because, as of the last remeasurement period, management did not consider it probable that there would be sufficient future taxable profits available to utilize the related tax loss carry-forwards and deductible temporary differences.

The recognition of DTAs is supported by forecasts of taxable profits for the entities concerned. In addition, tax planning opportunities are available that would result in additional future taxable income and these would be utilized, if necessary.

Deferred tax liabilities are recognized in respect of investments in subsidiaries, branches and associates, and interests in joint arrangements, except to the extent that UBS AG can control the timing of the reversal of the associated taxable temporary difference and it is probable that such will not reverse in the foreseeable future. However, as of 31 December 2022, this exception was not considered to apply to any taxable temporary differences.

USD m	31.12.22			31.12.21		
Deferred tax assets[1]	Gross	Valuation allowance	Recognized	Gross	Valuation allowance	Recognized
Tax loss carry-forwards	12,708	(8,720)	3,988	13,636	(9,193)	4,443
Temporary differences	5,774	(408)	5,365	5,092	(696)	4,396
of which: related to real estate costs capitalized for US tax purposes	*2,485*	*0*	*2,485*	*2,272*	*0*	*2,272*
of which: related to compensation and benefits	*1,169*	*(175)*	*993*	*1,200*	*(209)*	*991*
of which: related to cash flow hedges	*947*	*0*	*947*	*3*	*0*	*3*
of which: other	*1,173*	*(233)*	*940*	*1,620*	*(487)*	*1,133*
Total deferred tax assets	18,482	(9,128)	9,354[2]	18,728	(9,889)	8,839[2]
of which: related to the US			*8,294*			*8,521*
of which: related to other locations			*1,060*			*318*
Deferred tax liabilities						
Cash flow hedges			0			118
Other			233			179
Total deferred tax liabilities			233			297

1 After offset of DTLs, as applicable. 2 As of 31 December 2022, UBS AG recognized DTAs of USD 471m (31 December 2021: USD 77m) in respect of entities that incurred losses in either the current or preceding year.

In general, US federal tax losses incurred prior to 31 December 2017 can be carried forward for 20 years. US federal tax losses incurred after that date can be carried forward indefinitely, although the utilization of such losses is limited to 80% of the entity's future year taxable profits. UK tax losses can also be carried forward indefinitely; they can shelter up to either 25% or 50% of future year taxable profits, depending on when the tax losses arose. The amounts of US tax loss carry-forwards that are included in the table below are based on their amount for federal tax purposes rather than for state and local tax purposes.

Unrecognized tax loss carry-forwards

USD m	31.12.22	31.12.21
Within 1 year	231	141
From 2 to 5 years	2,184	1,026
From 6 to 10 years	11,106	13,283
From 11 to 20 years	1,610	2,093
No expiry	16,960	18,147
Total	32,091	34,690
of which: related to the US[1]	*13,350*	*14,870*
of which: related to the UK	*14,332*	*14,909*
of which: related to other locations	*4,409*	*4,911*

1 Related to UBS AG's US branch.

Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement

The tables below provide information about financial instruments and certain credit lines that are subject to expected credit loss (ECL) requirements. UBS AG's ECL disclosure segments, or "ECL segments" are aggregated portfolios based on shared risk characteristics and on the same or similar rating methods applied. The key segments are presented in the table below.

› **Refer to Note 19 for more information about expected credit loss measurement**

Segment	Segment description	Description of credit risk sensitivity	Business division
Private clients with mortgages	Lending to private clients secured by owner-occupied real estate and personal account overdrafts of those clients	Sensitive to the interest rate environment, unemployment levels, real estate collateral values and other regional aspects	– Personal & Corporate Banking – Global Wealth Management
Real estate financing	Rental or income-producing real estate financing to private and corporate clients secured by real estate	Sensitive to unemployment levels, the interest rate environment, real estate collateral values and other regional aspects	– Personal & Corporate Banking – Global Wealth Management – Investment Bank
Large corporate clients	Lending to large corporate and multi-national clients	Sensitive to GDP developments, unemployment levels, seasonality, business cycles and collateral values (diverse collateral, including real estate and other collateral types)	– Personal & Corporate Banking – Investment Bank
SME clients	Lending to small and medium-sized corporate clients	Sensitive to GDP developments, unemployment levels, the interest rate environment and, to some extent, seasonality, business cycles and collateral values (diverse collateral, including real estate and other collateral types)	– Personal & Corporate Banking
Lombard	Loans secured by pledges of marketable securities, guarantees and other forms of collateral (including concentration in hedge funds, private equity and unlisted equities), as well as unsecured recourse lending	Sensitive to equity and debt markets (e.g., changes in collateral values)	– Global Wealth Management
Credit cards	Credit card solutions in Switzerland and the US	Sensitive to unemployment levels	– Personal & Corporate Banking – Global Wealth Management
Commodity trade finance	Working capital financing of commodity traders, generally extended on a self-liquidating transactional basis	Sensitive primarily to the strength of individual transaction structures and collateral values (price volatility of commodities), as the primary source for debt service is directly linked to the shipments financed	– Personal & Corporate Banking
Financial intermediaries and hedge funds	Lending to financial institutions and pension funds, including exposures to broker-dealers and clearing houses	Sensitive to GDP development, the interest rate environment, price and volatility risks in financial markets, and regulatory and political risk	– Personal & Corporate Banking – Investment Bank

› **Refer to Note 19f for more details regarding sensitivity**

Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement (continued)

The tables below provide ECL exposure and ECL allowance and provision information about financial instruments and certain non-financial instruments that are subject to ECLs.

USD m	31.12.22							
	Carrying amount[1]				ECL allowances			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	169,445	169,402	44	0	(12)	0	(12)	0
Loans and advances to banks	14,671	14,670	1	0	(6)	(5)	(1)	0
Receivables from securities financing transactions measured at amortized cost	67,814	67,814	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	35,033	35,033	0	0	0	0	0	0
Loans and advances to customers	390,027	372,903	15,587	1,538	(783)	(129)	(180)	(474)
of which: Private clients with mortgages	*156,930*	*147,651*	*8,579*	*699*	*(161)*	*(27)*	*(107)*	*(28)*
of which: Real estate financing	*46,470*	*43,112*	*3,349*	*9*	*(41)*	*(17)*	*(23)*	*0*
of which: Large corporate clients	*12,226*	*10,733*	*1,189*	*303*	*(130)*	*(24)*	*(14)*	*(92)*
of which: SME clients	*13,903*	*12,211*	*1,342*	*351*	*(251)*	*(26)*	*(22)*	*(203)*
of which: Lombard	*132,287*	*132,196*	*0*	*91*	*(26)*	*(9)*	*0*	*(17)*
of which: Credit cards	*1,834*	*1,420*	*382*	*31*	*(36)*	*(7)*	*(10)*	*(19)*
of which: Commodity trade finance	*3,272*	*3,261*	*0*	*11*	*(96)*	*(6)*	*0*	*(90)*
Other financial assets measured at amortized cost	53,389	52,829	413	147	(86)	(17)	(6)	(63)
of which: Loans to financial advisors	*2,611*	*2,357*	*128*	*126*	*(59)*	*(7)*	*(2)*	*(51)*
Total financial assets measured at amortized cost	**730,379**	**712,651**	**16,044**	**1,685**	**(890)**	**(154)**	**(199)**	**(537)**
Financial assets measured at fair value through other comprehensive income	**2,239**	**2,239**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets within the scope of ECL requirements	**732,618**	**714,889**	**16,044**	**1,685**	**(890)**	**(154)**	**(199)**	**(537)**

	Total exposure				ECL provisions			
Off-balance sheet (within the scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	22,167	19,805	2,254	108	(48)	(13)	(9)	(26)
of which: Large corporate clients	*3,663*	*2,883*	*721*	*58*	*(26)*	*(2)*	*(3)*	*(21)*
of which: SME clients	*1,337*	*1,124*	*164*	*49*	*(5)*	*(1)*	*(1)*	*(3)*
of which: Financial intermediaries and hedge funds	*11,833*	*10,513*	*1,320*	*0*	*(12)*	*(8)*	*(4)*	*0*
of which: Lombard	*2,376*	*2,376*	*0*	*1*	*(1)*	*0*	*0*	*(1)*
of which: Commodity trade finance	*2,121*	*2,121*	*0*	*0*	*(1)*	*(1)*	*0*	*0*
Irrevocable loan commitments	39,996	37,531	2,341	124	(111)	(59)	(52)	0
of which: Large corporate clients	*23,611*	*21,488*	*2,024*	*99*	*(93)*	*(49)*	*(45)*	*0*
Forward starting reverse repurchase and securities borrowing agreements	3,801	3,801	0	0	0	0	0	0
Committed unconditionally revocable credit lines	43,677	41,809	1,833	36	(40)	(32)	(8)	0
of which: Real estate financing	*8,711*	*8,528*	*183*	*0*	*(6)*	*(6)*	*0*	*0*
of which: Large corporate clients	*4,578*	*4,304*	*268*	*5*	*(4)*	*(1)*	*(2)*	*0*
of which: SME clients	*4,723*	*4,442*	*256*	*26*	*(19)*	*(16)*	*(3)*	*0*
of which: Lombard	*7,855*	*7,854*	*0*	*1*	*0*	*0*	*0*	*0*
of which: Credit cards	*9,390*	*8,900*	*487*	*3*	*(7)*	*(5)*	*(2)*	*0*
of which: Commodity trade finance	*327*	*327*	*0*	*0*	*0*	*0*	*0*	*0*
Irrevocable committed prolongation of existing loans	4,696	4,600	94	2	(2)	(2)	0	0
Total off-balance sheet financial instruments and credit lines	**114,337**	**107,545**	**6,522**	**270**	**(201)**	**(106)**	**(69)**	**(26)**
Total allowances and provisions					**(1,091)**	**(260)**	**(267)**	**(564)**

1 The carrying amount of financial assets measured at amortized cost represents the total gross exposure net of the respective ECL allowances.

Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement (continued)

USD m	31.12.21							
	Carrying amount[1]				ECL allowances			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	192,817	192,817	0	0	0	0	0	0
Loans and advances to banks	15,360	15,333	26	1	(8)	(7)	(1)	0
Receivables from securities financing transactions measured at amortized cost	75,012	75,012	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	30,514	30,514	0	0	0	0	0	0
Loans and advances to customers	398,693	381,496	15,620	1,577	(850)	(126)	(152)	(572)
of which: Private clients with mortgages	*152,479*	*143,505*	*8,262*	*711*	*(132)*	*(28)*	*(71)*	*(33)*
of which: Real estate financing	*43,945*	*40,463*	*3,472*	*9*	*(60)*	*(19)*	*(40)*	*0*
of which: Large corporate clients	*13,990*	*12,643*	*1,037*	*310*	*(170)*	*(22)*	*(16)*	*(133)*
of which: SME clients	*14,004*	*12,076*	*1,492*	*436*	*(259)*	*(19)*	*(15)*	*(225)*
of which: Lombard	*149,283*	*149,255*	*0*	*27*	*(33)*	*(6)*	*0*	*(28)*
of which: Credit cards	*1,716*	*1,345*	*342*	*29*	*(36)*	*(10)*	*(9)*	*(17)*
of which: Commodity trade finance	*3,813*	*3,799*	*7*	*7*	*(114)*	*(6)*	*0*	*(108)*
Other financial assets measured at amortized cost	26,236	25,746	302	189	(109)	(27)	(7)	(76)
of which: Loans to financial advisors	*2,453*	*2,184*	*106*	*163*	*(86)*	*(19)*	*(3)*	*(63)*
Total financial assets measured at amortized cost	**738,632**	**720,917**	**15,948**	**1,767**	**(969)**	**(161)**	**(160)**	**(647)**
Financial assets measured at fair value through other comprehensive income	**8,844**	**8,844**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets within the scope of ECL requirements	**747,477**	**729,762**	**15,948**	**1,767**	**(969)**	**(161)**	**(160)**	**(647)**

	Total exposure				ECL provisions			
Off-balance sheet (within the scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	20,972	19,695	1,127	150	(41)	(18)	(8)	(15)
of which: Large corporate clients	*3,464*	*2,567*	*793*	*104*	*(6)*	*(3)*	*(3)*	*0*
of which: SME clients	*1,353*	*1,143*	*164*	*46*	*(8)*	*(1)*	*(1)*	*(7)*
of which: Financial intermediaries and hedge funds	*9,575*	*9,491*	*84*	*0*	*(17)*	*(13)*	*(4)*	*0*
of which: Lombard	*2,454*	*2,454*	*0*	*0*	*(1)*	*0*	*0*	*(1)*
of which: Commodity trade finance	*3,137*	*3,137*	*0*	*0*	*(1)*	*(1)*	*0*	*0*
Irrevocable loan commitments	39,478	37,097	2,335	46	(114)	(72)	(42)	0
of which: Large corporate clients	*23,922*	*21,811*	*2,102*	*9*	*(100)*	*(66)*	*(34)*	*0*
Forward starting reverse repurchase and securities borrowing agreements	1,444	1,444	0	0	0	0	0	0
Committed unconditionally revocable credit lines	42,373	39,802	2,508	63	(38)	(28)	(10)	0
of which: Real estate financing	*7,328*	*7,046*	*281*	*0*	*(5)*	*(4)*	*(1)*	*0*
of which: Large corporate clients	*5,358*	*4,599*	*736*	*23*	*(7)*	*(4)*	*(3)*	*0*
of which: SME clients	*5,160*	*4,736*	*389*	*35*	*(15)*	*(11)*	*(3)*	*0*
of which: Lombard	*8,670*	*8,670*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Credit cards	*9,466*	*9,000*	*462*	*4*	*(6)*	*(5)*	*(2)*	*0*
of which: Commodity trade finance	*117*	*117*	*0*	*0*	*0*	*0*	*0*	*0*
Irrevocable committed prolongation of existing loans	5,611	5,527	36	48	(3)	(3)	0	0
Total off-balance sheet financial instruments and credit lines	**109,878**	**103,565**	**6,006**	**307**	**(196)**	**(121)**	**(60)**	**(15)**
Total allowances and provisions					**(1,165)**	**(282)**	**(220)**	**(662)**

1 The carrying amount of financial assets measured at amortized cost represents the total gross exposure net of the respective ECL allowances.

Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement (continued)

Coverage ratios are calculated for the core loan portfolio by taking ECL allowances and provisions divided by the gross carrying amount of the exposures. Core loan exposure is defined as the sum of *Loans and advances to customers* and *Loans to financial advisors*.

These ratios are influenced by the following key factors:
- Lombard loans are generally secured with marketable securities in portfolios that are, as a rule, highly diversified, with strict lending policies that are intended to ensure that credit risk is minimal under most circumstances;
- mortgage loans to private clients and real estate financing are controlled by conservative eligibility criteria, including low loan-to-value ratios and strong debt service capabilities;
- the amount of unsecured retail lending (including credit cards) is insignificant;
- lending in Switzerland includes government-backed COVID-19 loans;
- contractual maturities in the loan portfolio, which are a factor in the calculation of ECLs, are generally short, with Lombard lending typically having average contractual maturities of 12 months or less, real estate lending generally between two and three years in Switzerland, with long dated maturities in the US, and corporate lending between one and two years with related loan commitments up to four years; and
- write-offs of ECL allowances against the gross loan balances when all or part of a financial asset is deemed uncollectible or forgiven, reduces the coverage ratios.

The total combined on- and off-balance sheet coverage ratio was at 21 basis points as of 31 December 2022, 1 basis point lower than on 31 December 2021. The combined stage 1 and 2 ratio of 10 basis points was unchanged compared with 31 December 2021; the stage 3 ratio was 22%, 2 percentage points lower than as of 31 December 2021.

	31.12.22								
	Gross carrying amount (USD m)				ECL coverage (bps)				
On-balance sheet	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 1&2	Stage 3
Private clients with mortgages	157,091	147,678	8,686	727	10	2	123	9	381
Real estate financing	46,511	43,129	3,372	9	9	4	70	9	232
Total real estate lending	203,602	190,807	12,059	736	10	2	108	9	379
Large corporate clients	12,356	10,757	1,204	395	105	22	120	32	2,325
SME clients	14,154	12,237	1,364	553	177	22	161	36	3,664
Total corporate lending	26,510	22,994	2,567	949	144	22	142	34	3,106
Lombard	132,313	132,205	0	108	2	1	0	1	1,580
Credit cards	1,869	1,427	393	50	190	46	256	91	3,779
Commodity trade finance	3,367	3,266	0	101	285	18	0	18	8,901
Other loans and advances to customers	23,149	22,333	748	68	18	6	38	7	3,769
Loans to financial advisors	2,670	2,364	130	176	221	28	124	33	2,870
Total other lending	163,368	161,595	1,270	503	16	3	114	3	4,016
Total[1]	393,480	375,396	15,896	2,188	21	4	114	8	2,398

	Gross exposure (USD m)				ECL coverage (bps)				
Off-balance sheet	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 1&2	Stage 3
Private clients with mortgages	6,535	6,296	236	3	5	4	18	4	1,183
Real estate financing	10,054	9,779	275	0	6	7	0	6	0
Total real estate lending	16,589	16,075	511	3	6	6	2	6	1,288
Large corporate clients	32,126	28,950	3,013	163	38	18	165	32	1,263
SME clients	7,122	6,525	499	98	47	30	214	43	304
Total corporate lending	39,247	35,475	3,513	260	40	20	172	34	903
Lombard	12,919	12,918	0	1	2	1	0	1	0
Credit cards	9,390	8,900	487	3	7	5	36	7	0
Commodity trade finance	2,459	2,459	0	0	3	3	0	3	0
Financial intermediaries and hedge funds	18,128	16,464	1,664	0	7	6	25	7	0
Other off-balance sheet commitments	11,803	11,454	346	3	11	8	68	9	0
Total other lending	54,700	52,195	2,498	7	6	5	33	6	0
Total[2]	110,537	103,745	6,522	270	18	10	106	16	980
Total on- and off-balance sheet[3]	504,016	479,140	22,418	2,458	21	5	112	10	2,242

1 Includes Loans and advances to customers and Loans to financial advisors which are presented on the balance sheet line Other assets measured at amortized cost. 2 Excludes Forward starting reverse repurchase and securities borrowing agreements. 3 Includes on-balance-sheet exposure, gross and off-balance-sheet exposure (notional) and the related ECL coverage ratio.

Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement (continued)

	31.12.21								
	Gross carrying amount (USD m)				ECL coverage (bps)				
On-balance sheet	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 1&2	Stage 3
Private clients with mortgages	152,610	143,533	8,333	744	9	2	85	6	446
Real estate financing	44,004	40,483	3,512	10	14	5	114	14	231
Total real estate lending	196,615	184,016	11,845	754	10	3	94	8	443
Large corporate clients	14,161	12,665	1,053	443	120	18	148	28	2,997
SME clients	14,263	12,095	1,507	661	182	16	103	25	3,402
Total corporate lending	28,424	24,760	2,560	1,104	151	17	121	26	3,240
Lombard	149,316	149,261	0	55	2	0	0	0	5,026
Credit cards	1,752	1,355	351	46	204	72	255	109	3,735
Commodity trade finance	3,927	3,805	7	115	290	15	3	15	9,388
Other loans and advances to customers	19,510	18,425	1,010	75	23	9	15	9	3,730
Loans to financial advisors	2,539	2,203	109	226	338	88	303	99	2,791
Total other lending	177,043	175,049	1,477	517	18	3	93	4	4,718
Total[1]	**402,081**	**383,825**	**15,882**	**2,374**	**23**	**4**	**98**	**8**	**2,673**

	Gross exposure (USD m)				ECL coverage (bps)				
Off-balance sheet	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 1&2	Stage 3
Private clients with mortgages	9,123	8,798	276	49	3	3	9	3	15
Real estate financing	8,766	8,481	285	0	9	7	88	9	0
Total real estate lending	17,889	17,278	562	49	6	5	49	6	15
Large corporate clients	32,748	28,981	3,630	136	34	25	110	35	1
SME clients	8,077	7,276	688	114	38	19	151	30	585
Total corporate lending	40,826	36,258	4,318	250	35	24	117	34	266
Lombard	14,438	14,438	0	0	1	0	0	0	0
Credit cards	9,466	9,000	462	4	7	5	34	7	0
Commodity trade finance	3,262	3,262	0	0	4	4	0	4	0
Financial intermediaries and hedge funds	13,747	13,379	369	0	13	10	120	13	0
Other off-balance sheet commitments	8,806	8,507	296	4	15	6	30	7	0
Total other lending	49,720	48,585	1,127	8	8	5	61	7	0
Total[2]	**108,434**	**102,121**	**6,006**	**307**	**18**	**12**	**100**	**17**	**486**
Total on- and off-balance sheet[3]	**510,516**	**485,946**	**21,888**	**2,681**	**22**	**5**	**99**	**9**	**2,423**

1 Includes Loans and advances to customers and Loans to financial advisors which are presented on the balance sheet line Other assets measured at amortized cost. 2 Excludes Forward starting reverse repurchase and securities borrowing agreements. 3 Includes on-balance-sheet exposure, gross and off-balance-sheet exposure (notional) and the related ECL coverage ratio.

Note 10 Derivative instruments

Overview

Over-the-counter (OTC) derivative contracts are usually traded under a standardized International Swaps and Derivatives Association (ISDA) master agreement or other recognized local industry-standard master agreements between UBS AG and its counterparties. Terms are negotiated directly with counterparties and the contracts have industry-standard settlement mechanisms prescribed by ISDA or similar industry-standard solutions. Other OTC derivatives are cleared through clearing houses, in particular interest rate swaps with LCH, where a settled-to-market method has been generally adopted, under which cash collateral exchanged on a daily basis is considered to legally settle the market value of the derivatives. Regulators in various jurisdictions have introduced rules requiring the payment and collection of initial and variation margins on certain OTC derivative contracts, which may have a bearing on price and other relevant terms.

Exchange-traded derivatives (ETD) are standardized in terms of their amounts and settlement dates, and are bought and sold on regulated exchanges. Exchanges offer the benefits of pricing transparency, standardized daily settlement of changes in value and, consequently, reduced credit risk.

Most of UBS AG's derivative transactions relate to sales and market-making activity. Sales activities include the structuring and marketing of derivative products to customers to enable them to take, transfer, modify or reduce current or expected risks. Market-making aims to directly support the facilitation and execution of client activity, and involves quoting bid and offer prices to other market participants with the aim of generating revenues based on spread and volume. UBS AG also uses various derivative instruments for hedging purposes.

› **Refer to Notes 15 and 20 for more information about derivative instruments**
› **Refer to Note 25 for more information about derivatives designated in hedge accounting relationships**

Risks of derivative instruments

The derivative financial assets shown on the balance sheet can be an important component of UBS AG's credit exposure; however, the positive replacement values related to a respective counterparty are rarely an adequate reflection of UBS AG's credit exposure in its derivatives business with that counterparty. This is generally the case because, on the one hand, replacement values can increase over time (potential future exposure), while, on the other hand, exposure may be mitigated by entering into master netting agreements and bilateral collateral arrangements. Both the exposure measures used internally by UBS AG to control credit risk and the capital requirements imposed by regulators reflect these additional factors.

› **Refer to Note 21 for more information about derivative financial assets and liabilities after consideration of netting potential permitted under enforceable netting arrangements**

› **Refer to the "Risk management and control" section of this report for more information about the risks arising from derivative instruments**

Derivative instruments

	31.12.22					31.12.21				
USD bn	Derivative financial assets	Notional amounts related to derivative financial assets[2,3]	Derivative financial liabilities	Notional amounts related to derivative financial liabilities[2,3]	Other notional amounts[2,4]	Derivative financial assets	Notional amounts related to derivative financial assets[2,3]	Derivative financial liabilities	Notional amounts related to derivative financial liabilities[2,3]	Other notional amounts[2,4]
Interest rate contracts	39.8	1,057.4	37.5	1,022.9	11,255.4	33.2	991.2	28.7	943.1	8,675.1
of which: forwards (OTC)[1]	*0.2*	*37.7*	*0.0*	*34.6*	*792.7*	*0.1*	*29.4*	*0.2*	*28.6*	*443.6*
of which: swaps (OTC)	*25.2*	*326.1*	*19.8*	*281.0*	*9,728.6*	*26.4*	*394.3*	*19.2*	*344.1*	*7,549.4*
of which: options (OTC)	*14.2*	*687.5*	*17.5*	*705.0*		*6.6*	*545.2*	*9.2*	*553.6*	
of which: futures (ETD)					*606.3*					*525.0*
of which: options (ETD)	*0.0*	*6.1*	*0.0*	*2.2*	*127.7*	*0.0*	*22.4*	*0.0*	*16.8*	*157.1*
Credit derivative contracts	1.0	36.8	1.2	37.1		1.4	44.7	1.8	46.3	
of which: credit default swaps (OTC)	*0.9*	*34.2*	*1.0*	*36.8*		*1.3*	*39.4*	*1.6*	*44.1*	
of which: total return swaps (OTC)	*0.1*	*0.9*	*0.2*	*0.3*		*0.1*	*1.3*	*0.2*	*1.7*	
Foreign exchange contracts	85.5	3,087.3	88.5	2,992.7	40.1	53.3	3,031.0	54.1	2,938.8	1.2
of which: forwards (OTC)	*26.5*	*853.6*	*28.6*	*910.2*		*23.8*	*1,009.1*	*23.8*	*1,043.2*	
of which: swaps (OTC)	*49.6*	*1,679.3*	*50.4*	*1,553.7*	*38.4*	*24.3*	*1,606.4*	*24.9*	*1,480.3*	
of which: options (OTC)	*9.3*	*551.6*	*9.2*	*521.6*		*5.2*	*412.6*	*5.3*	*408.6*	
Equity contracts	22.2	384.5	26.1	501.3	63.4	28.2	456.9	34.9	603.9	80.1
of which: swaps (OTC)	*5.3*	*95.5*	*6.6*	*122.0*		*4.7*	*105.7*	*9.3*	*154.8*	
of which: options (OTC)	*2.8*	*51.6*	*4.4*	*89.0*		*4.6*	*61.4*	*6.5*	*102.3*	
of which: futures (ETD)					*52.2*					*71.2*
of which: options (ETD)	*9.0*	*237.0*	*8.1*	*289.7*	*11.2*	*10.2*	*289.6*	*9.8*	*346.3*	*8.8*
of which: client-cleared transactions (ETD)	*5.1*		*7.0*			*8.6*		*9.4*		
Commodity contracts	1.4	68.1	1.4	64.2	17.6	1.6	57.8	1.6	56.4	14.7
of which: swaps (OTC)	*0.5*	*19.3*	*0.7*	*19.3*		*0.5*	*19.9*	*0.8*	*25.4*	
of which: options (OTC)	*0.4*	*15.8*	*0.3*	*13.3*		*0.4*	*14.0*	*0.2*	*10.4*	
of which: futures (ETD)					*16.4*					*13.9*
of which: forwards (ETD)	*0.0*	*24.5*	*0.0*	*23.2*		*0.0*	*18.1*	*0.0*	*15.2*	
of which: client-cleared transactions (ETD)	*0.2*		*0.3*			*0.6*		*0.4*		
Loan commitments measured at FVTPL (OTC)	0.0	0.9	0.0	3.7		0.0	0.8	0.0	8.2	
Unsettled purchases of non-derivative financial instruments[5]	0.1	12.1	0.1	9.4		0.1	13.3	0.2	10.6	
Unsettled sales of non-derivative financial instruments[5]	0.1	13.0	0.0	10.7		0.2	18.2	0.1	9.4	
Total derivative instruments, based on IFRS netting[6]	150.1	4,660.1	154.9	4,642.0	11,376.5	118.1	4,614.0	121.3	4,616.6	8,771.1

1 Includes certain forward starting repurchase and reverse repurchase agreements that are classified as measured at fair value through profit or loss and are recognized within derivative instruments. 2 In cases where derivative financial instruments are presented on a net basis on the balance sheet, the respective notional amounts of the netted derivative financial instruments are still presented on a gross basis. 3 Notional amounts of client-cleared ETD and OTC transactions through central clearing counterparties are not disclosed, as they have significantly different risk profile. 4 Other notional amounts relate to derivatives that are cleared through either a central counterparty or an exchange. The fair value of these derivatives is presented on the balance sheet net of the corresponding cash margin under Cash collateral receivables on derivative instruments and Cash collateral payables on derivative instruments and was not material for any of the periods presented. 5 Changes in the fair value of purchased and sold non-derivative financial instruments between trade date and settlement date are recognized as derivative financial instruments. 6 Derivative financial assets and liabilities are presented net on the balance sheet if UBS AG has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of the entity and all of the counterparties, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. Refer to Note 21 for more information on netting arrangements.

Note 10 Derivative instruments (continued)

On a notional amount basis, approximately 46% of OTC interest rate contracts held as of 31 December 2022 (31 December 2021: 40%) mature within one year, 32% (31 December 2021: 36%) within one to five years and 22% 31 December 2021: 25%) after five years.

Notional amounts of interest rate contracts cleared through either a central counterparty or an exchange that are legally settled or economically net settled on a daily basis are presented under *Other notional amounts* in the table above and are categorized into maturity buckets on the basis of contractual maturities of the cleared underlying derivative contracts. Other notional amounts related to interest rate contracts increased by USD 2.6trn compared with 31 December 2021, mainly reflecting higher business volumes driven by elevated interest rate volatility and inflation, partly offset by compression activity.

Note 11 Property, equipment and software

At historical cost less accumulated depreciation

USD m	Owned properties and equipment[1]	Leased properties and equipment[2]	Software	Projects in progress	2022[3]	2021[3]
Historical cost						
Balance at the beginning of the year	11,494	3,994	7,924	1,130	24,542	23,785
Additions	90[1]	380	330	1,059	1,859	1,789
Disposals / write-offs[4]	(284)	(48)	(81)	0	(414)	(632)
Reclassifications	(796)	0	1,052	(1,150)	(894)	(18)
Foreign currency translation	(152)	(50)	(5)	7	(200)	(381)
Balance at the end of the year	10,352	4,275	9,220	1,046	24,893	24,542
Accumulated depreciation						
Balance at the beginning of the year	7,178	1,272	4,380		12,830	11,827
Depreciation	463	430	926		1,819	1,835
Impairment[5]	2	0	0		2	9
Disposals / write-offs[4]	(283)	(45)	(81)		(410)	(619)
Reclassifications	(565)	(1)	0		(566)	(12)
Foreign currency translation	(98)	(18)	17		(99)	(210)
Balance at the end of the year	6,697	1,638	5,242		13,577	12,830
Net book value						
Net book value at the beginning of the year	4,316	2,722	3,544	1,130	11,712	11,958
Net book value at the end of the year	**3,655**	**2,637**	**3,978**	**1,046[6]**	**11,316**	**11,712**

1 Includes leasehold improvements and IT hardware. 2 Represents right-of-use assets recognized by UBS AG as lessee. UBS AG predominantly enters into lease contracts, or contracts that include lease components, in relation to real estate, including offices, retail branches and sales offices. The total cash outflow for leases during 2022 was USD 589m (2021: USD 632m). Interest expense on lease liabilities is included within Interest expense from financial instruments measured at amortized cost and Lease liabilities are included within Other financial liabilities measured at amortized cost. Refer to Notes 3 and 18a, respectively. There were no material gains or losses arising from sale-and-leaseback transactions in 2022 and in 2021. 3 The total reclassification amount for the respective periods represents net reclassifications to Properties and other non-current assets held for sale. 4 Includes write-offs of fully depreciated assets. 5 Impairment charges recorded in 2022 generally relate to assets that are no longer used, for which the recoverable amount based on a value in use approach was determined to be zero. 6 Consists of USD 858m related to software and USD 188m related to Owned properties and equipment.

Note 12 Goodwill and intangible assets

Introduction

UBS AG performs an impairment test on its goodwill assets on an annual basis or when indicators of impairment exist.

UBS AG considers Asset Management, as it is reported in Note 2a, as a separate cash-generating unit (a CGU), as that is the level at which the performance of investment (and the related goodwill) is reviewed and assessed by management. Given that a significant amount of goodwill in Global Wealth Management relates to the PaineWebber acquisition in 2000, which mainly affected the Americas portion of the business, this goodwill remains separately monitored by the Americas, despite the formation of Global Wealth Management in 2018. Therefore, goodwill for Global Wealth Management is separately considered for impairment at the level of two CGUs: Americas; and Switzerland and International (consisting of EMEA, Asia Pacific and Global).

The impairment test is performed for each CGU to which goodwill is allocated by comparing the recoverable amount with the carrying amount of the respective CGU. UBS AG determines the recoverable amount of the respective CGUs based on their value in use. An impairment charge is recognized if the carrying amount exceeds the recoverable amount.

As of 31 December 2022, total goodwill recognized on the balance sheet was USD 6.0bn, of which USD 3.7bn was carried by the Global Wealth Management Americas CGU, USD 1.2bn was carried by the Global Wealth Management Switzerland and International CGU, and USD 1.2bn was carried by Asset Management. Based on the impairment testing methodology described below, UBS AG concluded that the goodwill balances as of 31 December 2022 allocated to these CGUs were not impaired.

Methodology for goodwill impairment testing

The recoverable amounts are determined using a discounted cash flow model, which has been adapted to use inputs that consider features of the banking business and its regulatory environment. The recoverable amount of a CGU is the sum of the discounted earnings attributable to shareholders from the first three forecast years and the terminal value, adjusted for the effect of the capital assumed to be needed over the next three years and to support growth beyond that period. The terminal value, which covers all periods beyond the third year, is calculated on the basis of the forecast of the third-year profit, the discount rate and the long-term growth rate, as well as the implied perpetual capital growth.

The carrying amount for each CGU is determined by reference to UBS's equity attribution framework. Within this framework, which is described in the "Capital, liquidity and funding, and balance sheet" section of this report, UBS attributes equity to the businesses on the basis of their risk-weighted assets and leverage ratio denominator (both metrics include resource allocations from Group Functions to the business divisions), their goodwill and their intangible assets, as well as attributed equity related to certain common equity tier 1 deduction items. The framework is primarily used for the purpose of measuring the performance of the businesses and includes certain management assumptions. Attributed equity is equal to the capital a CGU requires to conduct its business and is currently considered a reasonable approximation of the carrying amount of the CGUs. The attributed equity methodology is also applied in the business planning process, the inputs from which are used in calculating the recoverable amounts of the respective CGU.

› **Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information about the equity attribution framework**

Assumptions

Valuation parameters used within UBS AG's impairment test model are linked to external market information, where applicable. The model used to determine the recoverable amount is most sensitive to changes in the forecast earnings available to shareholders in years one to three, to changes in the discount rates and to changes in the long-term growth rate. The applied long-term growth rate is based on long-term economic growth rates for different regions worldwide. Earnings available to shareholders are estimated on the basis of forecast results, which are part of the business plan approved by the Board of Directors.

The discount rates are determined by applying a capital asset pricing model-based approach, as well as considering quantitative and qualitative inputs from both internal and external analysts and the view of management. They also take into account regional differences in risk-free rates at the level of the individual CGUs. In line with discount rates, long-term growth rates are determined at the regional level based on nominal GDP growth rate forecasts.

Key assumptions used to determine the recoverable amounts of each CGU are tested for sensitivity by applying a reasonably possible change to those assumptions. Forecast earnings available to shareholders were changed by 20%, the discount rates were changed by 1.5 percentage points, and the long-term growth rates were changed by 0.75 percentage points. Under all scenarios, reasonably possible changes in key assumptions did not result in an impairment of goodwill or intangible assets reported by Global Wealth Management Americas, Global Wealth Management Switzerland and International, and Asset Management.

If the estimated earnings and other assumptions in future periods deviate from the current outlook, the value of goodwill attributable to Global Wealth Management Americas, Global Wealth Management Switzerland and International, and Asset Management may become impaired in the future, giving rise to losses in the income statement. Recognition of any impairment of goodwill would reduce International Financial Reporting Standards equity and net profit. It would not affect cash flows and, as goodwill is required to be deducted from capital under the Basel III capital framework, no effect would be expected on UBS AG's capital ratios.

Discount and growth rates

	Discount rates		Growth rates	
In %	31.12.22	31.12.21	31.12.22	31.12.21
Global Wealth Management Americas	10.5	9.5	3.8	4.0
Global Wealth Management Switzerland and International	9.4	8.5	3.6	3.1
Asset Management	9.5	8.5	3.4	2.9

Note 12 Goodwill and intangible assets (continued)

USD m	Goodwill	Intangible assets[1]	2022	2021
Historical cost				
Balance at the beginning of the year	6,126	1,612	7,739	7,865
Additions	0	0	0	1
Disposals[2]	(22)	0	(22)	(3)
Write-offs	0	0	0	(41)
Foreign currency translation	(61)	(14)	(76)	(83)
Balance at the end of the year	6,043	1,598	7,641	7,739
Accumulated amortization and impairment				
Balance at the beginning of the year		1,360	1,360	1,385
Amortization		26	26	31
Impairment / (reversal of impairment)		(1)	(1)	(1)
Write-offs		0	0	(41)
Foreign currency translation		(11)	(11)	(13)
Balance at the end of the year		1,374	1,374	1,360
Net book value at the end of the year	6,043	224	6,267	6,378
of which: Global Wealth Management Americas	*3,709*	*31*	*3,740*	*3,760*
of which: Global Wealth Management Switzerland and International	*1,166*	*59*	*1,225*	*1,276*
of which: Asset Management	*1,167*	*0*	*1,167*	*1,202*
of which: Investment Bank	*0*	*135*	*135*	*139*

1 Intangible assets mainly include customer relationships, contractual rights and the fully amortized branch network intangible asset recognized in connection with the acquisition of PaineWebber Group, Inc. 2 Reflects the derecognition of goodwill allocated to businesses that have been disposed of, in accordance with IAS 36 requirements.

The table below presents estimated aggregated amortization expenses for intangible assets.

USD m	Intangible assets
Estimated aggregated amortization expenses for:	
2023	26
2024	24
2025	23
2026	23
2027	22
Thereafter	104
Not amortized due to indefinite useful life	2
Total	224

Note 13 Other assets

a) Other financial assets measured at amortized cost

USD m	31.12.22	31.12.21
Debt securities	44,594	18,858
Loans to financial advisors	2,611	2,453
Fee- and commission-related receivables	1,803	1,966
Finance lease receivables	1,314	1,356
Settlement and clearing accounts	1,174	455
Accrued interest income	1,276	521
Other	618	627
Total other financial assets measured at amortized cost	53,389	26,236

Debt securities increased by USD 25.7bn compared with 31 December 2021, largely reflecting shifts from cash into securities within UBS's high-quality liquid asset portfolio as spreads widened. In addition, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost in 2022.

› **Refer to Note 1b for more information**

Note 13 Other assets (continued)

b) Other non-financial assets

USD m	31.12.22	31.12.21
Precious metals and other physical commodities	4,471	5,258
Deposits and collateral provided in connection with litigation, regulatory and similar matters[1]	2,205	1,526
Prepaid expenses	709	717
VAT, withholding tax and other tax receivables	1,405	591
Properties and other non-current assets held for sale	279	32
Assets of disposal group held for sale[2]		1,093
Other	583	618
Total other non-financial assets	9,652	9,836

1 Refer to Note 17 for more information. 2 Refer to Note 29 for more information.

Note 14 Customer deposits, and funding from UBS Group AG

a) Customer deposits

USD m	31.12.22	31.12.21
Demand deposits	182,307	247,299
Retail savings / deposits	149,310	133,354
Sweep deposits	69,223	113,870
Time deposits[1]	126,331	50,312
Total customer deposits	527,171	544,834

1 Includes customer deposits in UBS AG Jersey Branch placed by UBS Switzerland AG on behalf of its clients.

Increases in interest rates during the year resulted in significant shifts from demand deposits to time deposits.

b) Funding from UBS Group AG measured at amortized cost

USD m	31.12.22	31.12.21
Senior unsecured debt that contributes to total loss-absorbing capacity (TLAC)	42,073	38,984
Senior unsecured debt other than TLAC	236	4,471
Subordinated debt	13,838	13,840
of which: eligible as high-trigger loss-absorbing additional tier 1 capital instruments	*10,654*	*11,414*
of which: eligible as low-trigger loss-absorbing additional tier 1 capital instruments	*1,187*	*2,426*
Total funding from UBS Group AG measured at amortized cost[1]	56,147	57,295

1 UBS AG has also recognized funding from UBS Group AG that is designated at fair value. Refer to Note 18b for more information.

UBS AG uses interest rate and foreign exchange derivatives to manage the risks inherent in certain debt instruments held at amortized cost. In some cases, UBS AG applies hedge accounting for interest rate risk as discussed in item 2j in Note 1a and Note 25. As a result of applying hedge accounting, the life-to-date adjustment to the carrying amount of *Funding from UBS Group AG measured at amortized cost* was a decrease of USD 5.1bn as of 31 December 2022 and an increase of USD 0.2bn as of 31 December 2021, reflecting changes in fair value due to interest rate movements.

Subordinated debt consists of unsecured debt obligations that are contractually subordinated in right of payment to all other present and future non-subordinated obligations of the respective issuing entity. All of the subordinated debt instruments outstanding as of 31 December 2022 pay a fixed rate of interest.

› **Refer to Note 23 for maturity information**

Note 15 Debt issued designated at fair value

USD m	31.12.22	31.12.21
Issued debt instruments		
Equity-linked[1]	41,901	47,059
Rates-linked	16,276	16,369
Credit-linked	2,170	1,723
Fixed-rate	6,538	2,868
Commodity-linked	4,294	2,911
Other	663	529
Total debt issued designated at fair value	71,842	71,460
of which: issued by UBS AG with original maturity greater than one year[2]	*57,750*	*57,967*

1 Includes investment fund unit-linked instruments issued. 2 Based on original contractual maturity without considering any early redemption features. As of 31 December 2022, 100% of the balance was unsecured (31 December 2021: 100%).

Note 16 Debt issued measured at amortized cost

USD m	31.12.22	31.12.21
Short-term debt[1]	29,676	43,098
Senior unsecured debt	17,892	23,328
of which: issued by UBS AG with original maturity greater than one year	*17,892*	*23,307*
Covered bonds	0	1,389
Subordinated debt	2,968	5,163
of which: eligible as low-trigger loss-absorbing tier 2 capital instruments	*2,422*	*2,596*
of which: eligible as non-Basel III-compliant tier 2 capital instruments	*536*	*547*
Debt issued through the Swiss central mortgage institutions	8,962	9,454
Long-term debt[2]	29,823	39,334
Total debt issued measured at amortized cost[3]	59,499	82,432

1 Debt with an original contractual maturity of less than one year, includes mainly certificates of deposit and commercial paper. 2 Debt with an original contractual maturity greater than or equal to one year. The classification of debt issued into short-term and long-term does not consider any early redemption features. 3 Net of bifurcated embedded derivatives, the fair value of which was not material for the periods presented.

UBS AG uses interest rate and foreign exchange derivatives to manage the risks inherent in certain debt instruments held at amortized cost. In some cases, UBS AG applies hedge accounting for interest rate risk as discussed in item 2j in Note 1a and Note 25. As a result of applying hedge accounting, the life-to-date adjustment to the carrying amount of debt issued was a decrease of USD 1.0bn as of 31 December 2022 and an increase of USD 0.3bn as of 31 December 2021, reflecting changes in fair value due to interest rate movements.

Subordinated debt consists of unsecured debt obligations that are contractually subordinated in right of payment to all other present and future non-subordinated obligations of the respective issuing entity. All of the subordinated debt instruments outstanding as of 31 December 2022 pay a fixed rate of interest.

› **Refer to Note 23 for maturity information**

Note 17 Provisions and contingent liabilities

a) Provisions

The table below presents an overview of total provisions.

USD m	31.12.22	31.12.21
Provisions other than provisions for expected credit losses	2,982	3,256
Provisions for expected credit losses[1]	201	196
Total provisions	3,183	3,452

1 Refer to Note 9 for more information about ECL provisions recognized for off-balance sheet financial instruments and credit lines.

The following table presents additional information for provisions other than provisions for expected credit losses.

USD m	Litigation, regulatory and similar matters[1]	Restructuring	Other[3]	Total 2022
Balance at the beginning of the year	2,798	137	321	3,256
Increase in provisions recognized in the income statement	406	174	49	629
Release of provisions recognized in the income statement	(57)	(19)	(32)	(109)
Provisions used in conformity with designated purpose	(470)	(189)	(31)	(689)
Capitalized reinstatement costs	0	0	1	1
Foreign currency translation / unwind of discount	(90)	(5)	(11)	(106)
Balance at the end of the year	2,586	98[2]	297	2,982

1 Consists of provisions for losses resulting from legal, liability and compliance risks. 2 Consists of personnel-related restructuring provisions of USD 70m as of 31 December 2022 (31 December 2021: USD 90m) and provisions for onerous contracts of USD 28m as of 31 December 2022 (31 December 2021: USD 47m). 3 Mainly includes provisions related to real estate, employee benefits and operational risks.

Restructuring provisions relate to personnel-related provisions and onerous contracts. Personnel-related restructuring provisions are generally used within a short period of time. The level of personnel-related provisions can change when natural staff attrition reduces the number of people affected by a restructuring event, and therefore results in lower estimated costs. Onerous contracts for property are recognized when UBS is committed to pay for non-lease components, such as utilities, service charges, taxes and maintenance, when a property is vacated or not fully recovered from sub-tenants.

Information about provisions and contingent liabilities in respect of litigation, regulatory and similar matters, as a class, is included in Note 17b. There are no material contingent liabilities associated with the other classes of provisions.

b) Litigation, regulatory and similar matters

UBS operates in a legal and regulatory environment that exposes it to significant litigation and similar risks arising from disputes and regulatory proceedings. As a result, UBS (which for purposes of this Note may refer to UBS AG and/or one or more of its subsidiaries, as applicable) is involved in various disputes and legal proceedings, including litigation, arbitration, and regulatory and criminal investigations.

Such matters are subject to many uncertainties, and the outcome and the timing of resolution are often difficult to predict, particularly in the earlier stages of a case. There are also situations where UBS may enter into a settlement agreement. This may occur in order to avoid the expense, management distraction or reputational implications of continuing to contest liability, even for those matters for which UBS believes it should be exonerated. The uncertainties inherent in all such matters affect the amount and timing of any potential outflows for both matters with respect to which provisions have been established and other contingent liabilities. UBS makes provisions for such matters brought against it when, in the opinion of management after seeking legal advice, it is more likely than not that UBS has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against UBS, but are nevertheless expected to be, based on UBS's experience with similar asserted claims. If any of those conditions is not met, such matters result in contingent liabilities. If the amount of an obligation cannot be reliably estimated, a liability exists that is not recognized even if an outflow of resources is probable. Accordingly, no provision is established even if the potential outflow of resources with respect to such matters could be significant. Developments relating to a matter that occur after the relevant reporting period, but prior to the issuance of financial statements, which affect management's assessment of the provision for such matter (because, for example, the developments provide evidence of conditions that existed at the end of the reporting period), are adjusting events after the reporting period under IAS 10 and must be recognized in the financial statements for the reporting period.

Specific litigation, regulatory and other matters are described below, including all such matters that management considers to be material and others that management believes to be of significance due to potential financial, reputational and other effects. The amount of damages claimed, the size of a transaction or other information is provided where available and appropriate in order to assist users in considering the magnitude of potential exposures.

In the case of certain matters below, we state that we have established a provision, and for the other matters, we make no such statement. When we make this statement and we expect disclosure of the amount of a provision to prejudice seriously our position with other parties in the matter because it would reveal what UBS believes to be the probable and reliably estimable outflow, we do not disclose that amount. In some cases we are subject to confidentiality obligations that preclude such disclosure. With respect to the matters for which we do not state whether we have established a provision, either: (a) we have not established a provision, in which case the matter is treated as a contingent liability under the applicable accounting standard; or (b) we have established a provision but expect disclosure of that fact to prejudice seriously our position with other parties in the matter because it would reveal the fact that UBS believes an outflow of resources to be probable and reliably estimable.

With respect to certain litigation, regulatory and similar matters for which we have established provisions, we are able to estimate the expected timing of outflows. However, the aggregate amount of the expected outflows for those matters for which we are able to estimate expected timing is immaterial relative to our current and expected levels of liquidity over the relevant time periods.

The aggregate amount provisioned for litigation, regulatory and similar matters as a class is disclosed in the "Provisions" table in Note 17a above. It is not practicable to provide an aggregate estimate of liability for our litigation, regulatory and similar matters as a class of contingent liabilities. Doing so would require UBS to provide speculative legal assessments as to claims and proceedings that involve unique fact patterns or novel legal theories, that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Although UBS therefore cannot provide a numerical estimate of the future losses that could arise from litigation, regulatory and similar matters, UBS believes that the aggregate amount of possible future losses from this class that are more than remote substantially exceeds the level of current provisions.

Litigation, regulatory and similar matters may also result in non-monetary penalties and consequences. A guilty plea to, or conviction of, a crime could have material consequences for UBS. Resolution of regulatory proceedings may require UBS to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations, and may permit financial market utilities to limit, suspend or terminate UBS's participation in such utilities. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for UBS.

The risk of loss associated with litigation, regulatory and similar matters is a component of operational risk for purposes of determining capital requirements. Information concerning our capital requirements and the calculation of operational risk for this purpose is included in the "Capital, liquidity and funding, and balance sheet" section of this report.

Provisions for litigation, regulatory and similar matters by business division and in Group Functions[1]

USD m	Global Wealth Manage-ment	Personal & Corporate Banking	Asset Manage-ment	Investment Bank	Group Functions	Total 2022
Balance at the beginning of the year	1,338	181	8	310	962	2,798
Increase in provisions recognized in the income statement	268	2	1	129	6	406
Release of provisions recognized in the income statement	(23)	(15)	0	(8)	(12)	(57)
Provisions used in conformity with designated purpose	(331)	0	0	(115)	(23)	(470)
Reclassifications	0	0	0	4	(4)	0
Foreign currency translation / unwind of discount	(70)	(9)	0	(11)	0	(90)
Balance at the end of the year	1,182	159	8	308	928	2,586

1 Provisions, if any, for the matters described in items 3 and 4 of this Note are recorded in Global Wealth Management, and provisions, if any, for the matters described in item 2 are recorded in Group Functions. Provisions, if any, for the matters described in items 1 and 6 of this Note are allocated between Global Wealth Management and Personal & Corporate Banking, provisions, if any, for the matters described in item 5 are allocated between the Investment Bank and Group Functions, and provisions, if any, for the matters described in item 7 are allocated between Global Wealth Management and the Investment Bank.

1. Inquiries regarding cross-border wealth management businesses

Tax and regulatory authorities in a number of countries have made inquiries, served requests for information or examined employees located in their respective jurisdictions relating to the cross-border wealth management services provided by UBS and other financial institutions.

Since 2013, UBS (France) S.A., UBS AG and certain former employees have been under investigation in France in relation to UBS's cross-border business with French clients. In connection with this investigation, the investigating judges ordered UBS AG to provide bail ("caution") of EUR 1.1bn.

On 20 February 2019, the court of first instance returned a verdict finding UBS AG guilty of unlawful solicitation of clients on French territory and aggravated laundering of the proceeds of tax fraud, and UBS (France) S.A. guilty of aiding and abetting unlawful solicitation and of laundering the proceeds of tax fraud. The court imposed fines aggregating EUR 3.7bn on UBS AG and UBS (France) S.A. and awarded EUR 800m of civil damages to the French state. A trial in the French Court of Appeal took place in March 2021. On 13 December 2021, the Court of Appeal found UBS AG guilty of unlawful solicitation and aggravated laundering of the proceeds of tax fraud. The court ordered a fine of EUR 3.75m, the confiscation of EUR 1bn, and awarded civil damages to the French state of EUR 800m. UBS AG has filed an appeal with the French Supreme Court to preserve its rights. The notice of appeal enables UBS AG to thoroughly assess the verdict of the Court of Appeal and to determine next steps in the best interest of its stakeholders. The fine and confiscation imposed by the Court of Appeal are suspended during the appeal. The civil damages award has been paid to the French state (EUR 99m of which was deducted from the bail), subject to the result of UBS's appeal.

Our balance sheet at 31 December 2022 reflected provisions with respect to this matter in an amount of EUR 1.1bn (USD 1.2bn). The wide range of possible outcomes in this case contributes to a high degree of estimation uncertainty and the provision reflects our best estimate of possible financial implications, although actual penalties and civil damages could exceed (or may be less than) the provision amount.

Our balance sheet at 31 December 2022 reflected provisions with respect to matters described in this item 1 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

2. Claims related to sales of residential mortgage-backed securities and mortgages

From 2002 through 2007, prior to the crisis in the US residential loan market, UBS was a substantial issuer and underwriter of US residential mortgage-backed securities (RMBS) and was a purchaser and seller of US residential mortgages.

In November 2018, the DOJ filed a civil complaint in the District Court for the Eastern District of New York. The complaint seeks unspecified civil monetary penalties under the Financial Institutions Reform, Recovery and Enforcement Act of 1989 related to UBS's issuance, underwriting and sale of 40 RMBS transactions in 2006 and 2007. UBS moved to dismiss the civil complaint in February 2019. In December 2019, the district court denied UBS's motion to dismiss.

Our balance sheet at 31 December 2022 reflected a provision with respect to matters described in this item 2 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of this matter cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

3. Madoff

In relation to the Bernard L. Madoff Investment Securities LLC (BMIS) investment fraud, UBS AG, UBS (Luxembourg) S.A. (now UBS Europe SE, Luxembourg branch) and certain other UBS subsidiaries have been subject to inquiries by a number of regulators, including the Swiss Financial Market Supervisory Authority (FINMA) and the Luxembourg Commission de Surveillance du Secteur Financier. Those inquiries concerned two third-party funds established under Luxembourg law, substantially all assets of which were with BMIS, as well as certain funds established in offshore jurisdictions with either direct or indirect exposure to BMIS. These funds faced severe losses, and the Luxembourg funds are in liquidation. The documentation establishing both funds identifies UBS entities in various roles, including custodian, administrator, manager, distributor and promoter, and indicates that UBS employees serve as board members.

In 2009 and 2010, the liquidators of the two Luxembourg funds filed claims against UBS entities, non-UBS entities and certain individuals, including current and former UBS employees, seeking amounts totaling approximately EUR 2.1bn, which includes amounts that the funds may be held liable to pay the trustee for the liquidation of BMIS (BMIS Trustee).

A large number of alleged beneficiaries have filed claims against UBS entities (and non-UBS entities) for purported losses relating to the Madoff fraud. The majority of these cases have been filed in Luxembourg, where decisions that the claims in eight test cases were inadmissible have been affirmed by the Luxembourg Court of Appeal, and the Luxembourg Supreme Court has dismissed a further appeal in one of the test cases.

In the US, the BMIS Trustee filed claims against UBS entities, among others, in relation to the two Luxembourg funds and one of the offshore funds. The total amount claimed against all defendants in these actions was not less than USD 2bn. In 2014, the US Supreme Court rejected the BMIS Trustee's motion for leave to appeal decisions dismissing all claims except those for the recovery of approximately USD 125m of payments alleged to be fraudulent conveyances and preference payments. In 2016, the bankruptcy court dismissed these claims against the UBS entities. In February 2019, the Court of Appeals reversed the dismissal of the BMIS Trustee's remaining claims, and the US Supreme Court subsequently denied a petition seeking review of the Court of Appeals' decision. The case has been remanded to the Bankruptcy Court for further proceedings.

4. Puerto Rico

Declines since 2013 in the market prices of Puerto Rico municipal bonds and of closed-end funds (funds) that are sole-managed and co-managed by UBS Trust Company of Puerto Rico and distributed by UBS Financial Services Incorporated of Puerto Rico (UBS PR) led to multiple regulatory inquiries, which in 2014 and 2015, led to settlements with the Office of the Commissioner of Financial Institutions for the Commonwealth of Puerto Rico, the US Securities and Exchange Commission (SEC) and the Financial Industry Regulatory Authority.

Since then, UBS clients in Puerto Rico who own the funds or Puerto Rico municipal bonds and/or who used their UBS account assets as collateral for UBS non-purpose loans filed customer complaints and arbitration demands seeking aggregate damages of USD 3.42bn, of which USD 3.37bn have been resolved through settlements, arbitration or withdrawal of claims. Allegations include fraud, misrepresentation and unsuitability of the funds and of the loans.

A shareholder derivative action was filed in 2014 against various UBS entities and current and certain former directors of the funds, alleging hundreds of millions of US dollars in losses in the funds. In 2021, the parties reached an agreement to settle this matter for USD 15m, subject to court approval.

In 2011, a purported derivative action was filed on behalf of the Employee Retirement System of the Commonwealth of Puerto Rico (System) against over 40 defendants, including UBS PR, which was named in connection with its underwriting and consulting services. Plaintiffs alleged that defendants violated their purported fiduciary duties and contractual obligations in connection with the issuance and underwriting of USD 3bn of bonds by the System in 2008 and sought damages of over USD 800m. In 2016, the court granted the System's request to join the action as a plaintiff. In 2022, a federal district court enjoined the plaintiffs from proceeding with the action on the grounds it impermissibly conflicted with Puerto Rico's approved Plan of Adjustment.

Beginning in 2015, certain agencies and public corporations of the Commonwealth of Puerto Rico (Commonwealth) defaulted on certain interest payments on Puerto Rico bonds. In 2016, US federal legislation created an oversight board with power to oversee Puerto Rico's finances and to restructure its debt. The oversight board has imposed a stay on the exercise of certain creditors' rights. In 2017, the oversight board placed certain of the bonds into a bankruptcy-like proceeding under the supervision of a Federal District Judge.

In May 2019, the oversight board filed complaints in Puerto Rico federal district court bringing claims against financial, legal and accounting firms that had participated in Puerto Rico municipal bond offerings, including UBS, seeking a return of underwriting and swap fees paid in connection with those offerings. UBS estimates that it received approximately USD 125m in fees in the relevant offerings.

In August 2019, and February and November 2020, four US insurance companies that insured issues of Puerto Rico municipal bonds sued UBS and several other underwriters of Puerto Rico municipal bonds in three separate cases. The actions collectively seek recovery of an aggregate of USD 955m in damages from the defendants. The plaintiffs in these cases claim that defendants failed to reasonably investigate financial statements in the offering materials for the insured Puerto Rico bonds issued between 2002 and 2007, which plaintiffs argue they relied upon in agreeing to insure the bonds notwithstanding that they had no contractual relationship with the underwriters. Defendants' motions to dismiss have been granted in all three cases; those decisions are being appealed by the plaintiffs.

Our balance sheet at 31 December 2022 reflected provisions with respect to matters described in this item 4 in amounts that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provisions that we have recognized.

5. Foreign exchange, LIBOR and benchmark rates, and other trading practices

Foreign exchange-related regulatory matters: Beginning in 2013, numerous authorities commenced investigations concerning possible manipulation of foreign exchange markets and precious metals prices. As a result of these investigations, UBS entered into resolutions with Swiss, US and United Kingdom regulators and the European Commission. UBS was granted conditional immunity by the Antitrust Division of the DOJ and by authorities in other jurisdictions in connection with potential competition law violations relating to foreign exchange and precious metals businesses.

Foreign exchange-related civil litigation: Putative class actions have been filed since 2013 in US federal courts and in other jurisdictions against UBS and other banks on behalf of putative classes of persons who engaged in foreign currency transactions with any of the defendant banks. UBS has resolved US federal court class actions relating to foreign currency transactions with the defendant banks and persons who transacted in foreign exchange futures contracts and options on such futures under a settlement agreement that provides for UBS to pay an aggregate of USD 141m and provide cooperation to the settlement classes. Certain class members have excluded themselves from that settlement and have filed individual actions in US and English courts against UBS and other banks, alleging violations of US and European competition laws and unjust enrichment. UBS and the other banks have reached an agreement in principle to resolve those individual matters.

In 2015, a putative class action was filed in federal court against UBS and numerous other banks on behalf of persons and businesses in the US who directly purchased foreign currency from the defendants and alleged co-conspirators for their own end use. In March 2017, the court granted UBS's (and the other banks') motions to dismiss the complaint. The plaintiffs filed an amended complaint in August 2017. In March 2018, the court denied the defendants' motions to dismiss the amended complaint. In March 2022, the court denied plaintiffs' motion for class certification.

LIBOR and other benchmark-related regulatory matters: Numerous government agencies conducted investigations regarding potential improper attempts by UBS, among others, to manipulate LIBOR and other benchmark rates at certain times. UBS reached settlements or otherwise concluded investigations relating to benchmark interest rates with the investigating authorities. UBS was granted conditional leniency or conditional immunity from authorities in certain jurisdictions, including the Antitrust Division of the DOJ and the Swiss Competition Commission (WEKO), in connection with potential antitrust or competition law violations related to certain rates. However, UBS has not reached a final settlement with WEKO, as the Secretariat of WEKO has asserted that UBS does not qualify for full immunity.

LIBOR and other benchmark-related civil litigation: A number of putative class actions and other actions are pending in the federal courts in New York against UBS and numerous other banks on behalf of parties who transacted in certain interest rate benchmark-based derivatives. Also pending in the US and in other jurisdictions are a number of other actions asserting losses related to various products whose interest rates were linked to LIBOR and other benchmarks, including adjustable rate mortgages, preferred and debt securities, bonds pledged as collateral, loans, depository accounts, investments and other interest-bearing instruments. The complaints allege manipulation, through various means, of certain benchmark interest rates, including USD LIBOR, Euroyen TIBOR, Yen LIBOR, EURIBOR, CHF LIBOR, GBP LIBOR, SGD SIBOR and SOR and Australian BBSW, and seek unspecified compensatory and other damages under varying legal theories.

Note 17 Provisions and contingent liabilities (continued)

USD LIBOR class and individual actions in the US: In 2013 and 2015, the district court in the USD LIBOR actions dismissed, in whole or in part, certain plaintiffs' antitrust claims, federal racketeering claims, CEA claims, and state common law claims, and again dismissed the antitrust claims in 2016 following an appeal. In December 2021, the Second Circuit affirmed the district court's dismissal in part and reversed in part and remanded to the district court for further proceedings. The Second Circuit, among other things, held that there was personal jurisdiction over UBS and other foreign defendants based on allegations that at least one alleged co-conspirator undertook an overt act in the United States. Separately, in 2018, the Second Circuit reversed in part the district court's 2015 decision dismissing certain individual plaintiffs' claims and certain of these actions are now proceeding. In 2018, the district court denied plaintiffs' motions for class certification in the USD class actions for claims pending against UBS, and plaintiffs sought permission to appeal that ruling to the Second Circuit. In July 2018, the Second Circuit denied the petition to appeal of the class of USD lenders and in November 2018 denied the petition of the USD exchange class. In January 2019, a putative class action was filed in the District Court for the Southern District of New York against UBS and numerous other banks on behalf of US residents who, since 1 February 2014, directly transacted with a defendant bank in USD LIBOR instruments. The complaint asserts antitrust claims. The defendants moved to dismiss the complaint in August 2019. In March 2020 the court granted defendants' motion to dismiss the complaint in its entirety. Plaintiffs have appealed the dismissal. In March 2022, the Second Circuit dismissed the appeal because appellants, who had been substituted in to replace the original plaintiffs who had withdrawn, lacked standing to pursue the appeal. In August 2020, an individual action was filed in the Northern District of California against UBS and numerous other banks alleging that the defendants conspired to fix the interest rate used as the basis for loans to consumers by jointly setting the USD LIBOR rate and monopolized the market for LIBOR-based consumer loans and credit cards. Defendants moved to dismiss the complaint in September 2021. In September 2022, the court granted defendants' motion to dismiss the complaint in its entirety, while allowing plaintiffs the opportunity to file an amended complaint. Plaintiffs filed an amended complaint in October 2022, and defendants have moved to dismiss the amended complaint in November 2022.

Other benchmark class actions in the US:
Yen LIBOR / Euroyen TIBOR – In 2014, 2015 and 2017, the court in one of the Yen LIBOR / Euroyen TIBOR lawsuits dismissed certain of the plaintiffs' claims, including the plaintiffs' federal antitrust and racketeering claims. In August 2020, the court granted defendants' motion for judgment on the pleadings and dismissed the lone remaining claim in the action as impermissibly extraterritorial. In October 2022, the appeals court affirmed the dismissal on multiple grounds. In 2017, the court dismissed the other Yen LIBOR / Euroyen TIBOR action in its entirety on standing grounds. In April 2020, the appeals court reversed the dismissal and in August 2020 plaintiffs in that action filed an amended complaint focused on Yen LIBOR. The court granted in part and denied in part defendants' motion to dismiss the amended complaint in September 2021. In August 2022, the court granted UBS's motion for reconsideration and dismissed the case against UBS.

CHF LIBOR – In 2017, the court dismissed the CHF LIBOR action on standing grounds and failure to state a claim. Plaintiffs filed an amended complaint, and the court granted a renewed motion to dismiss in September 2019. Plaintiffs appealed. In September 2021, the Second Circuit granted the parties' joint motion to vacate the dismissal and remand the case for further proceedings. Plaintiffs filed a third amended complaint in November 2022 and defendants have moved to dismiss the amended complaint in January 2023.

EURIBOR – In 2017, the court in the EURIBOR lawsuit dismissed the case as to UBS and certain other foreign defendants for lack of personal jurisdiction. Plaintiffs have appealed.

SIBOR / SOR – In October 2018, the court in the SIBOR / SOR action dismissed all but one of plaintiffs' claims against UBS. Plaintiffs filed an amended complaint, and the court granted a renewed motion to dismiss in July 2019. Plaintiffs appealed. In March 2021, the Second Circuit reversed the dismissal. Plaintiffs filed an amended complaint in October 2021, which defendants moved to dismiss in November 2021. In March 2022, plaintiffs reached a settlement in principle with the remaining defendants, including UBS. The court granted final approval of the settlement in November 2022.

BBSW – In November 2018, the court dismissed the BBSW lawsuit as to UBS and certain other foreign defendants for lack of personal jurisdiction. Plaintiffs filed an amended complaint in April 2019, which UBS and other defendants moved to dismiss in May 2019. In February 2020, the court granted in part and denied in part defendants' motions to dismiss the amended complaint. In August 2020, UBS and other BBSW defendants joined a motion for judgment on the pleadings, which the court denied in May 2021. In February 2022, plaintiffs reached a settlement in principle with the remaining defendants, including UBS. The court granted final approval of the settlement in November 2022.

GBP LIBOR – The court dismissed the GBP LIBOR action in August 2019. Plaintiffs have appealed.

Government bonds: Putative class actions have been filed since 2015 in US federal courts against UBS and other banks on behalf of persons who participated in markets for US Treasury securities since 2007. A consolidated complaint was filed in 2017 in the US District Court for the Southern District of New York alleging that the banks colluded with respect to, and manipulated prices of, US Treasury securities sold at auction and in the secondary market and asserting claims under the antitrust laws and for unjust enrichment. Defendants' motions to dismiss the consolidated complaint were granted in March 2021. Plaintiffs filed an amended complaint, which defendants moved to dismiss in June 2021. In March 2022, the court granted defendants' motion to dismiss that complaint. Plaintiffs have appealed the dismissal. Similar class actions have been filed concerning European government bonds and other government bonds.

In May 2021, the European Commission issued a decision finding that UBS and six other banks breached European Union antitrust rules in 2007–2011 relating to European government bonds. The European Commission fined UBS EUR 172m. UBS is appealing the amount of the fine.

With respect to additional matters and jurisdictions not encompassed by the settlements and orders referred to above, our balance sheet at 31 December 2022 reflected a provision in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

6. Swiss retrocessions

The Federal Supreme Court of Switzerland ruled in 2012, in a test case against UBS, that distribution fees paid to a firm for distributing third-party and intra-group investment funds and structured products must be disclosed and surrendered to clients who have entered into a discretionary mandate agreement with the firm, absent a valid waiver. FINMA issued a supervisory note to all Swiss banks in response to the Supreme Court decision. UBS has met the FINMA requirements and has notified all potentially affected clients.

The Supreme Court decision has resulted, and continues to result, in a number of client requests for UBS to disclose and potentially surrender retrocessions. Client requests are assessed on a case-by-case basis. Considerations taken into account when assessing these cases include, among other things, the existence of a discretionary mandate and whether or not the client documentation contained a valid waiver with respect to distribution fees.

Our balance sheet at 31 December 2022 reflected a provision with respect to matters described in this item 6 in an amount that UBS believes to be appropriate under the applicable accounting standard. The ultimate exposure will depend on client requests and the resolution thereof, factors that are difficult to predict and assess. Hence, as in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

7. Communications recordkeeping

The SEC and CFTC conducted investigations of UBS and other financial institutions regarding compliance with records preservation requirements relating to business communications sent over unapproved electronic messaging channels. UBS cooperated with the investigations, and, in September 2022, UBS agreed to pay civil monetary penalties of USD 125m to the SEC and USD 75m to the CFTC to resolve these matters.

Note 18 Other liabilities

a) Other financial liabilities measured at amortized cost

USD m	31.12.22	31.12.21
Other accrued expenses	1,564	1,642
Accrued interest expenses	2,008	1,134
Settlement and clearing accounts	1,060	1,282
Lease liabilities	3,211	3,438
Other	2,549	2,269
Total other financial liabilities measured at amortized cost	10,391	9,765

b) Other financial liabilities designated at fair value

USD m	31.12.22	31.12.21
Financial liabilities related to unit-linked investment contracts	13,221	21,466
Securities financing transactions	15,333	6,377
Over-the-counter debt instruments and other	1,684	2,231
Funding from UBS Group AG	1,796	2,340
Total other financial liabilities designated at fair value	32,033	32,414

c) Other non-financial liabilities

USD m	31.12.22	31.12.21
Compensation-related liabilities	4,424	4,795
of which: financial advisor compensation plans	*1,463*	*1,512*
of which: other compensation plans	*2,023*	*2,140*
of which: net defined benefit liability	*449*	*617*
of which: other compensation-related liabilities[1]	*490*	*526*
Current tax liabilities	1,044	1,365
Deferred tax liabilities	233	297
VAT, withholding tax and other tax payables	472	524
Deferred income	233	225
Liabilities of disposal group held for sale[2]		1,298
Other	84	68
Total other non-financial liabilities	6,489	8,572

1 Includes liabilities for payroll taxes and untaken vacation. 2 Refer to Note 29 for more information.

Note 19 Expected credit loss measurement

a) Expected credit losses in the period

Total net credit loss expenses were USD 29m in 2022, reflecting net credit loss expenses of USD 29m related to stage 1 and 2 positions and USD 0m net credit loss expenses related to credit-impaired (stage 3) positions.

Stage 1 and 2 expected credit loss (ECL) expenses of USD 29m include USD 123m expenses related to scenario and parameter updates and USD 13m related to other book quality and size changes, partly offset by USD 77m post-model adjustment (PMA) releases and USD 30m releases related to model changes. Lending to corporate clients not secured by mortgages contributed USD 21m, mainly driven by scenario effects related to the downward revision of GDP and higher interest rate assumptions in the newly introduced *stagflationary geopolitical crisis scenario* (SGC). Lending secured by mortgages contributed USD 16m in expenses, mainly driven by scenario effects related to higher interest rate assumptions, especially from the SGC, and adverse house price assumptions from both applied downside scenarios. This was partly offset by releases from other lending of USD 9m.

› **Refer to Note 19b for more information regarding changes to ECL models, scenarios, scenario weights and the post-model adjustment and to Note 19c for more information regarding the development of ECL allowances and provisions**

Stage 3 net expenses of USD 0m were recognized across a number of defaulted positions, with net expenses of USD 12m in Personal and Corporate Banking and USD 5m in Global Wealth Management, offset by releases of USD 18m in the Investment Bank, including a USD 28m release for a single airline-related counterparty, mainly due to improved cashflow assumptions, and USD 10m net expenses across a number of defaulted positions.

Credit loss expense / (release)

USD m	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Group Functions	Total
For the year ended 31.12.22						
Stages 1 and 2	(5)	27	0	6	1	29
Stage 3	5	12	0	(18)	2	0
Total credit loss expense / (release)	0	39	0	(12)	3	29
For the year ended 31.12.21						
Stages 1 and 2	(28)	(62)	0	(34)	0	(123)
Stage 3	(1)	(24)	1	0	0	(25)
Total credit loss expense / (release)	**(29)**	**(86)**	**1**	**(34)**	**0**	**(148)**
For the year ended 31.12.20						
Stages 1 and 2	48	129	0	88	0	266
Stage 3	40	128	2	217	42	429
Total credit loss expense / (release)	**88**	**257**	**2**	**305**	**42**	**695**

b) Changes to ECL models, scenarios, scenario weights and key inputs

Refer to Note 1a for information about the principles governing expected credit loss (ECL) models, scenarios, scenario weights and key inputs applied.

Governance

Comprehensive cross-functional and cross-divisional governance processes are in place and are used to discuss and approve scenario updates and weights, to assess whether significant increases in credit risk resulted in stage transfers, to review model outputs and to reach conclusions regarding post-model adjustments.

Model changes

During 2022, the model review and enhancement process led to adjustments of the probability of default (PD), loss given default (LGD), and credit conversion factor (CCF) models, resulting in a USD 30m decrease in ECL allowances. This includes a decrease of USD 19m in Global Wealth Management affecting loans to financial advisors and specialized US lending portfolios and an USD 11m decrease in Personal & Corporate Banking related to lending to *large corporate clients* and *financial intermediaries & hedge funds*.

Scenario and key input updates

During 2022, the scenarios and related macroeconomic factors were updated from those applied at the end of 2021 by considering the prevailing economic and political conditions and uncertainty. The review focused on events that significantly changed the economic outlook during the year: the Russia–Ukraine war, with the subsequent effect on energy markets, the inflation outlook and economic growth in Europe, and rising global interest rates due to central banks' adoption of more restrictive monetary policies.

Baseline scenario: the projections of the baseline scenario, which are aligned to the economic and market assumptions used for UBS AG's business planning purposes, are broadly in line with external data, such as that from Bloomberg Consensus, Oxford Economics and the International Monetary Fund World Economic Outlook. The expectation for 2023 is that global growth stalls under the weight of monetary policy tightening, and continued pressure on real purchasing power due to high inflation – further fueled in Europe by the energy crisis and a lack of labor supply – even though unemployment rates are forecast to be higher than in 2022 and an energy crisis in Europe seems likely to be averted. Interest rates are expected to remain high, given the persistence of inflationary trends, leading to a less optimistic outlook for global house prices, which is cushioned in Switzerland by continued strong demand.

Global crisis scenario: The first hypothetical downside scenario, the global crisis scenario, is aligned with the UBS AG's 2022 binding stress scenario and was updated in 2022 to reflect expected risks, resulting in minimal changes. It assumes that, while the global economy has returned to pre-pandemic levels and the immediate risks from COVID-19 have decreased, the associated disruptions and the consequences of the unprecedented monetary and fiscal stimulus measures will remain critical. Concerns regarding the sustainability of public debt, following the marked deterioration of fiscal positions, lead to a loss of confidence and market turbulence, while protectionism results in a decrease in global trade. Governments and central banks have limited scope to support the economies, and interest rate levels remain moderate. As a consequence, China suffers a hard landing which, combined with political, solvency and liquidity concerns, affects emerging markets significantly. A spillover effect leads to a contraction of the Eurozone, Swiss and US economies, as global demand is significantly affected. Given the severity of the macroeconomic impact, unemployment rates rise to historical highs and real estate sectors contract sharply.

Stagflationary geopolitical crisis scenario: The second downside scenario was changed during 2022. In light of the developments caused by Russia's invasion of Ukraine, the *mild global interest rate steepening scenario* was replaced by a *severe global interest rate steepening scenario* in the first quarter of 2022, as the beginning of the Russia–Ukraine war increased fears of higher inflation and a corresponding reaction by monetary authorities. In the second quarter of the year, the progression of the war and the enforcement of sanctions regimes led to a redesign of the scenario. The resulting *severe Russia–Ukraine conflict scenario* has similar dynamics as the severe global interest rate steepening scenario, but addressed specifically the prospect of rising energy costs, especially in Europe, with the consequences of lower growth and higher inflation rates. In the fourth quarter of 2022, UBS developed a new *stagflationary geopolitical crisis scenario* (SGC) and included this new scenario in the ECL calculation for year-end 2022 in lieu of the *severe Russia–Ukraine conflict scenario*. While the SGC scenario addresses similar risks as the *severe Russia–Ukraine conflict scenario*, it also covers additional and broader risks and therefore assumes more severe shocks. Geopolitical tensions cause an escalation of security concerns and undermine globalization. The ensuing economic regionalization leads to a surge in global commodity prices and further disruptions of supply chains and raises the specter of prolonged stagflation. The severe interest rate and adverse house price assumptions in the SGC scenario had a substantive impact on model-based ECL allowances for loans secured by mortgages in Switzerland and the US. These effects were partly offset by PMA releases related to loans secured by mortgages. Refer to the section below on "Scenario weights and post-model adjustments" for more details.

Asset price inflation scenario: The upside scenario is based on positive developments, such as an easing of geopolitical tensions across the globe and a rebound in Chinese economic growth. A combination of lower energy and commodity prices, effective monetary policies and easing supply chain disruptions helps reduce inflation. Improved consumer and business sentiment lead to an economic rebound with central banks able to normalize interest rates; asset prices increase significantly.

Note 19 Expected credit loss measurement (continued)

The table below details the key assumptions for the four scenarios applied as of 31 December 2022.

Scenario weights and post-model adjustments

Due to the less positive outlook compared with the assessment on 31 December 2021, the scenario weights changed during 2022. The upside scenario was allocated a 0% probability, and the previous 5% weight was added to the *baseline scenario*, now set at 60%. Following the introduction of the SGC, which was deemed to have a higher probability of occurring than the *global crisis scenario*, the weights were rebalanced. The SGC has a weight of 25% (compared with 10% for the *mild global interest rate steepening scenario* used as of 31 December 2021) and the weight of the *global crisis scenario* was reduced to 15% (from 30% as of 31 December 2021). The weights are also shown in the table below.

The scenarios and weight allocation were established in line with the general market sentiment that the short-term outlook is subdued and a recession in major markets is a strong probability. The downside risks in relation to inflation and monetary policy, as well as the availability and price of energy, mainly in Europe, are better reflected in our models compared with the uncertain developments caused by COVID-19 in recent years.

However, unquantifiable risks continue to be relevant, as the pandemic has not been overcome and the world may face new disruptions. Furthermore, the geopolitical situation worsened during 2022, and the impact on the world economy from escalations with unforeseeable consequences could be severe. In the near term, this uncertainty relates primarily to the development of the Russia–Ukraine war. Models, which are based on supportable statistical information from past experiences regarding interdependencies of macroeconomic factors and their implications for credit risk portfolios, cannot comprehensively reflect such extraordinary events, such as a pandemic or a fundamental change in the world political order. Rather than creating multiple additional scenarios to attempt gauging these risks and applying model parameters that lack supportable information and cannot be robustly validated, management continued to also apply PMAs.

These PMA took into account that more of the downside risks were modeled in 2022, particularly for lending secured by mortgages. The PMA amounted to USD 131m as of 31 December 2022 (31 December 2021: USD 224m). These remaining PMA for uncertainties on potentially unmodeled risk almost entirely relate to corporate lending portfolios in Personal & Corporate Banking and the Investment Bank.

Economic scenarios and weights applied

	Assigned weights in %	
ECL scenario	31.12.22	31.12.21
Asset price inflation	0.0	5.0
Baseline	60.0	55.0
Mild global interest rate steepening	0.0	10.0
Stagflationary geopolitical crisis	25.0	0.0
Global crisis	15.0	30.0

Scenario assumptions

	One year				Three years cumulative			
31.12.22	Asset price inflation	Baseline	Stagflationary geopolitical crisis	Global crisis	Asset price inflation	Baseline	Stagflationary geopolitical crisis	Global crisis
Real GDP growth (% change)								
United States	4.0	(0.3)	(4.8)	(6.4)	9.1	3.2	(4.4)	(1.8)
Eurozone	3.0	0.6	(5.6)	(8.5)	6.2	2.5	(5.7)	(8.3)
Switzerland	3.0	0.7	(4.8)	(6.7)	6.6	3.5	(4.9)	(3.7)
Consumer price index (% change)								
United States	2.5	2.6	10.0	(0.5)	8.1	6.5	15.8	1.2
Eurozone	2.3	5.0	9.6	(0.7)	7.4	9.6	14.8	(0.7)
Switzerland	2.1	1.6	5.8	(1.8)	6.2	3.9	10.7	(1.6)
Unemployment rate (end-of-period level, %)								
United States	3.0	3.9	9.2	10.0	3.0	5.3	11.8	9.4
Eurozone	6.0	7.0	10.9	11.9	6.0	7.1	12.2	13.0
Switzerland	1.7	2.3	4.3	4.4	1.5	2.6	5.1	4.9
Fixed income: 10-year government bonds (change in yields, basis points)								
USD	25.0	(5.6)	235.0	(326.0)	70.0	(13.2)	205.0	(291.1)
EUR	20.0	47.8	250.0	(270.6)	57.5	44.7	220.0	(246.5)
CHF	25.0	45.7	220.0	(209.7)	62.5	57.0	205.0	(159.6)
Equity indices (% change)								
S&P 500	20.0	7.4	(51.5)	(50.0)	51.7	22.8	(45.6)	(27.9)
EuroStoxx 50	17.0	17.2	(51.6)	(50.0)	42.9	29.2	(47.2)	(39.3)
SPI	14.0	5.6	(51.6)	(46.0)	37.9	19.3	(47.2)	(32.9)
Swiss real estate (% change)								
Single-Family Homes	6.6	1.1	(16.7)	(19.9)	14.0	2.3	(32.9)	(23.9)
Other real estate (% change)								
United States (S&P / Case–Shiller)	7.8	(4.5)	(12.8)	(19.3)	19.1	(0.6)	(35.8)	(32.7)
Eurozone (House Price Index)	7.0	(2.7)	(8.4)	(8.9)	15.4	2.0	(14.7)	(17.5)

Note 19 Expected credit loss measurement (continued)

Scenario assumptions	One year				Three years cumulative			
31.12.21	Asset price inflation	Baseline	Mild global interest rate steepening	Global crisis	Asset price inflation	Baseline	Mild global interest rate steepening	Global crisis
Real GDP growth (% change)								
United States	9.1	4.4	(0.1)	(5.9)	17.8	10.1	1.8	(3.8)
Eurozone	9.4	3.9	(0.1)	(8.7)	17.3	7.5	0.9	(10.3)
Switzerland	5.5	2.4	(0.9)	(6.6)	13.1	5.8	(0.1)	(5.7)
Consumer price index (% change)								
United States	3.1	2.2	5.7	(1.2)	9.5	6.3	13.0	0.4
Eurozone	2.3	1.4	4.2	(1.3)	8.0	4.8	10.4	(1.7)
Switzerland	1.8	0.3	3.5	(1.8)	6.1	1.7	9.0	(1.6)
Unemployment rate (end-of-period level, %)								
United States	3.0	3.9	6.1	10.9	3.0	3.5	7.2	10.8
Eurozone	6.2	7.4	8.7	12.9	6.0	7.2	9.1	15.1
Switzerland	2.3	2.5	3.4	5.2	1.6	2.3	4.2	5.9
Fixed income: 10-year government bonds (change in yields, basis points)								
USD	50.0	16.5	259.2	(50.0)	170.0	41.2	329.2	(15.0)
EUR	40.0	11.1	283.8	(35.0)	140.0	34.9	349.3	(25.0)
CHF	50.0	12.1	245.5	(70.0)	150.0	34.4	307.3	(35.0)
Equity indices (% change)								
S&P 500	12.0	14.1	(27.0)	(50.2)	35.5	24.7	(21.8)	(40.1)
EuroStoxx 50	16.0	12.3	(23.4)	(57.6)	41.6	20.7	(19.9)	(50.4)
SPI	14.0	12.1	(22.9)	(53.6)	37.9	19.1	(19.6)	(44.2)
Swiss real estate (% change)								
Single-Family Homes	5.1	4.4	(4.3)	(17.0)	15.5	7.4	(8.8)	(30.0)
Other real estate (% change)								
United States (S&P / Case–Shiller)	10.0	3.5	(2.3)	(9.5)	21.7	7.1	(8.7)	(26.3)
Eurozone (House Price Index)	8.4	5.1	(4.0)	(5.4)	17.8	9.6	(7.6)	(10.8)

c) Development of ECL allowances and provisions

The ECL allowances and provisions recognized in the period are impacted by a variety of factors, such as:
- the effect of selecting and updating forward-looking scenarios and the respective weights;
- origination of new instruments during the period;
- the effect of passage of time (lower residual lifetime PD and the effect of discount unwind) as the ECL on an instrument for the remaining lifetime decreases (all other factors remaining the same);
- derecognition of instruments in the period;
- change in individual asset quality of instruments;
- movements from a maximum 12-month ECL to the recognition of lifetime ECL (and vice versa) following transfers between stages 1 and 2;
- movements from stages 1 and 2 to stage 3 (credit-impaired status) when default has become certain and PD increases to 100% (or vice versa);
- changes in models or updates to model parameters;
- write-off; and
- foreign exchange translations for assets denominated in foreign currencies.

The table below explains the changes in the ECL allowances and provisions for on- and off-balance sheet financial instruments and credit lines in scope of ECL requirements between the beginning and the end of the period due to the factors listed above.

Development of ECL allowances and provisions

USD m	Total	Stage 1	Stage 2	Stage 3
Balance as of 31 December 2021	(1,165)	(282)	(220)	(662)
Net movement from new and derecognized transactions[1]	(7)	(21)	16	(2)
of which: Private clients with mortgages	*(6)*	*(6)*	*0*	*0*
of which: Real estate financing	*(3)*	*(5)*	*2*	*0*
of which: Large corporate clients	*8*	*(1)*	*11*	*(2)*
of which: SME clients	*(1)*	*(1)*	*0*	*0*
of which: Other	*(6)*	*(8)*	*3*	*0*
of which: Financial intermediaries and hedge funds	*0*	*(2)*	*2*	*0*
of which: Loans to financial advisors	*0*	*0*	*0*	*0*
Remeasurements with stage transfers[2]	(65)	20	(39)	(46)
of which: Private clients with mortgages	*(10)*	*3*	*(12)*	*0*
of which: Real estate financing	*7*	*(1)*	*8*	*0*
of which: Large corporate clients	*(33)*	*16*	*(28)*	*(21)*
of which: SME clients	*(23)*	*2*	*(2)*	*(22)*
of which: Other	*(6)*	*1*	*(4)*	*(3)*
of which: Financial intermediaries and hedge funds	*0*	*0*	*0*	*0*
of which: Loans to financial advisors	*1*	*2*	*(1)*	*0*
Remeasurements without stage transfers[3]	13	(8)	(27)	48
of which: Private clients with mortgages	*(12)*	*5*	*(18)*	*1*
of which: Real estate financing	*13*	*3*	*10*	*0*
of which: Large corporate clients	*32*	*(11)*	*2*	*41*
of which: SME clients	*(6)*	*(10)*	*(9)*	*14*
of which: Other	*(15)*	*5*	*(12)*	*(8)*
of which: Sovereigns	*(8)*	*0*	*(8)*	*0*
of which: Loans to financial advisors	*(3)*	*3*	*(1)*	*(6)*
Model changes[4]	30	29	1	0
Movements with profit or loss impact[5]	(29)	20	(49)	0
Movements without profit or loss impact (write-off, FX and other)[6]	104	3	1	99
Balance as of 31 December 2022	(1,091)	(260)	(267)	(564)

1 Represents the increase and decrease in allowances and provisions resulting from financial instruments (including guarantees and facilities) that were newly originated, purchased or renewed and from the final derecognition of loans or facilities on their maturity date or earlier. 2 Represents the remeasurement between 12-month and lifetime ECL due to stage transfers. 3 Represents the change in allowances and provisions related to changes in model inputs or assumptions, including changes in forward-looking macroeconomic conditions, changes in the exposure profile, PD and LGD changes, and unwinding of the time value. 4 Represents the change in the allowances and provisions related to changes in models and methodologies. 5 Includes ECL movements from new and derecognized transactions, remeasurement changes, model and methodology changes. 6 Represents the decrease in allowances and provisions resulting from write-offs of the ECL allowance against the gross carrying amount when all or part of a financial asset is deemed uncollectible or forgiven and movements in foreign exchange rates.

Movements with profit or loss impact: Stages 1 and 2 ECL allowances and provisions increased on a net basis by USD 29m:
- *Net movement from new and derecognized transactions* includes USD 21m stage 1 expenses and USD 16m stage 2 releases: Stage 1 expenses are primarily driven by new loans secured by real estate. The residual effect is spread across lending segments. Stage 2 releases are largely driven by redemption of corporate loans in the Investment Bank.
- *Remeasurements with stage transfers* include USD 20m releases in stage 1 and USD 39m expenses in stage 2. This mainly includes the transfer of a few large corporate lending transactions in the Investment Bank from stage 1 to 2 (i.e., releases in stage 1 and related but generally higher expenses in stage 2), driven by rating downgrades and scenario effects.
- *Remeasurements without stage transfers* include stage 1 expenses of USD 8m and stage 2 expenses of USD 27m. These expenses of USD 35m relate to large and SME corporate lending (USD 28m), substantially due to scenario effects, and to a single sovereign counterparty (USD 8m).
- Model changes: refer to Note 19b for more information.

Movements without profit or loss impact: Stage 3 allowances decreased by USD 99m almost entirely due to write-offs of USD 95m.

Development of ECL allowances and provisions

USD m	Total	Stage 1	Stage 2	Stage 3
Balance as of 31 December 2020	(1,468)	(306)	(333)	(829)
Net movement from new and derecognized transactions[1]	(59)	(72)	13	0
of which: Private clients with mortgages	*(7)*	*(10)*	*3*	*0*
of which: Real estate financing	*(7)*	*(11)*	*4*	*0*
of which: Large corporate clients	*(13)*	*(21)*	*7*	*0*
of which: SME clients	*(8)*	*(8)*	*0*	*0*
of which: Other	*(24)*	*(23)*	*(2)*	*0*
of which: Financial intermediaries and hedge funds	*(21)*	*(18)*	*(4)*	*0*
of which: Loans to financial advisors	*0*	*(1)*	*1*	*0*
Remeasurements with stage transfers[2]	(40)	8	0	(49)
of which: Private clients with mortgages	*(9)*	*4*	*(13)*	*0*
of which: Real estate financing	*(3)*	*1*	*(4)*	*0*
of which: Large corporate clients	*2*	*(2)*	*12*	*(8)*
of which: SME clients	*(27)*	*5*	*4*	*(36)*
of which: Other	*(3)*	*0*	*2*	*(4)*
of which: Financial intermediaries and hedge funds	*2*	*(1)*	*3*	*0*
of which: Loans to financial advisors	*0*	*1*	*(1)*	*0*
Remeasurements without stage transfers[3]	203	55	74	74
of which: Private clients with mortgages	*33*	*8*	*26*	*(1)*
of which: Real estate financing	*30*	*13*	*13*	*3*
of which: Large corporate clients	*44*	*5*	*21*	*17*
of which: SME clients	*53*	*(1)*	*1*	*53*
of which: Other	*44*	*29*	*14*	*2*
of which: Financial intermediaries and hedge funds	*27*	*15*	*12*	*0*
of which: Loans to financial advisors	*6*	*8*	*1*	*(3)*
Model changes[4]	45	29	16	0
Movements with profit or loss impact[5]	148	19	104	25
Movements without profit or loss impact (write-off, FX and other)[6]	154	5	9	141
Balance as of 31 December 2021	(1,165)	(282)	(220)	(662)

1 Represents the increase and decrease in allowances and provisions resulting from financial instruments (including guarantees and facilities) that were newly originated, purchased or renewed and from the final derecognition of loans or facilities on their maturity date or earlier. 2 Represents the remeasurement between 12-month and lifetime ECL due to stage transfers. 3 Represents the change in allowances and provisions related to changes in model inputs or assumptions, including changes in forward-looking macroeconomic conditions, changes in the exposure profile, PD and LGD changes, and unwinding of the time value. 4 Represents the change in the allowances and provisions related to changes in models and methodologies. 5 Includes ECL movements from new and derecognized transactions, remeasurement changes, model and methodology changes. 6 Represents the decrease in allowances and provisions resulting from write-offs of the ECL allowance against the gross carrying amount when all or part of a financial asset is deemed uncollectible or forgiven and movements in foreign exchange rates.

As explained in Note 1a, the assessment of a significant increase in credit risk (SICR) considers a number of qualitative and quantitative factors to determine whether a stage transfer between stage 1 and stage 2 is required, although the primary assessment considers changes in PD based on rating analyses and economic outlook. Additionally, UBS AG takes into consideration counterparties that have moved to a credit watch list and those with payments that are at least 30 days past due.

ECL stage 2 (“significant deterioration in credit risk”) allowances / provisions as of 31 December 2022 – classification by trigger

USD m	Stage 2	*of which: PD layer*	*of which: watch list*	*of which: ≥30 days past due*
On- and off-balance sheet	(267)	*(196)*	*(21)*	*(50)*
of which: Private clients with mortgages	*(107)*	*(83)*	*0*	*(25)*
of which: Real estate financing	*(23)*	*(18)*	*0*	*(5)*
of which: Large corporate clients	*(65)*	*(51)*	*(13)*	*0*
of which: SME clients	*(37)*	*(22)*	*(7)*	*(7)*
of which: Financial intermediaries and hedge funds	*(17)*	*(17)*	*0*	*0*
of which: Loans to financial advisors	*(2)*	*0*	*0*	*(2)*
of which: Credit cards	*(12)*	*0*	*0*	*(12)*
of which: Other	*(5)*	*(5)*	*0*	*0*

d) Maximum exposure to credit risk

The tables below provide UBS AG's maximum exposure to credit risk for financial instruments subject to ECL requirements and the respective collateral and other credit enhancements mitigating credit risk for these classes of financial instruments.

The maximum exposure to credit risk includes the carrying amounts of financial instruments recognized on the balance sheet subject to credit risk and the notional amounts for off-balance sheet arrangements. Where information is available, collateral is presented at fair value. For other collateral, such as real estate, a reasonable alternative value is used. Credit enhancements, such as credit derivative contracts and guarantees, are included at their notional amounts. Both are capped at the maximum exposure to credit risk for which they serve as security. The "Risk management and control" section of this report describes management's view of credit risk and the related exposures, which can differ in certain respects from the requirements of International Financial Reporting Standards (IFRS).

Maximum exposure to credit risk

	31.12.22								
		Collateral[1,2]				Credit enhancements[1]			Exposure to credit risk after collateral and credit enhancements
USD bn	Maximum exposure to credit risk	Cash collateral received	Collateralized by equity and debt instruments	Secured by real estate	Other collateral[3]	Netting	Credit derivative contracts	Guarantees	
Financial assets measured at amortized cost on the balance sheet									
Cash and balances at central banks	169.4								169.4
Loans and advances to banks[4]	14.7		0.0					0.1	14.6
Receivables from securities financing transactions measured at amortized cost	67.8	0.0	64.5		2.4				0.9
Cash collateral receivables on derivative instruments[5,6]	35.0					22.9			12.1
Loans and advances to customers	390.0	36.1	115.9	197.8	19.6			3.0	17.6
Other financial assets measured at amortized cost	53.4	0.1	0.5	0.0	1.3				51.4
Total financial assets measured at amortized cost	730.4	36.2	181.0	197.9	23.4	22.9	0.0	3.0	266.1
Financial assets measured at fair value through other comprehensive income – debt	2.2								2.2
Total maximum exposure to credit risk reflected on the balance sheet within the scope of ECL	732.6	36.2	181.0	197.9	23.4	22.9	0.0	3.0	268.3
Guarantees[7]	22.1	1.2	9.3	0.1	2.0			1.8	7.7
Loan commitments[7]	39.9	0.2	3.1	1.3	6.5		0.1	1.0	27.8
Forward starting transactions, reverse repurchase and securities borrowing agreements	3.8		3.8						0.0
Committed unconditionally revocable credit lines	43.6	0.2	8.2	6.0	6.2			0.5	22.5
Total maximum exposure to credit risk not reflected on the balance sheet within the scope of ECL	109.4	1.6	24.4	7.5	14.7	0.0	0.1	3.3	58.0

	31.12.21								
		Collateral[1,2]				Credit enhancements[1]			Exposure to credit risk after collateral and credit enhancements
USD bn	Maximum exposure to credit risk	Cash collateral received	Collateralized by equity and debt instruments	Secured by real estate	Other collateral[3]	Netting	Credit derivative contracts	Guarantees	
Financial assets measured at amortized cost on the balance sheet									
Cash and balances at central banks	192.8								192.8
Loans and advances to banks[4]	15.4		0.1					0.1	15.1
Receivables from securities financing transactions measured at amortized cost	75.0	0.0	68.0		6.9				0.0
Cash collateral receivables on derivative instruments[5,6]	30.5					18.4			12.1
Loans and advances to customers	398.7	38.2	128.7	191.3	20.2			4.0	16.4
Other financial assets measured at amortized cost	26.2	0.2	0.1	0.0	1.3				24.7
Total financial assets measured at amortized cost	**738.6**	**38.4**	**196.9**	**191.3**	**28.4**	**18.4**	**0.0**	**4.0**	**261.1**
Financial assets measured at fair value through other comprehensive income – debt	**8.8**								**8.8**
Total maximum exposure to credit risk reflected on the balance sheet within the scope of ECL	**747.5**	**38.4**	**196.9**	**191.3**	**28.4**	**18.4**	**0.0**	**4.0**	**270.0**
Guarantees[7]	20.9	1.3	6.5	0.2	2.5			2.3	8.1
Loan commitments[7]	39.4	0.5	4.0	2.4	7.3		0.3	1.7	23.1
Forward starting transactions, reverse repurchase and securities borrowing agreements	1.4		1.4						0.0
Committed unconditionally revocable credit lines	42.3	0.3	9.0	6.2	3.9			0.5	22.5
Total maximum exposure to credit risk not reflected on the balance sheet within the scope of ECL	**104.1**	**2.2**	**20.9**	**8.7**	**13.7**	**0.0**	**0.3**	**4.5**	**53.7**

1 Of which: USD 1,372m for 31 December 2022 (31 December 2021: USD 1,443m) relates to total credit-impaired financial assets measured at amortized cost and USD 113m for 31 December 2022 (31 December 2021: USD 130m) to total off-balance sheet financial instruments and credit lines for credit-impaired positions. 2 Collateral arrangements generally incorporate a range of collateral, including cash, equity and debt instruments, real estate and other collateral. UBS AG applies a risk-based approach that generally prioritizes collateral according to its liquidity profile. 3 Includes but is not limited to life insurance contracts, inventory, mortgage loans, gold and other commodities. 4 Loans and advances to banks include amounts held with third-party banks on behalf of clients. The credit risk associated with these balances may be borne by those clients. 5 Included within Cash collateral receivables on derivative instruments are margin balances due from exchanges or clearing houses. Some of these margin balances reflect amounts transferred on behalf of clients who retain the associated credit risk. 6 The amount shown in the "Netting" column represents the netting potential not recognized on the balance sheet. Refer to Note 21 for more information. 7 The amount shown in the "Guarantees" column includes sub-participations.

e) Financial assets subject to credit risk by rating category

The table below shows the credit quality and the maximum exposure to credit risk based on the UBS AG's internal credit rating system and year-end stage classification. Under IFRS 9, the credit risk rating reflects the UBS AG's assessment of the probability of default of individual counterparties, prior to substitutions. The amounts presented are gross of impairment allowances.

› **Refer to the "Risk management and control" section of this report for more details regarding the UBS AG's internal grading system**

Financial assets subject to credit risk by rating category

USD m	31.12.22								
Rating category[1]	0–1	2–3	4–5	6–8	9–13	Credit-impaired (defaulted)	Total gross carrying amount	ECL allowances	Net carrying amount (maximum exposure to credit risk)
Financial assets measured at amortized cost									
Cash and balances at central banks	168,525	877	0	0	56	0	169,457	(12)	169,445
of which: stage 1	*168,525*	*877*	*0*	*0*	*0*	*0*	*169,402*	*0*	*169,402*
of which: stage 2	*0*	*0*	*0*	*0*	*56*	*0*	*56*	*(12)*	*44*
Loans and advances to banks	862	11,150	832	996	837	0	14,676	(6)	14,671
of which: stage 1	*862*	*11,150*	*832*	*996*	*836*	*0*	*14,675*	*(5)*	*14,670*
of which: stage 2	*0*	*0*	*0*	*0*	*1*	*0*	*1*	*(1)*	*1*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Receivables from securities financing transactions measured at amortized cost	27,158	15,860	8,870	15,207	721	0	67,816	(2)	67,814
of which: stage 1	*27,158*	*15,860*	*8,870*	*15,207*	*721*	*0*	*67,816*	*(2)*	*67,814*
Cash collateral receivables on derivative instruments	10,613	12,978	7,138	4,157	147	0	35,034	0	35,033
of which: stage 1	*10,613*	*12,978*	*7,138*	*4,157*	*147*	*0*	*35,034*	*0*	*35,033*
Loans and advances to customers	6,491	216,824	68,444	76,147	20,891	2,012	390,810	(783)	390,027
of which: stage 1	*6,491*	*215,332*	*66,202*	*69,450*	*15,557*	*0*	*373,032*	*(129)*	*372,903*
of which: stage 2	*0*	*1,493*	*2,242*	*6,698*	*5,334*	*0*	*15,767*	*(180)*	*15,587*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*2,012*	*2,012*	*(474)*	*1,538*
Other financial assets measured at amortized cost	29,011	16,649	447	6,708	450	210	53,475	(86)	53,389
of which: stage 1	*29,011*	*16,646*	*427*	*6,426*	*336*	*0*	*52,846*	*(17)*	*52,829*
of which: stage 2	*0*	*2*	*20*	*283*	*114*	*0*	*419*	*(6)*	*413*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*210*	*210*	*(63)*	*147*
Total financial assets measured at amortized cost	242,660	274,337	85,731	103,216	23,102	2,222	731,269	(890)	730,379
On-balance sheet financial instruments									
Financial assets measured at FVOCI – debt instruments	1,307	840	0	92	0	0	2,239	0	2,239
Total on-balance sheet financial instruments	243,966	275,178	85,731	103,308	23,102	2,222	733,508	(890)	732,618

Off-balance sheet positions subject to expected credit loss by rating category

USD m	31.12.22							
Rating category[1]	0–1	2–3	4–5	6–8	9–13	Credit-impaired (defaulted)	Total off-balance sheet exposure (maximum exposure to credit risk)	ECL provisions
Off-balance sheet financial instruments								
Guarantees	7,252	5,961	4,772	3,049	1,025	108	22,167	(48)
of which: stage 1	*7,252*	*5,917*	*3,812*	*2,229*	*596*	*0*	*19,805*	*(13)*
of which: stage 2	*0*	*44*	*960*	*821*	*429*	*0*	*2,254*	*(9)*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*108*	*108*	*(26)*
Irrevocable loan commitments	1,770	14,912	6,986	10,097	6,107	124	39,996	(111)
of which: stage 1	*1,770*	*14,789*	*6,818*	*9,625*	*4,529*	*0*	*37,531*	*(59)*
of which: stage 2	*0*	*123*	*168*	*472*	*1,578*	*0*	*2,341*	*(52)*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*124*	*124*	*0*
Forward starting reverse repurchase and securities borrowing agreements	2,781	2	11	1,007	0	0	3,801	0
Total off-balance sheet financial instruments	11,803	20,874	11,769	14,153	7,132	233	65,964	(159)
Credit lines								
Committed unconditionally revocable credit lines	2,288	16,483	9,247	11,885	3,739	36	43,677	(40)
of which: stage 1	*2,288*	*15,777*	*8,960*	*11,355*	*3,429*	*0*	*41,809*	*(32)*
of which: stage 2	*0*	*705*	*287*	*531*	*310*	*0*	*1,833*	*(8)*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*36*	*36*	*0*
Irrevocable committed prolongation of existing loans	7	1,939	1,489	868	392	2	4,696	(2)
of which: stage 1	*7*	*1,938*	*1,411*	*864*	*380*	*0*	*4,600*	*(2)*
of which: stage 2	*0*	*1*	*78*	*4*	*11*	*0*	*94*	*0*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*2*	*2*	*0*
Total credit lines	2,295	18,421	10,736	12,753	4,131	37	48,373	(42)

1 Refer to the "Internal UBS rating scale and mapping of external ratings" table in the "Risk management and control" section of this report for more information on rating categories.

Note 19 Expected credit loss measurement (continued)

Financial assets subject to credit risk by rating category

USD m	31.12.21								
Rating category[1]	0–1	2–3	4–5	6–8	9–13	Credit-impaired (defaulted)	Total gross carrying amount	ECL allowances	Net carrying amount (maximum exposure to credit risk)
Financial assets measured at amortized cost									
Cash and balances at central banks	191,015	1,802	0	0	0	0	192,817	0	192,817
of which: stage 1	*191,015*	*1,802*	*0*	*0*	*0*	*0*	*192,817*	*0*	*192,817*
Loans and advances to banks	407	12,552	1,123	795	490	1	15,368	(8)	15,360
of which: stage 1	*407*	*12,552*	*1,098*	*795*	*488*	*0*	*15,340*	*(7)*	*15,333*
of which: stage 2	*0*	*0*	*24*	*0*	*2*	*0*	*27*	*(1)*	*26*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*0*	*1*
Receivables from securities financing transactions measured at amortized cost	34,386	11,267	10,483	17,440	1,439	0	75,014	(2)	75,012
of which: stage 1	*34,386*	*11,267*	*10,483*	*17,440*	*1,439*	*0*	*75,014*	*(2)*	*75,012*
Cash collateral receivables on derivative instruments	7,466	13,476	5,878	3,647	47	0	30,514	0	30,514
of which: stage 1	*7,466*	*13,476*	*5,878*	*3,647*	*47*	*0*	*30,514*	*0*	*30,514*
Loans and advances to customers	5,295	232,663	67,620	70,394	21,423	2,148	399,543	(850)	398,693
of which: stage 1	*5,295*	*231,583*	*65,083*	*63,298*	*16,362*	*0*	*381,622*	*(126)*	*381,496*
of which: stage 2	*0*	*1,080*	*2,536*	*7,096*	*5,061*	*0*	*15,773*	*(152)*	*15,620*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*2,148*	*2,148*	*(572)*	*1,577*
Other financial assets measured at amortized cost	12,564	6,705	321	6,097	394	264	26,346	(109)	26,236
of which: stage 1	*12,564*	*6,696*	*307*	*5,887*	*317*	*0*	*25,772*	*(27)*	*25,746*
of which: stage 2	*0*	*10*	*13*	*209*	*77*	*0*	*309*	*(7)*	*302*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*264*	*264*	*(76)*	*189*
Total financial assets measured at amortized cost	251,133	278,465	85,424	98,372	23,793	2,414	739,601	(969)	738,632
On-balance sheet financial instruments									
Financial assets measured at FVOCI – debt instruments	3,996	4,771	0	77	0	0	8,844	0	8,844
Total on-balance sheet financial instruments	255,130	283,236	85,424	98,449	23,793	2,414	748,445	(969)	747,477

Off-balance sheet positions subject to expected credit loss by rating category

USD m	31.12.21							
Rating category[1]	0–1	2–3	4–5	6–8	9–13	Credit-impaired (defaulted)	Total off-balance sheet exposure (maximum exposure to credit risk)	ECL provisions
Off-balance sheet financial instruments								
Guarantees	4,457	7,064	4,535	3,757	1,009	150	20,972	(41)
of which: stage 1	*4,457*	*7,037*	*4,375*	*3,075*	*752*	*0*	*19,695*	*(18)*
of which: stage 2	*0*	*27*	*160*	*682*	*258*	*0*	*1,127*	*(8)*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*150*	*150*	*(15)*
Irrevocable loan commitments	2,797	14,183	7,651	8,298	6,502	46	39,478	(114)
of which: stage 1	*2,797*	*13,917*	*7,416*	*7,127*	*5,840*	*0*	*37,097*	*(72)*
of which: stage 2	*0*	*266*	*235*	*1,171*	*663*	*0*	*2,335*	*(42)*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*46*	*46*	*0*
Forward starting reverse repurchase and securities borrowing agreements	0	0	55	1,389	0	0	1,444	0
Total off balance sheet financial instruments	7,254	21,247	12,241	13,444	7,512	196	61,894	(155)
Credit lines								
Committed unconditionally revocable credit lines	2,636	16,811	8,627	10,130	4,107	63	42,373	(38)
of which: stage 1	*2,636*	*16,467*	*8,304*	*8,724*	*3,671*	*0*	*39,802*	*(28)*
of which: stage 2	*0*	*344*	*323*	*1,406*	*436*	*0*	*2,508*	*(10)*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*63*	*63*	*0*
Irrevocable committed prolongation of existing loans	17	2,438	1,422	1,084	602	48	5,611	(3)
of which: stage 1	*17*	*2,438*	*1,422*	*1,082*	*568*	*0*	*5,527*	*(3)*
of which: stage 2	*0*	*0*	*0*	*1*	*34*	*0*	*36*	*0*
of which: stage 3	*0*	*0*	*0*	*0*	*0*	*48*	*48*	*0*
Total credit lines	2,653	19,249	10,049	11,214	4,709	111	47,984	(41)

1 Refer to the "Internal UBS rating scale and mapping of external ratings" table in the "Risk management and control" section of this report for more information on rating categories.

f) Sensitivity information

As outlined in Note 1a, ECL estimates involve significant uncertainties at the time they are made.

ECL models

The models applied to determine point-in-time PD and LGD rely on market and statistical data, which has been found to correlate well with historically observed defaults in sufficiently homogeneous segments. The risk sensitivities for each of the ECL reporting segments to such factors are summarized in Note 9.

Sustainability and climate risk

Sustainability and climate risk (SCR) may negatively affect clients or portfolios due to direct or indirect transition costs, or exposure to physical risks in locations likely to be impacted by climate change. Such effects could lead to a deterioration in credit worthiness, which in turn would have an impact on ECLs.

While some indicators that are more influenced by climate change (e.g., energy prices) are factored into the current PD models where they have demonstrated statistical relevance, UBS AG currently does not use a specific SCR scenario in addition to the four general economic scenarios applied to derive the weighted-average ECL. The rationale for the approach at this point in time is the significance of model risks and challenges in calibration and probability weight assessment given the paucity of data.

Instead, UBS AG focuses on the process of vetting clients and business transactions and takes individual actions, where transition risk is deemed to be a significant driver of a counterparty's credit worthiness. This review process may lead to a downward revision of the counterparty's credit rating, or the adoption of risk mitigating actions, and hence affect the individual contribution to ECLs.

At the portfolio level, UBS AG has started to use stress loss assumptions to assess the extent to which SCR may affect the quality of the loans extended to small and medium-sized entities and large corporate clients. Initial tests were based on a set of assumptions presented by external parties (such as the Bank of England). Such analysis undertaken during 2022 concluded that the counterparties are not expected to be significantly impacted by physical or transition risks, mainly as there are no material risk concentrations in high-risk sectors. The analysis of the corporate loan book has also shown that any potential significant impacts from transition costs or physical risks would materialize over a time horizon that exceeds in most cases the contractual lifetime of the underlying assets. Based on current information on regulatory developments, this would also apply to the portfolio of private clients' mortgages and real estate financing, given the long lead times for investments in upgrading the housing stock.

As a result of the aforementioned factors, it was assessed that the magnitude of any impact of SCR on the weighted-average ECL would not be material as of 31 December 2022. Therefore, no specific post-model adjustment was made in this regard.

› **Refer to "Sustainability and climate risk" in the "Risk management and control" section of this report**
› **Refer to "Our focus on sustainability and climate" in the "Our strategy, business model and environment" section of this report**
› **Refer to "UBS AG consolidated supplemental disclosures required under SEC regulations" for the maturity profile of UBS core loan book**

Forward-looking scenarios

Depending on the scenario selection and related macroeconomic assumptions for the risk factors, the components of the relevant weighted-average ECL change. This is particularly relevant for interest rates, which can move in both directions under a given growth assumption, e.g., low growth with high interest rates in a stagflation scenario, versus low growth and falling interest rates in a recession. Management generally looks for scenario narratives that reflect the key risk drivers of a given credit portfolio.

As forecasting models are complex, due to the combination of multiple factors, simple what-if analyses involving a change of individual parameters do not necessarily provide realistic information on the exposure of segments to changes in the macroeconomy. Portfolio-specific analyses based on their key risk factors would also not be meaningful, as potential compensatory effects in other segments would be ignored. The table below indicates some sensitivities to ECLs, if a key macroeconomic variable for the forecasting period is amended across all scenarios with all other factors remaining unchanged.

Potential effect on stage 1 and stage 2 positions from changing key parameters as of 31 December 2022

USD m	100% Baseline	100% Stagflationary geopolitical crisis	100% Global crisis	Weighted average
Change in key parameters				
Fixed income: Government bonds (absolute change)				
−0.50%	(3)	(106)	(2)	(14)
+0.50%	4	124	2	17
+1.00%	8	264	10	37
Unemployment rate (absolute change)				
−1.00%	(4)	(138)	(24)	(23)
−0.50%	(2)	(78)	(13)	(12)
+0.50%	3	84	16	15
+1.00%	5	179	32	31
Real GDP growth (relative change)				
−2.00%	7	13	18	11
−1.00%	3	7	9	5
+1.00%	(3)	(7)	(9)	(5)
+2.00%	(5)	(13)	(18)	(10)
House Price Index (relative change)				
−5.00%	15	196	88	56
−2.50%	7	92	40	25
+2.50%	(4)	(83)	(35)	(19)
+5.00%	(7)	(157)	(65)	(36)
Equity (S&P500, EuroStoxx, SMI) (relative change)				
−10.00%	4	7	6	5
−5.00%	2	3	3	2
+5.00%	(2)	(4)	(3)	(2)
+10.00%	(4)	(8)	(7)	(5)

Sensitivities can be more meaningfully assessed in the context of coherent scenarios with consistently developed macroeconomic factors. The table above outlines favorable and unfavorable effects, based on reasonably possible alternative changes to the economic conditions for stage 1 and stage 2 positions. The ECL impact is calculated for material portfolios and disclosed for each scenario.

The forecasting horizon is limited to three years, with a model-based mean reversion of PD and LGD assumed thereafter. Changes to these timelines may have an effect on ECLs: depending on the cycle, a longer or shorter forecasting horizon will lead to different annualized lifetime PD and average LGD estimations. This is currently not deemed to be material for UBS, as a large proportion of loans, including mortgages in Switzerland, have maturities that are within the forecasting horizon.

Scenario weights and stage allocation

Potential effect on stage 1 and stage 2 positions from changing scenario weights or moving to an ECL lifetime calculation as of 31 December 2022

	Actual ECL allowances and provisions, including staging (as per Note 9)	Pro forma ECL allowances and provisions, including staging and assuming application of 100% scenario weighting				Pro forma ECL allowances and provisions, assuming all positions being subject to lifetime ECL
Scenarios	Weighted average	100% Baseline	100% Asset price inflation	100% Stagflationary geopolitical crisis	100% Global crisis	Weighted average
USD m, except where indicated						
Segmentation						
Private clients with mortgages	(136)	(25)	(13)	(523)	(184)	(473)
Real estate financing	(43)	(26)	(22)	(176)	(30)	(126)
Large corporate clients	(136)	(97)	(84)	(199)	(174)	(235)
SME clients	(86)	(67)	(66)	(162)	(97)	(153)
Other segments	(125)	(114)	(111)	(145)	(153)	(281)
Total	**(526)**	**(329)**	**(295)**	**(1,204)**	**(638)**	**(1,267)**

Scenario weights

ECL is sensitive to changing scenario weights, in particular if narratives and parameters are selected that are not close to the baseline scenario, highlighting the non-linearity of credit losses.

As shown in the table above, the ECLs for stage 1 and stage 2 positions would have been USD 329m (31 December 2021: USD 387m) instead of USD 526m (31 December 2021: USD 503m) if ECLs had been determined solely on the *baseline scenario*. The weighted-average ECL therefore amounted to 160% (31 December 2021: 130%) of the baseline value. The effects of weighting each of the four scenarios 100% are shown in the table above.

Stage allocation and SICR

The determination of what constitutes an SICR is based on management judgment, as explained in Note 1a. Changing the SICR trigger will have a direct effect on ECLs, as more or fewer positions would be subject to lifetime ECLs under any scenario.

The relevance of the SICR trigger on overall ECL is demonstrated in the table above with the indication that the ECL allowances and provisions for stage 1 and stage 2 positions would have been USD 1,267m, if all non-impaired positions across the portfolio had been measured for lifetime ECLs irrespective of their actual SICR status. This amount compares with actual stage 1 and 2 allowances and provisions of USD 526m as of 31 December 2022.

Maturity profile

The maturity profile is an important driver in ECLs, in particular for transactions in stage 2. A transfer of a transaction into stage 2 may therefore have a significant effect on ECLs. The current maturity profile of most lending books is relatively short.

Lending to large corporate clients is generally between one and two years, with related loan commitments up to four years. Real estate lending is generally between two and three years in Switzerland, with long dated maturities in the US. Lombard-lending contracts typically have average contractual maturities of 12 months or less, and include callable features.

A significant portion of our lending to SMEs and Real estate financings is documented under multi-purpose credit agreements, which allow for various forms of utilization but are unconditionally cancelable by UBS at any time: a) for drawings under such agreements with a fixed maturity, the respective term is applied for ECL calculations, or a maximum of 12 months in stage 1; b) for unused credit lines and all drawings that have no fixed maturity (e.g., current accounts), UBS generally applies a 12-month maturity from the reporting date, given the credit review policies, which require either continuous monitoring of key indicators and behavioral patterns for smaller positions or an annual formal review for any other limit. The ECLs for these products are sensitive to shortening or extending the maturity assumption.

Note 20 Fair value measurement

a) Valuation principles

All financial and non-financial assets and liabilities measured or disclosed at fair value are categorized into one of three fair value hierarchy levels in accordance with International Financial Reporting Standards (IFRS). The fair value hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. In certain cases, the inputs used to measure fair value may fall within different levels of the fair value hierarchy. For disclosure purposes, the level in the hierarchy within which an instrument is classified in its entirety is based on the lowest level input that is significant to the position's fair value measurement:
– Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities;
– Level 2 – valuation techniques for which all significant inputs are, or are based on, observable market data; or
– Level 3 – valuation techniques for which significant inputs are not based on observable market data.

Fair values are determined using quoted prices in active markets for identical assets or liabilities, where available. Where the market for a financial instrument or non-financial asset or liability is not active, fair value is established using a valuation technique, including pricing models. Valuation adjustments may be made to allow for additional factors, including model, liquidity, credit and funding risks, which are not explicitly captured within the valuation technique, but which would nevertheless be considered by market participants when establishing a price. The limitations inherent in a particular valuation technique are considered in the determination of the classification of an asset or liability within the fair value hierarchy. Generally, the unit of account for a financial instrument is the individual instrument, and UBS applies valuation adjustments at an individual instrument level, consistent with that unit of account. However, if certain conditions are met, UBS may estimate the fair value of a portfolio of financial assets and liabilities with substantially similar and offsetting risk exposures on the basis of the net open risks.

› **Refer to Note 20d for more information**

b) Valuation governance

UBS's fair value measurement and model governance framework includes numerous controls and other procedural safeguards that are intended to maximize the quality of fair value measurements reported in the financial statements. New products and valuation techniques must be reviewed and approved by key stakeholders from the risk and finance control functions. Responsibility for the ongoing measurement of financial and non-financial instruments at fair value is with the business divisions.

Fair value estimates are validated by the risk and finance control functions, which are independent of the business divisions. Independent price verification is performed by Finance through benchmarking the business divisions' fair value estimates with observable market prices and other independent sources. A governance framework and associated controls are in place in order to monitor the quality of third-party pricing sources where used. For instruments where valuation models are used to determine fair value, independent valuation and model control groups within Finance and Risk Control evaluate UBS's models on a regular basis, including valuation and model input parameters, as well as pricing. As a result of the valuation controls employed, valuation adjustments may be made to the business divisions' estimates of fair value to align with independent market data and the relevant accounting standard.

› **Refer to Note 20d for more information**

c) Fair value hierarchy

The table below provides the fair value hierarchy classification of financial and non-financial assets and liabilities measured at fair value. The narrative that follows describes valuation techniques used in measuring their fair value of different product types (including significant valuation inputs and assumptions used), and the factors considered in determining their classification within the fair value hierarchy.

During 2022, assets and liabilities that were transferred from Level 2 to Level 1, or from Level 1 to Level 2, and were held for the entire reporting period were not material.

Determination of fair values from quoted market prices or valuation techniques[1]

	31.12.22				31.12.21			
USD m	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value on a recurring basis								
Financial assets at fair value held for trading	96,263	10,284	1,488	108,034	113,722	15,012	2,299	131,033
of which: Equity instruments	*83,095*	*789*	*126*	*84,010*	*97,983*	*1,090*	*149*	*99,222*
of which: Government bills / bonds	*5,496*	*950*	*18*	*6,464*	*7,135*	*1,351*	*10*	*8,496*
of which: Investment fund units	*6,673*	*596*	*61*	*7,330*	*7,843*	*1,364*	*21*	*9,229*
of which: Corporate and municipal bonds	*976*	*6,509*	*541*	*8,026*	*708*	*7,791*	*556*	*9,055*
of which: Loans	*0*	*1,179*	*628*	*1,807*	*0*	*3,099*	*1,443*	*4,542*
of which: Asset-backed securities	*22*	*261*	*114*	*397*	*53*	*317*	*120*	*489*
Derivative financial instruments	769	147,876	1,464	150,109	522	116,482	1,140	118,145
of which: Foreign exchange	*575*	*84,882*	*2*	*85,459*	*255*	*53,046*	*7*	*53,307*
of which: Interest rate	*0*	*39,345*	*460*	*39,805*	*0*	*32,747*	*494*	*33,241*
of which: Equity / index	*1*	*21,542*	*653*	*22,195*	*0*	*27,861*	*384*	*28,245*
of which: Credit	*0*	*719*	*318*	*1,038*	*0*	*1,179*	*236*	*1,414*
of which: Commodities	*0*	*1,334*	*30*	*1,365*	*0*	*1,590*	*16*	*1,606*
Brokerage receivables	0	17,576	0	17,576	0	21,839	0	21,839
Financial assets at fair value not held for trading	26,572	29,110	3,725	59,408	27,278	28,185	4,180	59,642
of which: Financial assets for unit-linked investment contracts	*13,071*	*1*	*0*	*13,072*	*21,110*	*187*	*6*	*21,303*
of which: Corporate and municipal bonds	*35*	*14,101*	*230*	*14,366*	*123*	*13,937*	*306*	*14,366*
of which: Government bills / bonds	*13,103*	*3,638*	*0*	*16,741*	*5,624*	*3,236*	*0*	*8,860*
of which: Loans	*0*	*3,602*	*736*	*4,337*	*0*	*4,982*	*892*	*5,874*
of which: Securities financing transactions	*0*	*7,590*	*114*	*7,704*	*0*	*5,704*	*100*	*5,804*
of which: Auction rate securities	*0*	*0*	*1,326*	*1,326*	*0*	*0*	*1,585*	*1,585*
of which: Investment fund units	*307*	*178*	*190*	*675*	*338*	*137*	*117*	*591*
of which: Equity instruments	*57*	*0*	*792*	*849*	*83*	*2*	*681*	*765*
Financial assets measured at fair value through other comprehensive income on a recurring basis								
Financial assets measured at fair value through other comprehensive income	57	2,182	0	2,239	2,704	6,140	0	8,844
of which: Asset-backed securities[2]	*0*	*0*	*0*	*0*	*0*	*4,849*	*0*	*4,849*
of which: Government bills / bonds[2]	*0*	*26*	*0*	*26*	*2,658*	*27*	*0*	*2,686*
of which: Corporate and municipal bonds	*57*	*2,156*	*0*	*2,213*	*45*	*1,265*	*0*	*1,310*
Non-financial assets measured at fair value on a recurring basis								
Precious metals and other physical commodities	4,471	0	0	4,471	5,258	0	0	5,258
Non-financial assets measured at fair value on a non-recurring basis								
Other non-financial assets[3]	0	0	21	21	0	0	26	26
Total assets measured at fair value	128,132	207,028	6,698	341,858	149,484	187,658	7,645	344,787

Note 20 Fair value measurement (continued)

Determination of fair values from quoted market prices or valuation techniques (continued)[1]

USD m	31.12.22 Level 1	Level 2	Level 3	Total	31.12.21 Level 1	Level 2	Level 3	Total
Financial liabilities measured at fair value on a recurring basis								
Financial liabilities at fair value held for trading	23,578	5,823	114	29,515	25,413	6,170	105	31,688
of which: Equity instruments	*16,521*	*352*	*78*	*16,951*	*18,328*	*513*	*83*	*18,924*
of which: Corporate and municipal bonds	*36*	*4,643*	*27*	*4,707*	*30*	*4,219*	*17*	*4,266*
of which: Government bills / bonds	*5,880*	*706*	*1*	*6,587*	*5,883*	*826*	*0*	*6,709*
of which: Investment fund units	*1,141*	*84*	*3*	*1,229*	*1,172*	*555*	*6*	*1,733*
Derivative financial instruments	640	152,582	1,684	154,906	509	118,558	2,242	121,309
of which: Foreign exchange	*587*	*87,897*	*24*	*88,508*	*258*	*53,800*	*21*	*54,078*
of which: Interest rate	*0*	*37,429*	*116*	*37,545*	*0*	*28,398*	*278*	*28,675*
of which: Equity / index	*0*	*24,963*	*1,184*	*26,148*	*0*	*33,438*	*1,511*	*34,949*
of which: Credit	*0*	*920*	*279*	*1,199*	*0*	*1,412*	*341*	*1,753*
of which: Commodities	*0*	*1,309*	*52*	*1,361*	*0*	*1,503*	*63*	*1,566*
Financial liabilities designated at fair value on a recurring basis								
Brokerage payables designated at fair value	0	45,085	0	45,085	0	44,045	0	44,045
Debt issued designated at fair value	0	62,603	9,240	71,842	0	59,606	11,854	71,460
Other financial liabilities designated at fair value	0	30,055	1,978	32,033	0	29,258	3,156	32,414
of which: Financial liabilities related to unit-linked investment contracts	*0*	*13,221*	*0*	*13,221*	*0*	*21,466*	*0*	*21,466*
of which: Securities financing transactions	*0*	*15,333*	*0*	*15,333*	*0*	*6,375*	*2*	*6,377*
of which: Over-the-counter debt instruments and other	*0*	*993*	*691*	*1,684*	*0*	*1,417*	*814*	*2,231*
Total liabilities measured at fair value	24,219	296,148	13,015	333,382	25,922	257,637	17,357	300,916

1 Bifurcated embedded derivatives are presented on the same balance sheet lines as their host contracts and are not included in this table. The fair value of these derivatives was not material for the periods presented. 2 Effective 1 April 2022, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost. Refer to Note 1 for more information. 3 Other non-financial assets primarily consist of properties and other non-current assets held for sale, which are measured at the lower of their net carrying amount or fair value less costs to sell.

Valuation techniques

UBS uses widely recognized valuation techniques for determining the fair value of financial and non-financial instruments that are not actively traded and quoted. The most frequently applied valuation techniques include discounted value of expected cash flows, relative value and option pricing methodologies.

Discounted value of expected cash flows is a valuation technique that measures fair value using estimated expected future cash flows from assets or liabilities and then discounts these cash flows using a discount rate or discount margin that reflects the credit and / or funding spreads required by the market for instruments with similar risk and liquidity profiles to produce a present value. When using such valuation techniques, expected future cash flows are estimated using an observed or implied market price for the future cash flows or by using industry-standard cash flow projection models. The discount factors within the calculation are generated using industry-standard yield curve modeling techniques and models.

Relative value models measure fair value based on the market prices of equivalent or comparable assets or liabilities, making adjustments for differences between the characteristics of the observed instrument and the instrument being valued.

Option pricing models incorporate assumptions regarding the behavior of future price movements of an underlying referenced asset or assets to generate a probability-weighted future expected payoff for the option. The resulting probability-weighted expected payoff is then discounted using discount factors generated from industry-standard yield curve modeling techniques and models. The option pricing model may be implemented using a closed-form analytical formula or other mathematical techniques (e.g., binomial tree or Monte Carlo simulation).

Where available, valuation techniques use market-observable assumptions and inputs. If such data is not available, inputs may be derived by reference to similar assets in active markets, from recent prices for comparable transactions or from other observable market data. In such cases, the inputs selected are based on historical experience and practice for similar or analogous instruments, derivation of input levels based on similar products with observable price levels, and knowledge of current market conditions and valuation approaches.

For more complex instruments, fair values may be estimated using a combination of observed transaction prices, consensus pricing services and relevant quotes. Consideration is given to the nature of the quotes (e.g., indicative or firm) and the relationship of recently evidenced market activity to the prices provided by consensus pricing services. UBS also uses internally developed models, which are typically based on valuation methods and techniques recognized as standard within the industry. Assumptions and inputs used in valuation techniques include benchmark interest rate curves, credit and funding spreads used in estimating discount rates, bond and equity prices, equity index prices, foreign exchange rates, levels of market volatility and correlation. Refer to Note 20e for more information. The discount curves used by UBS incorporate the funding and credit characteristics of the instruments to which they are applied.

Financial instruments excluding derivatives: valuation and classification in the fair value hierarchy

Product	Valuation and classification in the fair value hierarchy	
Government bills and bonds	Valuation	– Generally valued using prices obtained directly from the market. – Instruments not priced directly using active-market data are valued using discounted cash flow valuation techniques that incorporate market data for similar government instruments.
	Fair value hierarchy	– Generally traded in active markets with prices that can be obtained directly from these markets, resulting in classification as Level 1, while the remaining positions are classified as Level 2 and Level 3.
Corporate and municipal bonds	Valuation	– Generally valued using prices obtained directly from the market for the security, or similar securities, adjusted for seniority, maturity and liquidity. – When prices are not available, instruments are valued using discounted cash flow valuation techniques incorporating the credit spread of the issuer or similar issuers. – For convertible bonds without directly comparable prices, issuances may be priced using a convertible bond model.
	Fair value hierarchy	– Generally classified as Level 1 or Level 2, depending on the depth of trading activity behind price sources. – Level 3 instruments have no suitable pricing information available.
Traded loans and loans measured at fair value	Valuation	– Valued directly using market prices that reflect recent transactions or quoted dealer prices, where available. – Where no market price data is available, loans are valued by relative value benchmarking using pricing derived from debt instruments in comparable entities or different products in the same entity, or by using a credit default swap valuation technique, which requires inputs for credit spreads, credit recovery rates and interest rates. Recently originated commercial real estate loans are measured using a securitization approach based on rating agency guidelines.
	Fair value hierarchy	– Instruments with suitably deep and liquid pricing information are classified as Level 2. – Positions requiring the use of valuation techniques, or for which the price sources have insufficient trading depth, are classified as Level 3.
Investment fund units	Valuation	– Predominantly exchange-traded, with readily available quoted prices in liquid markets. – Where market prices are not available, fair value may be measured using net asset values (NAVs).
	Fair value hierarchy	– Listed units are classified as Level 1, provided there is sufficient trading activity to justify active-market classification, while other positions are classified as Level 2. – Positions for which NAVs are not available are classified as Level 3.
Asset-backed securities (ABS)	Valuation	– For liquid securities, the valuation process will use trade and price data, updated for movements in market levels between the time of trading and the time of valuation. Less liquid instruments are measured using discounted expected cash flows incorporating price data for instruments or indices with similar risk profiles.
	Fair value hierarchy	– Residential mortgage-backed securities, commercial mortgage-backed securities and other ABS are generally classified as Level 2. However, if significant inputs are unobservable, or if market or fundamental data is not available, they are classified as Level 3.
Auction rate securities (ARS)	Valuation	– ARS are valued utilizing a discounted cash flow methodology. The model captures interest rate risk emanating from the note coupon, credit risk attributable to the underlying closed-end fund investments, liquidity risk as a function of the level of trading volume in these positions, and extension risk, as ARS are perpetual instruments that require an assumption regarding their maturity or issuer redemption date.
	Fair value hierarchy	– Granular and liquid pricing information is generally not available for ARS. As a result, these securities are classified as Level 3.
Equity instruments	Valuation	– Listed equity instruments are generally valued using prices obtained directly from the market. – Unlisted equity holdings, including private equity positions, are initially marked at their transaction price and are revalued when reliable evidence of price movement becomes available or when the position is deemed to be impaired.
	Fair value hierarchy	– The majority of equity securities are actively traded on public stock exchanges where quoted prices are readily and regularly available, resulting in Level 1 classification. – Equity securities less actively traded will be classified as Level 2 and illiquid positions as Level 3.
Financial assets for unit-linked investment contracts	Valuation	– The majority of assets are listed on exchanges and fair values are determined using quoted prices.
	Fair value hierarchy	– Most assets are classified as Level 1 if actively traded, or Level 2 if trading is not active. – Instruments for which prices are not readily available are classified as Level 3.
Securities financing transactions	Valuation	– These instruments are valued using discounted expected cash flow techniques. The discount rate applied is based on funding curves that are relevant to the collateral eligibility terms.
	Fair value hierarchy	– Collateral funding curves for these instruments are generally observable and, as a result, these positions are classified as Level 2. – Where the collateral terms are non-standard, the funding curve may be considered unobservable and these positions are classified as Level 3.
Brokerage receivables and payables	Valuation	– Fair value is determined based on the value of the underlying balances.
	Fair value hierarchy	– Due to their on-demand nature, these receivables and payables are deemed as Level 2.

Product	Valuation and classification in the fair value hierarchy	
Financial liabilities related to unit-linked investment contracts	Valuation	– The fair values of investment contract liabilities are determined by reference to the fair value of the corresponding assets.
	Fair value hierarchy	– The liabilities themselves are not actively traded, but are mainly referenced to instruments that are actively traded and are therefore classified as Level 2.
Precious metals and other physical commodities	Valuation	– Physical assets are valued using the spot rate observed in the relevant market.
	Fair value hierarchy	– Generally traded in active markets with prices that can be obtained directly from these markets, resulting in classification as Level 1.
Debt issued designated at fair value	Valuation	– The risk management and the valuation approaches for these instruments are closely aligned with the equivalent derivatives business and the underlying risk, and the valuation techniques used for this component are the same as the relevant valuation techniques described below.
	Fair value hierarchy	– The observability is closely aligned with the equivalent derivatives business and the underlying risk.

Derivative instruments: valuation and classification in the fair value hierarchy

The curves used for discounting expected cash flows in the valuation of collateralized derivatives reflect the funding terms associated with the relevant collateral arrangement for the instrument being valued. These collateral arrangements differ across counterparties with respect to the eligible currency and interest terms of the collateral. The majority of collateralized derivatives are measured using a discount curve based on funding rates derived from overnight interest in the cheapest eligible currency for the respective counterparty collateral agreement.

Uncollateralized and partially collateralized derivatives are discounted using the alternative reference rate (the ARR) (or equivalent) curve for the currency of the instrument. As described in Note 20d, the fair value of uncollateralized and partially collateralized derivatives is then adjusted by credit valuation adjustments (CVAs), debit valuation adjustments (DVAs) and funding valuation adjustments (FVAs), as applicable, to reflect an estimation of the effect of counterparty credit risk, UBS's own credit risk, and funding costs and benefits.

› **Refer to Note 10 for more information about derivative instruments**

Derivative product	Valuation and classification in the fair value hierarchy	
Interest rate contracts	Valuation	– Interest rate swap contracts are valued by estimating future interest cash flows and discounting those cash flows using a rate that reflects the appropriate funding rate for the position being measured. The yield curves used to estimate future index levels and discount rates are generated using market-standard yield curve models using interest rates associated with current market activity. The key inputs to the models are interest rate swap rates, forward rate agreement rates, short-term interest rate futures prices, basis swap spreads and inflation swap rates. – Interest rate option contracts are valued using various market-standard option models, using inputs that include interest rate yield curves, inflation curves, volatilities and correlations. – When the maturity of an interest rate swap or option contract exceeds the term for which standard market quotes are observable for a significant input parameter, the contracts are valued by extrapolation from the last observable point using standard assumptions or by reference to another observable comparable input parameter to represent a suitable proxy for that portion of the term.
	Fair value hierarchy	– The majority of interest rate swaps are classified as Level 2, as the standard market contracts that form the inputs for yield curve models are generally traded in active and observable markets. – Options are generally treated as Level 2, as the calibration process enables the model output to be validated to active-market levels. Models calibrated in this way are then used to revalue the portfolio of both standard options and more exotic products. – Interest rate swap or option contracts are classified as Level 3 when the terms exceed standard market-observable quotes. – Exotic options for which appropriate volatility or correlation input levels cannot be implied from observable market data are classified as Level 3.
Credit derivative contracts	Valuation	– Credit derivative contracts are valued using industry-standard models based primarily on market credit spreads, upfront pricing points and implied recovery rates. Where a derivative credit spread is not directly available, it may be derived from the price of the reference cash bond. – Asset-backed credit derivatives are valued using a valuation technique similar to that of the underlying security with an adjustment to reflect the funding differences between cash and synthetic form.
	Fair value hierarchy	– Single-entity and portfolio credit derivative contracts are classified as Level 2 when credit spreads and recovery rates are determined from actively traded observable market data. Where the underlying reference name(s) are not actively traded and the correlation cannot be directly mapped to actively traded tranche instruments, these contracts are classified as Level 3. – Asset-backed credit derivatives follow the characteristics of the underlying security and are therefore distributed across Level 2 and Level 3.

Derivative product	Valuation and classification in the fair value hierarchy	
Foreign exchange contracts	Valuation	– Open spot foreign exchange (FX) contracts are valued using the FX spot rate observed in the market. – Forward FX contracts are valued using the FX spot rate adjusted for forward pricing points observed from standard market-based sources. – Over-the-counter (OTC) FX option contracts are valued using market-standard option valuation models. The models used for shorter-dated options (i.e., maturities of five years or less) tend to be different than those used for longer-dated options because the models needed for longer-dated OTC FX contracts require additional consideration of interest rate and FX rate interdependency. – The valuation for multi-dimensional FX options uses a multi-local volatility model, which is calibrated to the observed FX volatilities for all relevant FX pairs.
	Fair value hierarchy	– The markets for FX spot and FX forward pricing points are both actively traded and observable and therefore such FX contracts are generally classified as Level 2. – A significant proportion of OTC FX option contracts are classified as Level 2 as inputs are derived mostly from standard market contracts traded in active and observable markets. – OTC FX option contracts classified as Level 3 include multi-dimensional FX options and long-dated FX exotic option contracts where there is no active market from which to derive volatility or correlation inputs.
Equity / index contracts	Valuation	– Equity forward contracts have a single stock or index underlying and are valued using market-standard models. The key inputs to the models are stock prices, estimated dividend rates and equity funding rates (which are implied from prices of forward contracts observed in the market). Estimated cash flows are then discounted using market-standard discounted cash flow models using a rate that reflects the appropriate funding rate for that portion of the portfolio. When no market data is available for the instrument maturity, they are valued by extrapolation of available data, use of historical dividend data, or use of data for a related equity. – Equity option contracts are valued using market-standard models that estimate the equity forward level as described for equity forward contracts and incorporate inputs for stock volatility and for correlation between stocks within a basket. The probability-weighted expected option payoff generated is then discounted using market-standard discounted cash flow models applying a rate that reflects the appropriate funding rate for that portion of the portfolio. When volatility, forward or correlation inputs are not available, they are valued using extrapolation of available data, historical dividend, correlation or volatility data, or the equivalent data for a related equity.
	Fair value hierarchy	– As inputs are derived mostly from standard market contracts traded in active and observable markets, a significant proportion of equity forward contracts are classified as Level 2. – Equity option positions for which inputs are derived from standard market contracts traded in active and observable markets are also classified as Level 2. Level 3 positions are those for which volatility, forward or correlation inputs are not observable.
Commodity contracts	Valuation	– Commodity forward and swap contracts are measured using market-standard models that use market forward levels on standard instruments. – Commodity option contracts are measured using market-standard option models that estimate the commodity forward level as described for commodity forward and swap contracts, incorporating inputs for the volatility of the underlying index or commodity. For commodity options on baskets of commodities or bespoke commodity indices, the valuation technique also incorporates inputs for the correlation between different commodities or commodity indices.
	Fair value hierarchy	– Individual commodity contracts are typically classified as Level 2, because active forward and volatility market data is available.

d) Valuation adjustments and other items

The output of a valuation technique is always an estimate of a fair value that cannot be measured with complete certainty. As a result, valuations are adjusted where appropriate and when such factors would be considered by market participants in estimating fair value, to reflect close-out costs, credit exposure, model-driven valuation uncertainty, funding costs and benefits, trading restrictions and other factors.

Deferred day-1 profit or loss reserves

For new transactions where the valuation technique used to measure fair value requires significant inputs that are not based on observable market data, the financial instrument is initially recognized at the transaction price. The transaction price may differ from the fair value obtained using a valuation technique, where any such difference is deferred and not initially recognized in the income statement.

Deferred day-1 profit or loss is generally released into *Other net income from financial instruments measured at fair value through profit or loss* when pricing of equivalent products or the underlying parameters becomes observable or when the transaction is closed out.

The table below summarizes the changes in deferred day-1 profit or loss reserves during the respective period.

Note 20 Fair value measurement (continued)

Deferred day-1 profit or loss reserves

USD m	2022	2021	2020
Reserve balance at the beginning of the year	418	269	146
Profit / (loss) deferred on new transactions	299	459	362
(Profit) / loss recognized in the income statement	(295)	(308)	(238)
Foreign currency translation	0	(2)	0
Reserve balance at the end of the year	422	418	269

Own credit

Own credit risk is reflected in the valuation of UBS's fair value option liabilities where this component is considered relevant for valuation purposes by UBS's counterparties and other market participants.

Changes in the fair value of financial liabilities designated at fair value through profit or loss related to own credit are recognized in *Other comprehensive income* directly within *Retained earnings, with no reclassification to the income statement in future periods.* This presentation does not create or increase an accounting mismatch in the income statement, as UBS does not hedge changes in own credit.

Own credit is estimated using own credit adjustment (OCA) curves, which incorporate observable market data, including market-observed secondary prices for UBS's debt and debt curves of peers. In the table below, the change in unrealized own credit consists of changes in fair value that are attributable to the change in UBS's credit spreads, as well as the effect of changes in fair values attributable to factors other than credit spreads, such as redemptions, effects from time decay and changes in interest and other market rates. Realized own credit is recognized when an instrument with an associated unrealized OCA is repurchased prior to the contractual maturity date. Life-to-date amounts reflect the cumulative unrealized change since initial recognition.

› **Refer to Note 15 for more information about debt issued designated at fair value**

Own credit adjustments on financial liabilities designated at fair value

	Included in Other comprehensive income		
	For the year ended		
USD m	31.12.22	31.12.21	31.12.20
Recognized during the period:			
Realized gain / (loss)	1	(14)	2
Unrealized gain / (loss)	866	60	(295)
Total gain / (loss), before tax	867	46	(293)
USD m	31.12.22	31.12.21	31.12.20
Recognized on the balance sheet as of the end of the period:			
Unrealized life-to-date gain / (loss)	556	(315)	(381)
of which: debt issued designated at fair value	289	(144)	(233)
of which: other financial liabilities designated at fair value	266	(172)	(148)

Credit valuation adjustments

In order to measure the fair value of OTC derivative instruments, including funded derivative instruments that are classified as *Financial assets at fair value not held for trading,* CVAs are needed to reflect the credit risk of the counterparty inherent in these instruments. This amount represents the estimated fair value of protection required to hedge the counterparty credit risk of such instruments. A CVA is determined for each counterparty, considering all exposures with that counterparty, and is dependent on the expected future value of exposures, default probabilities and recovery rates, applicable collateral or netting arrangements, break clauses, funding spreads, and other contractual factors.

Funding valuation adjustments

FVAs reflect the costs and benefits of funding associated with uncollateralized and partially collateralized derivative receivables and payables and are calculated as the valuation effect from moving the discounting of the uncollateralized derivative cash flows from the ARR to OCA using the CVA framework, including the probability of counterparty default. An FVA is also applied to collateralized derivative assets in cases where the collateral cannot be sold or repledged.

Debit valuation adjustments

A DVA is estimated to incorporate own credit in the valuation of derivatives where an FVA is not already recognized. The DVA calculation is effectively consistent with the CVA framework, being determined for each counterparty, considering all exposures with that counterparty and taking into account collateral netting agreements, expected future mark-to-market movements and UBS's credit default spreads.

Other valuation adjustments

Instruments that are measured as part of a portfolio of combined long and short positions are valued at mid-market levels to ensure consistent valuation of the long- and short-component risks. A liquidity valuation adjustment is then made to the overall net long or short exposure to move the fair value to bid or offer as appropriate, reflecting current levels of market liquidity. The bid–offer spreads used in the calculation of this valuation adjustment are obtained from market transactions and other relevant sources and are updated periodically.

Uncertainties associated with the use of model-based valuations are incorporated into the measurement of fair value through the use of model reserves. These reserves reflect the amounts that UBS estimates should be deducted from valuations produced directly by models to incorporate uncertainties in the relevant modeling assumptions, in the model and market inputs used, or in the calibration of the model output to adjust for known model deficiencies. In arriving at these estimates, UBS considers a range of market practices, including how it believes market participants would assess these uncertainties. Model reserves are reassessed periodically in light of data from market transactions, consensus pricing services and other relevant sources.

Balance sheet valuation adjustments on financial instruments

	As of	
USD m	31.12.22	31.12.21
Credit valuation adjustments[1]	(33)	(44)
Funding valuation adjustments	(50)	(49)
Debit valuation adjustments	4	2
Other valuation adjustments	(839)	(913)
of which: liquidity	*(311)*	*(341)*
of which: model uncertainty	*(529)*	*(571)*

1 Amounts do not include reserves against defaulted counterparties.

Other items

In the first half of 2021, UBS AG incurred a loss of USD 861m as a result of closing out a significant portfolio of swaps with a US-based client of its prime brokerage business and the unwinding of related hedges, following the client's default. This loss is presented within *Other net income from financial instruments measured at fair value through profit or loss*.

e) Level 3 instruments: valuation techniques and inputs

The table below presents material Level 3 assets and liabilities, together with the valuation techniques used to measure fair value, the inputs used in a given valuation technique that are considered significant as of 31 December 2022 and unobservable, and a range of values for those unobservable inputs.

The range of values represents the highest- and lowest-level inputs used in the valuation techniques. Therefore, the range does not reflect the level of uncertainty regarding a particular input or an assessment of the reasonableness of UBS's estimates and assumptions, but rather the different underlying characteristics of the relevant assets and liabilities held by UBS. The ranges will therefore vary from period to period and parameter to parameter based on characteristics of the instruments held at each balance sheet date. Furthermore, the ranges of unobservable inputs may differ across other financial institutions, reflecting the diversity of the products in each firm's inventory.

Valuation techniques and inputs used in the fair value measurement of Level 3 assets and liabilities

	Fair value						Range of inputs						
	Assets		Liabilities				31.12.22			31.12.21			
USD bn	31.12.22	31.12.21	31.12.22	31.12.21	Valuation technique(s)	Significant unobservable input(s)[1]	low	high	weighted average[2]	low	high	weighted average[2]	unit[1]
Financial assets and liabilities at fair value held for trading and Financial assets at fair value not held for trading													
Corporate and municipal bonds	*0.8*	*0.9*	*0.0*	*0.0*	Relative value to market comparable	Bond price equivalent	14	112	85	16	143	98	points
					Discounted expected cash flows	Discount margin	412	412		434	434		basis points
Traded loans, loans measured at fair value, loan commitments and guarantees	*1.7*	*2.8*	*0.0*	*0.0*	Relative value to market comparable	Loan price equivalent	30	100	97	0	101	99	points
					Discounted expected cash flows	Credit spread	200	200	200	175	800	436	basis points
					Market comparable and securitization model	Credit spread	145	1,350	322	28	1,544	241	basis points
Auction rate securities	*1.3*	*1.6*			Discounted expected cash flows	Credit spread	115	196	144	115	197	153	basis points
Investment fund units[3]	*0.3*	*0.1*	*0.0*	*0.0*	Relative value to market comparable	Net asset value							
Equity instruments[3]	*0.9*	*0.8*	*0.1*	*0.1*	Relative value to market comparable	Price							
Debt issued designated at fair value[4]			*9.2*	*11.9*									
Other financial liabilities designated at fair value			*2.0*	*3.2*	Discounted expected cash flows	Funding spread	23	175		24	175		basis points
Derivative financial instruments													
Interest rate	*0.5*	*0.5*	*0.1*	*0.3*	Option model	Volatility of interest rates	75	143		65	81		basis points
Credit	*0.3*	*0.2*	*0.3*	*0.3*	Discounted expected cash flows	Credit spreads	9	565		1	583		basis points
						Bond price equivalent	3	277		2	136		points
Equity / index	*0.7*	*0.4*	*1.2*	*1.5*	Option model	Equity dividend yields	0	20		0	11		%
						Volatility of equity stocks, equity and other indices	4	120		4	98		%
						Equity-to-FX correlation	(29)	84		(29)	76		%
						Equity-to-equity correlation	(25)	100		(25)	100		%

1 The ranges of significant unobservable inputs are represented in points, percentages and basis points. Points are a percentage of par (e.g., 100 points would be 100% of par). 2 Weighted averages are provided for most non-derivative financial instruments and were calculated by weighting inputs based on the fair values of the respective instruments. Weighted averages are not provided for inputs related to Other financial liabilities designated at fair value and Derivative financial instruments, as this would not be meaningful. 3 The range of inputs is not disclosed, as there is a dispersion of values given the diverse nature of the investments. 4 Debt issued designated at fair value primarily consists of UBS structured notes, which include variable maturity notes with various equity and foreign exchange underlying risks, rates-linked and credit-linked notes, all of which have embedded derivative parameters that are considered to be unobservable. The equivalent derivative instrument parameters are presented in the respective derivative financial instruments lines in this table.

Significant unobservable inputs in Level 3 positions

This section discusses the significant unobservable inputs used in the valuation of Level 3 instruments and assesses the potential effect that a change in each unobservable input in isolation may have on a fair value measurement. Relationships between observable and unobservable inputs have not been included in the summary below.

Input	Description
Bond price equivalent	– Where market prices are not available for a bond, fair value is measured by comparison with observable pricing data from similar instruments. Factors considered when selecting comparable instruments include credit quality, maturity and industry of the issuer. Fair value may be measured either by a direct price comparison or by conversion of an instrument price into a yield (either as an outright yield or as a spread to the relevant benchmark rate). – For corporate and municipal bonds, the range represents the range of prices from reference issuances used in determining fair value. Bonds priced at 0 are distressed to the point that no recovery is expected, while prices significantly in excess of 100 or par relate to inflation-linked or structured issuances that pay a coupon in excess of the market benchmark as of the measurement date. – For credit derivatives, the bond price range represents the range of prices used for reference instruments, which are typically converted to an equivalent yield or credit spread as part of the valuation process.
Loan price equivalent	– Where market prices are not available for a traded loan, fair value is measured by comparison with observable pricing data for similar instruments. Factors considered when selecting comparable instruments include industry segment, collateral quality, maturity and issuer-specific covenants. Fair value may be measured either by a direct price comparison or by conversion of an instrument price into a yield. The range represents the range of prices derived from reference issuances of a similar credit quality used to measure fair value for loans classified as Level 3. Loans priced at 0 are distressed to the point that no recovery is expected, while a current price of 100 represents a loan that is expected to be repaid in full.
Credit spread	– Valuation models for many credit derivatives require an input for the credit spread, which is a reflection of the credit quality of the associated referenced underlying. The credit spread of a particular security is quoted in relation to the yield on a benchmark security or reference rate, typically either US Treasury or ARR, and is generally expressed in terms of basis points. An increase / (decrease) in credit spread will increase / (decrease) the value of credit protection offered by credit default swaps and other credit derivative products. The income statement effect from such changes depends on the nature and direction of the positions held. Credit spreads may be negative where the asset is more creditworthy than the benchmark against which the spread is calculated. A wider credit spread represents decreasing creditworthiness. The range represents a diverse set of underlyings, with the lower end of the range representing credits of the highest quality and the upper end of the range representing greater levels of credit risk.
Discount margin	– The discount margin (DM) spread represents the discount rates applied to present value cash flows of an asset to reflect the market return required for uncertainty in the estimated cash flows. DM spreads are a rate or rates applied on top of a floating index (e.g., Secured Overnight Financing Rate (SOFR)) to discount expected cash flows. Generally, a decrease / (increase) in the DM in isolation would result in a higher / (lower) fair value. – The high end of the range relates to securities that are priced low within the market relative to the expected cash flow schedule. This indicates that the market is pricing an increased risk of credit loss into the security that is greater than what is being captured by the expected cash flow generation process. The low ends of the ranges are typical of funding rates on better-quality instruments.
Funding spread	– Structured financing transactions are valued using synthetic funding curves that best represent the assets that are pledged as collateral for the transactions. They are not representative of where UBS can fund itself on an unsecured basis, but provide an estimate of where UBS can source and deploy secured funding with counterparties for a given type of collateral. The funding spreads are expressed in terms of basis points, and if funding spreads widen, this increases the effect of discounting. – A small proportion of structured debt instruments and non-structured fixed-rate bonds within financial liabilities designated at fair value had an exposure to funding spreads that was longer in duration than the actively traded market.
Volatility	– Volatility measures the variability of future prices for a particular instrument and is generally expressed as a percentage, where a higher number reflects a more volatile instrument, for which future price movements are more likely to occur. Volatility is a key input into option models, where it is used to derive a probability-based distribution of future prices for the underlying instrument. The effect of volatility on individual positions within the portfolio is driven primarily by whether the option contract is a long or short position. In most cases, the fair value of an option increases as a result of an increase in volatility and is reduced by a decrease in volatility. Generally, volatility used in the measurement of fair value is derived from active-market option prices (referred to as implied volatility). A key feature of implied volatility is the volatility "smile" or "skew," which represents the effect of pricing options of different option strikes at different implied volatility levels. – Volatilities of low interest rates tend to be much higher than volatilities of high interest rates. In addition, different currencies may have significantly different implied volatilities.

Note 20 Fair value measurement (continued)

Input	Description
Correlation	– Correlation measures the interrelationship between the movements of two variables. It is expressed as a percentage between –100% and +100%, where +100% represents perfectly correlated variables (meaning a movement of one variable is associated with a movement of the other variable in the same direction) and –100% implies that the variables are inversely correlated (meaning a movement of one variable is associated with a movement of the other variable in the opposite direction). The effect of correlation on the measurement of fair value depends on the specific terms of the instruments being valued, reflecting the range of different payoff features within such instruments. – Equity-to-FX correlation is important for equity options based on a currency other than the currency of the underlying stock. Equity-to-equity correlation is particularly important for complex options that incorporate, in some manner, different equities in the projected payoff.
Equity dividend yields	– The derivation of a forward price for an individual stock or index is important for measuring fair value for forward or swap contracts and for measuring fair value using option pricing models. The relationship between the current stock price and the forward price is based on a combination of expected future dividend levels and payment timings, and, to a lesser extent, the relevant funding rates applicable to the stock in question. Dividend yields are generally expressed as an annualized percentage of the share price, with the lowest limit of 0% representing a stock that is not expected to pay any dividend. The dividend yield and timing represent the most significant parameter in determining fair value for instruments that are sensitive to an equity forward price.

f) Level 3 instruments: sensitivity to changes in unobservable input assumptions

The table below summarizes those financial assets and liabilities classified as Level 3 for which a change in one or more of the unobservable inputs to reflect reasonably possible favorable and unfavorable alternative assumptions would change fair value significantly, and the estimated effect thereof. The table below does not represent the estimated effect of stress scenarios. Interdependencies between Level 1, 2 and 3 parameters have not been incorporated in the table. Furthermore, direct interrelationships between the Level 3 parameters discussed below are not a significant element of the valuation uncertainty.

Sensitivity data is estimated using a number of techniques, including the estimation of price dispersion among different market participants, variation in modeling approaches and reasonably possible changes to assumptions used within the fair value measurement process. The sensitivity ranges are not always symmetrical around the fair values, as the inputs used in valuations are not always precisely in the middle of the favorable and unfavorable range.

Sensitivity data is determined at a product or parameter level and then aggregated assuming no diversification benefit. Diversification would incorporate estimated correlations across different sensitivity results and, as such, would result in an overall sensitivity that would be less than the sum of the individual component sensitivities. However, UBS believes that the diversification benefit is not significant to this analysis.

Sensitivity of fair value measurements to changes in unobservable input assumptions[1]

	31.12.22		31.12.21	
USD m	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes
Traded loans, loans measured at fair value, loan commitments and guarantees	19	(12)	19	(13)
Securities financing transactions	33	(37)	41	(53)
Auction rate securities	46[2]	(46)[2]	66	(66)
Asset-backed securities	27	(27)	20	(20)
Equity instruments	183	(161)	173	(146)
Interest rate derivatives, net	18[2]	(12)[2]	29	(19)
Credit derivatives, net	3	(4)	5	(8)
Foreign exchange derivatives, net	10	(5)	19	(11)
Equity / index derivatives, net	361	(330)	368	(335)
Other	39[2]	(62)[2]	50	(73)
Total	738	(696)	790	(744)

1 Sensitivity of issued and over-the-counter debt instruments is reported with the equivalent derivative or securities financing instrument. 2 Includes refinements applied in estimating valuation uncertainty across various parameters.

g) Level 3 instruments: movements during the period

The table below presents additional information about material movements in Level 3 assets and liabilities measured at fair value on a recurring basis, excluding any related hedging activity.

Assets and liabilities transferred into or out of Level 3 are presented as if those assets or liabilities had been transferred at the beginning of the year.

Movements of Level 3 instruments

USD bn	Balance at the beginning of the period	Net gains / losses included in comprehensive income[1]	*of which: related to instruments held at the end of the period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance at the end of the period
For the twelve months ended 31 December 2022[2]											
Financial assets at fair value held for trading	2.3	(0.3)	*(0.3)*	0.3	(1.8)	0.5	0.0	0.7	(0.3)	(0.0)	1.5
of which: Investment fund units	*0.0*	*(0.0)*	*(0.0)*	*0.0*	*(0.0)*	*0.0*	*0.0*	*0.1*	*(0.0)*	*(0.0)*	*0.1*
of which: Corporate and municipal bonds	*0.6*	*(0.0)*	*(0.0)*	*0.3*	*(0.6)*	*0.0*	*0.0*	*0.4*	*(0.0)*	*(0.0)*	*0.5*
of which: Loans	*1.4*	*(0.1)*	*(0.1)*	*0.0*	*(1.1)*	*0.5*	*0.0*	*0.0*	*(0.2)*	*0.0*	*0.6*
Derivative financial instruments – assets	1.1	0.6	*0.3*	0.0	0.0	0.4	(0.7)	0.1	(0.0)	(0.0)	1.5
of which: Interest rate	*0.5*	*0.3*	*0.3*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*(0.1)*	*(0.0)*	*0.5*
of which: Equity / index	*0.4*	*0.2*	*0.1*	*0.0*	*0.0*	*0.4*	*(0.3)*	*0.1*	*(0.0)*	*(0.0)*	*0.7*
of which: Credit	*0.2*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*0.1*	*0.0*	*0.3*
Financial assets at fair value not held for trading	4.2	0.1	*0.1*	0.7	(1.2)	0.1	(0.0)	0.2	(0.3)	(0.0)	3.7
of which: Loans	*0.9*	*(0.0)*	*(0.0)*	*0.4*	*(0.4)*	*0.1*	*0.0*	*0.1*	*(0.3)*	*(0.0)*	*0.7*
of which: Auction rate securities	*1.6*	*0.1*	*0.0*	*0.0*	*(0.3)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*1.3*
of which: Equity instruments	*0.7*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.1*	*0.0*	*(0.0)*	*0.8*
Derivative financial instruments – liabilities	2.2	(0.8)	*(0.4)*	0.0	0.0	1.1	(0.9)	0.3	(0.2)	(0.1)	1.7
of which: Interest rate	*0.3*	*(0.3)*	*(0.0)*	*0.0*	*0.0*	*0.1*	*(0.0)*	*0.0*	*(0.0)*	*(0.0)*	*0.1*
of which: Equity / index	*1.5*	*(0.4)*	*(0.3)*	*0.0*	*0.0*	*0.8*	*(0.7)*	*0.1*	*(0.2)*	*(0.0)*	*1.2*
of which: Credit	*0.3*	*(0.1)*	*(0.0)*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.1*	*(0.0)*	*(0.0)*	*0.3*
Debt issued designated at fair value	11.9	(1.3)	*(0.9)*	0.0	0.0	4.7	(3.1)	0.7	(3.3)	(0.3)	9.2
Other financial liabilities designated at fair value[3]	3.2	(1.0)	*(1.0)*	0.0	0.0	0.0	(0.1)	0.1	(0.2)	(0.0)	2.0
For the twelve months ended 31 December 2021											
Financial assets at fair value held for trading	2.3	(0.0)	*(0.1)*	0.3	(1.6)	1.2	0.0	0.3	(0.3)	(0.0)	2.3
of which: Investment fund units	*0.0*	*(0.0)*	*(0.0)*	*0.0*	*(0.0)*	*0.0*	*0.0*	*0.0*	*(0.0)*	*(0.0)*	*0.0*
of which: Corporate and municipal bonds	*0.8*	*0.0*	*(0.0)*	*0.2*	*(0.4)*	*0.0*	*0.0*	*0.0*	*(0.1)*	*(0.0)*	*0.6*
of which: Loans	*1.1*	*0.0*	*(0.0)*	*0.0*	*(0.8)*	*1.2*	*0.0*	*0.0*	*(0.2)*	*0.0*	*1.4*
Derivative financial instruments – assets	1.8	(0.2)	*(0.1)*	0.0	0.0	0.5	(0.7)	0.1	(0.3)	(0.0)	1.1
of which: Interest rate	*0.5*	*0.1*	*0.1*	*0.0*	*0.0*	*0.1*	*(0.2)*	*0.0*	*(0.1)*	*(0.0)*	*0.5*
of which: Equity / index	*0.9*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.3*	*(0.4)*	*0.0*	*(0.2)*	*(0.0)*	*0.4*
of which: Credit	*0.3*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*(0.0)*	*0.0*	*0.2*
Financial assets at fair value not held for trading	3.9	0.1	*0.1*	1.0	(0.6)	0.0	0.0	0.1	(0.3)	(0.0)	4.2
of which: Loans	*0.9*	*(0.0)*	*0.0*	*0.6*	*(0.3)*	*0.0*	*0.0*	*0.0*	*(0.3)*	*(0.0)*	*0.9*
of which: Auction rate securities	*1.5*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*1.6*
of which: Equity instruments	*0.5*	*0.1*	*0.1*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.0)*	*(0.0)*	*0.7*
Derivative financial instruments – liabilities	3.5	0.2	*(0.0)*	0.0	0.0	0.9	(1.8)	0.0	(0.5)	(0.0)	2.2
of which: Interest rate	*0.5*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*(0.0)*	*(0.0)*	*0.3*
of which: Equity / index	*2.3*	*0.3*	*0.1*	*0.0*	*0.0*	*0.8*	*(1.5)*	*0.0*	*(0.4)*	*(0.0)*	*1.5*
of which: Credit	*0.5*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.0)*	*0.0*	*(0.1)*	*(0.0)*	*0.3*
Debt issued designated at fair value	9.6	0.7	*0.6*	0.0	0.0	7.1	(4.2)	0.1	(1.2)	(0.2)	11.9
Other financial liabilities designated at fair value	2.1	0.0	*0.0*	0.0	0.0	1.3	(0.2)	0.0	(0.0)	(0.0)	3.2

1 Net gains / losses included in comprehensive income are recognized in Net interest income and Other net income from financial instruments measured at fair value through profit or loss in the Income statement, and also in Gains / (losses) from own credit on financial liabilities designated at fair value, before tax in the Statement of comprehensive income. 2 Total Level 3 assets as of 31 December 2022 were USD 6.7bn (31 December 2021: USD 7.6bn). Total Level 3 liabilities as of 31 December 2022 were USD 13.0bn (31 December 2021: USD 17.4bn). 3 Of the USD 1.0bn in net gains / losses that is included in comprehensive income, USD 0.6bn is recognized in the Income statement and USD 0.4bn is recognized in the Statement of comprehensive income in Gains / (losses) from own credit on financial liabilities designated at fair value, before tax.

h) Maximum exposure to credit risk for financial instruments measured at fair value

The tables below provide UBS AG's maximum exposure to credit risk for financial instruments measured at fair value and the respective collateral and other credit enhancements mitigating credit risk for these classes of financial instruments.

The maximum exposure to credit risk includes the carrying amounts of financial instruments recognized on the balance sheet subject to credit risk and the notional amounts for off-balance sheet arrangements. Where information is available, collateral is presented at fair value. For other collateral, such as real estate, a reasonable alternative value is used. Credit enhancements, such as credit derivative contracts and guarantees, are included at their notional amounts. Both are capped at the maximum exposure to credit risk for which they serve as security. The "Risk management and control" section of this report describes management's view of credit risk and the related exposures, which can differ in certain respects from the requirements of IFRS.

Maximum exposure to credit risk

	31.12.22								
		Collateral				Credit enhancements			
USD bn	Maximum exposure to credit risk	Cash collateral received	Collateralized by equity and debt instruments	Secured by real estate	Other collateral	Netting	Credit derivative contracts	Guarantees	Exposure to credit risk after collateral and credit enhancements
Financial assets measured at fair value on the balance sheet[1]									
Financial assets at fair value held for trading – debt instruments[2,3]	16.7								16.7
Derivative financial instruments[4]	150.1		5.9			133.5			10.7
Brokerage receivables	17.6		17.3						0.3
Financial assets at fair value not held for trading – debt instruments[5]	44.8		11.4						33.4
Total financial assets measured at fair value	229.2	0.0	34.6	0.0	0.0	133.5	0.0	0.0	61.2
Guarantees[6]	0.2							0.2	0.0

	31.12.21								
		Collateral				Credit enhancements			
USD bn	Maximum exposure to credit risk	Cash collateral received	Collateralized by equity and debt instruments	Secured by real estate	Other collateral	Netting	Credit derivative contracts	Guarantees	Exposure to credit risk after collateral and credit enhancements
Financial assets measured at fair value on the balance sheet[1]									
Financial assets at fair value held for trading – debt instruments[2,3]	22.6								22.6
Derivative financial instruments[4]	118.1		4.2			103.2			10.7
Brokerage receivables	21.8	0.0	21.6						0.2
Financial assets at fair value not held for trading – debt instruments[5]	37.0	0.0	11.2						25.7
Total financial assets measured at fair value	**199.5**	**0.0**	**37.1**	**0.0**	**0.0**	**103.2**	**0.0**	**0.0**	**59.2**
Guarantees[6]	0.2				0.0			0.2	0.0

1 The maximum exposure to loss is generally equal to the carrying amount and subject to change over time with market movements. 2 These positions are generally managed under the market risk framework. For the purpose of this disclosure, collateral and credit enhancements were not considered. 3 Does not include investment fund units. 4 The amount shown in the "Netting" column represents the netting potential not recognized on the balance sheet. Refer to Note 21 for more information. 5 Financial assets at fair value not held for trading collateralized by securities consisted of structured loans and reverse repurchase and securities borrowing agreements. 6 The amount shown in the "Guarantees" column largely relates to sub-participations.

i) Financial instruments not measured at fair value

The table below provides the estimated fair values of financial instruments not measured at fair value.

Financial instruments not measured at fair value

	31.12.22						31.12.21					
	Carrying amount	Fair value					Carrying amount	Fair value				
USD bn	Total	Carrying amount approximates fair value[1]	Level 1	Level 2	Level 3	Total	Total	Carrying amount approximates fair value[1]	Level 1	Level 2	Level 3	Total
Assets												
Cash and balances at central banks	169.4	169.4	0.1	0.0	0.0	169.4	192.8	192.7	0.1	0.0	0.0	192.8
Loans and advances to banks	14.7	13.9	0.0	0.7	0.0	14.6	15.4	14.6	0.0	0.7	0.0	15.3
Receivables from securities financing transactions measured at amortized cost	67.8	64.3	0.0	1.8	1.7	67.8	75.0	71.6	0.0	1.3	2.1	75.0
Cash collateral receivables on derivative instruments	35.0	35.0	0.0	0.0	0.0	35.0	30.5	30.5	0.0	0.0	0.0	30.5
Loans and advances to customers	390.0	136.9	0.0	45.9	195.0	377.7	398.7	163.7	0.0	43.8	190.4	397.9
Other financial assets measured at amortized cost[2]	53.4	13.0	10.3	25.1	2.5	51.0	26.2	4.1	9.3	10.7	2.4	26.5
Liabilities												
Amounts due to banks	11.6	8.9	0.0	2.7	0.0	11.6	13.1	9.1	0.0	4.0	0.0	13.1
Payables from securities financing transactions measured at amortized cost	4.2	3.5	0.0	0.7	0.0	4.2	5.5	4.1	0.0	1.5	0.0	5.5
Cash collateral payables on derivative instruments	36.4	36.4	0.0	0.0	0.0	36.4	31.8	31.8	0.0	0.0	0.0	31.8
Customer deposits	527.2	493.0	0.0	33.9	0.0	526.9	544.8	537.6	0.0	7.3	0.0	544.8
Funding from UBS Group AG measured at amortized cost	56.1	2.0	0.0	53.7	0.0	55.7	57.3	2.8	0.0	56.0	0.0	58.8
Debt issued measured at amortized cost	59.5	13.4	0.0	45.5	0.0	58.9	82.4	13.0	0.0	69.8	0.0	82.8
Other financial liabilities measured at amortized cost[3]	7.2	7.2	0.0	0.0	0.0	7.2	6.3	6.3	0.0	0.0	0.0	6.3

1 Includes certain financial instruments where the carrying amount is a reasonable approximation of the fair value due to the instruments' short-term nature (instruments that are receivable or payable on demand, or with a remaining maturity (excluding the effects of callable features) of three months or less). 2 Effective 1 April 2022, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost. Refer to Note 1 for information. 3 Excludes lease liabilities.

The fair values included in the table above have been calculated for disclosure purposes only. The valuation techniques and assumptions described below relate only to the fair value of UBS's financial instruments not measured at fair value. Other institutions may use different methods and assumptions for their fair value estimations, and therefore such fair value disclosures cannot necessarily be compared from one financial institution to another. The following principles were applied when determining fair value estimates for financial instruments not measured at fair value:

- For financial instruments with remaining maturities greater than three months, the fair value was determined from quoted market prices, if available.
- Where quoted market prices were not available, the fair values were estimated by discounting contractual cash flows using current market interest rates or appropriate yield curves for instruments with similar credit risk and maturity. These estimates generally include adjustments for counterparty credit risk or UBS's own credit.
- For short-term financial instruments with remaining maturities of three months or less, the carrying amount, which is net of credit loss allowances, is generally considered a reasonable estimate of fair value.

Note 21 Offsetting financial assets and financial liabilities

UBS AG enters into netting agreements with counterparties to manage the credit risks associated primarily with repurchase and reverse repurchase transactions, securities borrowing and lending, over-the-counter derivatives, and exchange-traded derivatives. These netting agreements and similar arrangements generally enable the counterparties to set off liabilities against available assets received in the ordinary course of business and / or in the event that the counterparties to the transaction are unable to fulfill their contractual obligations.

The tables below provide a summary of financial assets and financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements, as well as financial collateral received or pledged to mitigate credit exposures for these financial instruments.

UBS AG engages in a variety of counterparty credit risk mitigation strategies in addition to netting and collateral arrangements. Therefore, the net amounts presented in the tables below do not purport to represent their actual credit risk exposure.

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

	Assets subject to netting arrangements								
	Netting recognized on the balance sheet			Netting potential not recognized on the balance sheet[3]			Assets not subject to netting arrangements[4]	Total assets	
As of 31.12.22, USD bn	Gross assets before netting	Netting with gross liabilities[2]	Net assets recognized on the balance sheet	Financial liabilities	Collateral received	Assets after consideration of netting potential	Assets recognized on the balance sheet	Total assets after consideration of netting potential	Total assets recognized on the balance sheet
Receivables from securities financing transactions measured at amortized cost	60.8	(11.1)	49.6	(3.0)	(46.4)	0.3	18.2	18.5	67.8
Derivative financial instruments	147.4	(2.5)	144.9	(110.9)	(28.5)	5.5	5.2	10.7	150.1
Cash collateral receivables on derivative instruments[1]	33.5	0.0	33.5	(20.9)	(1.9)	10.6	1.5	12.1	35.0
Financial assets at fair value not held for trading	85.6	(76.8)	8.7	(1.5)	(7.3)	0.0	50.7	50.7	59.4
of which: reverse repurchase agreements	*84.4*	*(76.8)*	*7.6*	*(1.5)*	*(6.1)*	*0.0*	*0.1*	*0.1*	*7.7*
Total assets	327.2	(90.4)	236.8	(136.3)	(84.1)	16.4	75.6	92.0	312.4
As of 31.12.21, USD bn									
Receivables from securities financing transactions measured at amortized cost	67.7	(13.8)	53.9	(2.9)	(51.0)	0.0	21.1	21.1	75.0
Derivative financial instruments	116.0	(3.6)	112.4	(88.9)	(18.5)	5.0	5.8	10.7	118.1
Cash collateral receivables on derivative instruments[1]	29.4	0.0	29.4	(15.2)	(3.3)	11.0	1.1	12.1	30.5
Financial assets at fair value not held for trading	93.1	(87.6)	5.5	(1.1)	(4.4)	0.0	54.1	54.1	59.6
of which: reverse repurchase agreements	*93.1*	*(87.6)*	*5.5*	*(1.1)*	*(4.4)*	*0.0*	*0.3*	*0.3*	*5.8*
Total assets	**306.2**	**(105.0)**	**201.2**	**(108.1)**	**(77.2)**	**15.9**	**82.1**	**98.1**	**283.3**

1 The net amount of Cash collateral receivables on derivative instruments recognized on the balance sheet includes certain OTC derivatives that are net settled on a daily basis either legally or in substance under IAS 32 principles and exchange-traded derivatives that are economically settled on a daily basis. 2 The logic of the table results in amounts presented in the "Netting with gross liabilities" column corresponding directly to the amounts presented in the "Netting with gross assets" column in the liabilities table presented below. Netting in this column for reverse repurchase agreements presented within the lines "Receivables from securities financing transactions measured at amortized cost" and "Financial assets at fair value not held for trading" taken together corresponds to the amounts presented for repurchase agreements in the "Payables from securities financing transactions measured at amortized cost" and "Other financial liabilities designated at fair value" lines in the liabilities table presented below. 3 For the purpose of this disclosure, the amounts of financial instruments and cash collateral presented have been capped so as not to exceed the net amount of financial assets presented on the balance sheet; i.e., over-collateralization, where it exists, is not reflected in the table. 4 Includes assets not subject to enforceable netting arrangements and other out-of-scope items.

Note 21 Offsetting financial assets and financial liabilities (continued)

Financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

	Liabilities subject to netting arrangements						Liabilities not subject to netting arrangements[4]	Total liabilities	
	Netting recognized on the balance sheet			Netting potential not recognized on the balance sheet[3]					
As of 31.12.22, USD bn	Gross liabilities before netting	Netting with gross assets[2]	Net liabilities recognized on the balance sheet	Financial assets	Collateral pledged	Liabilities after consideration of netting potential	Liabilities recognized on the balance sheet	Total liabilities after consideration of netting potential	Total liabilities recognized on the balance sheet
Payables from securities financing transactions measured at amortized cost	14.1	(11.1)	3.0	(1.3)	(1.8)	0.0	1.2	1.2	4.2
Derivative financial instruments	150.3	(2.5)	147.8	(110.9)	(26.2)	10.7	7.1	17.8	154.9
Cash collateral payables on derivative instruments[1]	34.9	0.0	34.9	(20.0)	(1.9)	13.0	1.6	14.5	36.4
Other financial liabilities designated at fair value	92.5	(76.9)	15.6	(3.2)	(12.4)	0.0	16.4	16.4	32.0
of which: repurchase agreements	*92.1*	*(76.9)*	*15.3*	*(3.2)*	*(12.1)*	*0.0*	*0.1*	*0.1*	*15.3*
Total liabilities	**291.7**	**(90.4)**	**201.3**	**(135.3)**	**(42.3)**	**23.7**	**26.3**	**49.9**	**227.6**
As of 31.12.21, USD bn									
Payables from securities financing transactions measured at amortized cost	16.9	(12.8)	4.1	(1.8)	(2.3)	0.0	1.4	1.4	5.5
Derivative financial instruments	118.4	(3.6)	114.9	(88.9)	(18.1)	7.9	6.4	14.3	121.3
Cash collateral payables on derivative instruments[1]	30.4	0.0	30.4	(13.1)	(3.3)	14.0	1.4	15.4	31.8
Other financial liabilities designated at fair value	94.8	(88.6)	6.2	(2.2)	(3.8)	0.2	26.3	26.5	32.4
of which: repurchase agreements	*94.6*	*(88.6)*	*6.0*	*(2.2)*	*(3.8)*	*0.0*	*0.4*	*0.4*	*6.4*
Total liabilities	**260.6**	**(105.0)**	**155.6**	**(106.0)**	**(27.5)**	**22.1**	**35.5**	**57.6**	**191.1**

1 The net amount of Cash collateral payables on derivative instruments recognized on the balance sheet includes certain OTC derivatives that are net settled on a daily basis either legally or in substance under IAS 32 principles and exchange-traded derivatives that are economically settled on a daily basis. 2 The logic of the table results in amounts presented in the "Netting with gross assets" column corresponding to the amounts presented in the "Netting with gross liabilities" column in the assets table presented above. Netting in this column for repurchase agreements presented within the lines "Payables from securities financing transactions measured at amortized cost" and "Other financial liabilities designated at fair value" taken together corresponds to the amounts presented for reverse repurchase agreements in the "Receivables from securities financing transactions measured at amortized cost" and "Financial assets at fair value not held for trading" lines in the assets table presented above. 3 For the purpose of this disclosure, the amounts of financial instruments and cash collateral presented have been capped so as not to exceed the net amount of financial liabilities presented on the balance sheet; i.e., over-collateralization, where it exists, is not reflected in the table. 4 Includes liabilities not subject to enforceable netting arrangements and other out-of-scope items.

Note 22 Restricted and transferred financial assets

This Note provides information about restricted financial assets (Note 22a), transfers of financial assets (Note 22b and 22c) and financial assets that are received as collateral with the right to resell or repledge these assets (Note 22d).

a) Restricted financial assets

Restricted financial assets consist of assets pledged as collateral against an existing liability or contingent liability and other assets that are otherwise explicitly restricted such that they cannot be used to secure funding.

Financial assets are mainly pledged as collateral in securities lending transactions, in repurchase transactions, against loans from Swiss mortgage institutions and in connection with the issuance of covered bonds. UBS AG generally enters into repurchase and securities lending arrangements under standard market agreements. For securities lending, the cash received as collateral may be more or less than the fair value of the securities loaned, depending on the nature of the transaction. For repurchase agreements, the fair value of the collateral sold under an agreement to repurchase is generally in excess of the cash borrowed. Pledged mortgage loans serve as collateral for existing liabilities against Swiss central mortgage institutions and for existing covered bond issuances of USD 8,962m as of 31 December 2022 (31 December 2021: USD 10,843m).

Other restricted financial assets include assets protected under client asset segregation rules, assets held under unit-linked investment contracts to back related liabilities to the policy holders and assets held in certain jurisdictions to comply with explicit minimum local asset maintenance requirements. The carrying amount of the liabilities associated with these other restricted financial assets is generally equal to the carrying amount of the assets, with the exception of assets held to comply with local asset maintenance requirements, for which the associated liabilities are greater.

Restricted financial assets

USD m	31.12.22		31.12.21	
	Restricted financial assets	*of which: assets pledged as collateral that may be sold or repledged by counterparties*	Restricted financial assets	*of which: assets pledged as collateral that may be sold or repledged by counterparties*
Financial assets pledged as collateral				
Financial assets at fair value held for trading	57,435	*36,742*	63,834	*43,397*
Loans and advances to customers[1]	15,195		18,160	
Financial assets at fair value not held for trading	1,509	*1,220*	961	*961*
Debt securities classified as Other financial assets measured at amortized cost	3,432	*2,685*	2,234	*1,870*
Total financial assets pledged as collateral	77,571		85,188	
Other restricted financial assets				
Loans and advances to banks	3,689		3,408	
Financial assets at fair value held for trading	162		392	
Cash collateral receivables on derivative instruments	5,155		4,747	
Loans and advances to customers	1,127		1,237	
Financial assets at fair value not held for trading	14,090		22,328	
Financial assets measured at fair value through other comprehensive income	1,842		894	
Other	859		97	
Total other restricted financial assets	26,924		33,104	
Total financial assets pledged and other restricted financial assets[2]	104,495		118,292	

1 Mainly related to mortgage loans that serve as collateral for existing liabilities toward Swiss central mortgage institutions and for existing covered bond issuances. Of these pledged mortgage loans, approximately USD 3.1bn as of 31 December 2022 (31 December 2021: approximately USD 2.7bn) could be withdrawn or used for future liabilities or covered bond issuances without breaching existing collateral requirements.
2 Does not include assets placed with central banks related to undrawn credit lines and for payment, clearing and settlement purposes (31 December 2022: USD 5.9bn; 31 December 2021: USD 4.4bn).

Note 22 Restricted and transferred financial assets (continued)

In addition to restrictions on financial assets, UBS AG and its subsidiaries are, in certain cases, subject to regulatory requirements that affect the transfer of dividends and capital within UBS AG, as well as intercompany lending. Supervisory authorities also may require entities to measure capital and leverage ratios on a stressed basis, such as the Federal Reserve Board's Comprehensive Capital Analysis and Review (CCAR) process, which may limit the relevant subsidiaries' ability to make distributions of capital based on the results of those tests.

Supervisory authorities generally have discretion to impose higher requirements or to otherwise limit the activities of subsidiaries.

Non-regulated subsidiaries are generally not subject to such requirements and transfer restrictions. However, restrictions can also be the result of different legal, regulatory, contractual, entity- or country-specific arrangements and / or requirements.

› **Refer to the "Financial and regulatory key figures for our significant regulated subsidiaries and sub-groups" section of this report for financial information about significant regulated subsidiaries of UBS AG**

b) Transferred financial assets that are not derecognized in their entirety

The table below presents information for financial assets that have been transferred but are subject to continued recognition in full, as well as recognized liabilities associated with those transferred assets.

Transferred financial assets subject to continued recognition in full

USD m	31.12.22		31.12.21	
	Carrying amount of transferred assets	Carrying amount of associated liabilities recognized on balance sheet	Carrying amount of transferred assets	Carrying amount of associated liabilities recognized on balance sheet
Financial assets at fair value held for trading that may be sold or repledged by counterparties	36,742	16,470	43,397	17,687
relating to securities lending and repurchase agreements in exchange for cash received	*16,756*	*16,470*	*17,970*	*17,687*
relating to securities lending agreements in exchange for securities received	*18,908*		*24,146*	
relating to other financial asset transfers	*1,078*		*1,281*	
Financial assets at fair value not held for trading that may be sold or repledged by counterparties	1,220	1,050	961	898
Debt securities classified as Other financial assets measured at amortized cost that may be sold or repledged by counterparties	2,685	2,302	1,870	1,725
Total financial assets transferred	**40,647**	**19,822**	**46,227**	**20,311**

Transactions in which financial assets are transferred, but continue to be recognized in their entirety on UBS AG's balance sheet include securities lending and repurchase agreements, as well as other financial asset transfers. Repurchase and securities lending arrangements are, for the most part, conducted under standard market agreements and are undertaken with counterparties subject to UBS AG's normal credit risk control processes.

› **Refer to Note 1a item 2e for more information about repurchase and securities lending agreements**

As of 31 December 2022, approximately 45% of the transferred financial assets were assets held for trading transferred in exchange for cash, in which case the associated recognized liability represents the amount to be repaid to counterparties. For securities lending and repurchase agreements, a haircut of between 0% and 15% is generally applied to the transferred assets, which results in associated liabilities having a carrying amount below the carrying amount of the transferred assets. The counterparties to the associated liabilities presented in the table above have full recourse to UBS AG.

In securities lending arrangements entered into in exchange for the receipt of other securities as collateral, neither the securities received nor the obligation to return them are recognized on UBS AG's balance sheet, as the risks and rewards of ownership are not transferred to UBS AG. In cases where such financial assets received are subsequently sold or repledged in another transaction, this is not considered to be a transfer of financial assets.

Other financial asset transfers primarily include securities transferred to collateralize derivative transactions, for which the carrying amount of associated liabilities is not provided in the table above, because those replacement values are managed on a portfolio basis across counterparties and product types, and therefore there is no direct relationship between the specific collateral pledged and the associated liability.

Transferred financial assets that are not subject to derecognition in full but remain on the balance sheet to the extent of UBS AG's continuing involvement were not material as of 31 December 2022 and as of 31 December 2021.

Note 22 Restricted and transferred financial assets (continued)

c) Transferred financial assets that are derecognized in their entirety with continuing involvement

Continuing involvement in a transferred and fully derecognized financial asset may result from contractual provisions in the particular transfer agreement or from a separate agreement, with the counterparty or a third party, entered into in connection with the transfer.

The fair value and carrying amount of UBS AG's continuing involvement from transferred positions as of 31 December 2022 and 31 December 2021 was not material. Life-to-date losses reported in prior periods primarily relate to legacy positions in securitization vehicles that have been fully marked down, with no remaining exposure to loss.

d) Off-balance sheet assets received

The table below presents assets received from third parties that can be sold or repledged and that are not recognized on the balance sheet, but that are held as collateral, including amounts that have been sold or repledged.

Off-balance sheet assets received

USD m	31.12.22	31.12.21
Fair value of assets received that can be sold or repledged	434,023	497,828
received as collateral under reverse repurchase, securities borrowing and lending arrangements, derivative and other transactions [1]	*418,847*	*483,426*
received in unsecured borrowings	*15,175*	*14,402*
Thereof sold or repledged [2]	331,805	367,440
in connection with financing activities	*288,752*	*319,176*
to satisfy commitments under short sale transactions	*29,515*	*31,688*
in connection with derivative and other transactions [1]	*13,538*	*16,575*

1 Includes securities received as initial margin from its clients that UBS AG is required to remit to central counterparties, brokers and deposit banks through its exchange-traded derivative clearing and execution services. 2 Does not include off-balance sheet securities (31 December 2022: USD 9.9bn; 31 December 2021: USD 12.7bn) placed with central banks related to undrawn credit lines and for payment, clearing and settlement purposes for which there are no associated liabilities or contingent liabilities.

Note 23 Maturity analysis of assets and liabilities

a) Maturity analysis of carrying amounts of assets and liabilities

The table below provides an analysis of carrying amounts of balance sheet assets and liabilities, as well as off-balance sheet exposures by residual contractual maturity as of the reporting date. The residual contractual maturity of assets includes the effect of callable features. The residual contractual maturity of liabilities and off-balance sheet exposures is based on the earliest date on which a third party could require UBS AG to pay.

Derivative financial instruments and financial assets and liabilities at fair value held for trading are presented in the *Due within 1 month* column; however, the respective contractual maturities may extend over significantly longer periods.

Assets held to hedge unit-linked investment contracts (presented within *Financial assets at fair value not held for trading*) are presented in the *Due within 1 month* column, consistent with the maturity assigned to the related amounts due under unit-linked investment contracts (presented within *Other financial liabilities designated at fair value*).

Other financial assets and liabilities with no contractual maturity, such as equity securities, are presented in the *Perpetual / Not applicable* column. Undated or perpetual instruments are classified based on the contractual notice period that the counterparty of the instrument is entitled to give. Where there is no contractual notice period, undated or perpetual contracts are presented in the *Perpetual / Not applicable* column.

Non-financial assets and liabilities with no contractual maturity are generally included in the *Perpetual / Not applicable* column.

Loan commitments are classified based on the earliest date they can be drawn down.

Note 23 Maturity analysis of assets and liabilities (continued)

	31.12.22							
USD bn	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 2 years	Due between 2 and 5 years	Due over 5 years	Perpetual / Not applicable	Total
Assets								
Total financial assets measured at amortized cost[1]	425.2	28.7	34.5	78.8	70.5	92.8		730.4
Loans and advances to customers	*141.9*	*16.3*	*28.3*	*74.9*	*55.6*	*73.0*		*390.0*
Total financial assets measured at fair value through profit or loss	300.4	10.0	7.8	3.6	9.9	2.0	1.5	335.1
Financial assets at fair value not held for trading	*24.6*	*10.0*	*7.8*	*3.6*	*9.9*	*2.0*	*1.5*	*59.4*
Financial assets measured at fair value through other comprehensive income[1]	0.3	0.9	0.9	0.1	0.0	0.0		2.2
Total non-financial assets	7.1		0.2		2.0	0.4	28.0	37.7
Total assets	732.9	39.5	43.4	82.4	82.4	95.1	29.6	1,105.4
Liabilities								
Total financial liabilities measured at amortized cost	524.3	40.2	49.6	20.7	35.2	23.5	11.8	705.4
Customer deposits	*464.5*	*28.5*	*23.8*	*7.7*	*2.3*	*0.3*		*527.2*
Funding from UBS Group AG	*2.0*			*4.8*	*21.2*	*16.3*	*11.8*	*56.1*
Debt issued measured at amortized cost	*4.6*	*8.8*	*23.3*	*7.2*	*10.0*	*5.7*		*59.5*
of which: non-subordinated fixed rate debt	*3.1*	*4.0*	*13.2*	*2.8*	*7.8*	*5.7*		*36.6*
of which: non-subordinated floating rate debt	*1.5*	*4.8*	*10.1*	*1.9*	*1.6*			*19.9*
of which: subordinated fixed-rate debt				*2.4*	*0.5*			*3.0*
Total financial liabilities measured at fair value through profit or loss[2]	265.9	13.8	16.3	19.6	7.3	10.5		333.4
Debt issued designated at fair value	*9.3*	*12.3*	*15.9*	*19.3*	*6.9*	*8.2*		*71.8*
of which: non-subordinated fixed rate debt	*0.5*	*2.3*	*5.6*	*3.6*	*2.0*	*1.6*		*15.6*
of which: non-subordinated floating rate debt	*8.8*	*10.0*	*10.3*	*15.7*	*4.9*	*6.6*		*56.2*
Total non-financial liabilities	6.7	2.6					0.5	9.7
Total liabilities	796.9	56.5	65.9	40.4	42.5	34.0	12.3	1,048.5
Guarantees, loan commitments and forward starting transactions[3]								
Loan commitments	39.3	0.3	0.4	0.0				40.0
Guarantees	22.4							22.4
Forward starting transactions, reverse repurchase and securities borrowing agreements	3.8							3.8
Total	65.4	0.3	0.4	0.0				66.2

	31.12.21							
USD bn	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 2 years	Due between 2 and 5 years	Due over 5 years	Perpetual / Not applicable	Total
Assets								
Total financial assets measured at amortized cost	454.3	45.6	43.2	53.7	64.2	77.6		738.6
Loans and advances to customers	*157.8*	*28.5*	*37.3*	*49.7*	*55.1*	*70.3*		*398.7*
Total financial assets measured at fair value through profit or loss	300.7	5.8	8.1	5.2	7.1	2.5	1.4	330.7
Financial assets at fair value not held for trading	*29.7*	*5.8*	*8.1*	*5.2*	*7.1*	*2.5*	*1.4*	*59.6*
Financial assets measured at fair value through other comprehensive income	0.1	0.4	0.7	0.1	0.4	7.1		8.8
Total non-financial assets	7.3	0.5	0.1	0.2	1.4	0.3	28.2	38.0
Total assets	**762.3**	**52.3**	**52.1**	**59.3**	**73.2**	**87.5**	**29.5**	**1,116.1**
Liabilities								
Total financial liabilities measured at amortized cost	583.3	21.5	48.4	17.3	36.0	24.7	13.7	744.8
Customer deposits	*531.0*	*6.5*	*3.2*	*1.9*	*1.8*	*0.3*		*544.8*
Funding from UBS Group AG	*0.0*	*2.8*	*1.4*	*6.3*	*17.0*	*16.1*	*13.7*	*57.3*
Debt issued measured at amortized cost	*3.7*	*9.3*	*38.4*	*8.7*	*15.5*	*6.9*		*82.4*
of which: non-subordinated fixed rate debt	*3.7*	*8.4*	*27.4*	*6.6*	*9.0*	*6.9*		*62.0*
of which: non-subordinated floating rate debt	*0.0*	*0.8*	*9.0*	*2.1*	*3.3*			*15.2*
of which: subordinated fixed-rate debt			*2.0*		*3.1*			*5.2*
Total financial liabilities measured at fair value through profit or loss[2]	238.1	12.0	14.7	18.8	5.6	11.8		300.9
Debt issued designated at fair value	*12.5*	*11.6*	*14.1*	*18.6*	*5.4*	*9.2*		*71.5*
of which: non-subordinated fixed rate debt	*0.8*	*1.2*	*2.9*	*1.2*	*1.3*	*2.4*		*9.8*
of which: non-subordinated floating rate debt	*11.7*	*10.3*	*11.2*	*17.4*	*4.2*	*6.8*		*61.6*
Total non-financial liabilities	8.7	2.6					0.7	12.0
Total liabilities	**830.0**	**36.0**	**63.0**	**36.2**	**41.6**	**36.5**	**14.4**	**1,057.7**
Guarantees, loan commitments and forward starting transactions[3]								
Loan commitments	38.3	0.5	0.7	0.0				39.5
Guarantees	21.2							21.2
Forward starting transactions, reverse repurchase and securities borrowing agreements	1.4							1.4
Total	**60.9**	**0.5**	**0.7**	**0.0**				**62.1**

1 Effective 1 April 2022, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost. Refer to Note 1b for more information. 2 As of 31 December 2022 and 31 December 2021, the contractual redemption amount at maturity of debt issued designated at fair value through profit or loss and other financial liabilities measured at fair value through profit or loss was not materially different from the carrying amount. 3 The notional amounts associated with derivative loan commitments, as well as forward starting repurchase and reverse repurchase agreements, measured at fair value through profit or loss are presented together with notional amounts related to derivative instruments and have been excluded from the table above. Refer to Note 10 for more information.

b) Maturity analysis of financial liabilities on an undiscounted basis

The table below provides an analysis of financial liabilities on an undiscounted basis, including all cash flows relating to principal and future interest payments. The residual contractual maturities for non-derivative and non-trading financial liabilities are based on the earliest date on which UBS could be contractually required to pay. Derivative positions and trading liabilities, predominantly made up of short sale transactions, are presented in the *Due within 1 month* column, as this provides a conservative reflection of the nature of these trading activities. The residual contractual maturities may extend over significantly longer periods.

	31.12.22							
USD bn	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 2 years	Due between 2 and 5 years	Due over 5 years	Perpetual / Not applicable	Total
Financial liabilities recognized on balance sheet[1]								
Amounts due to banks	6.3	2.6	1.9	0.3	0.6	0.0		11.7
Payables from securities financing transactions	3.3	0.3	0.4	0.3		0.0		4.4
Cash collateral payables on derivative instruments	36.4							36.4
Customer deposits	464.6	28.8	24.5	8.2	2.6	0.3		529.0
Funding from UBS Group AG[2]	2.2	0.6	1.2	6.8	27.6	21.2	12.7	72.3
Debt issued measured at amortized cost	4.6	8.9	23.7	7.8	10.8	6.9		62.8
Other financial liabilities measured at amortized cost	5.6	0.1	0.4	0.5	1.2	1.3		9.2
of which: lease liabilities	*0.1*	*0.1*	*0.4*	*0.5*	*1.2*	*1.3*		*3.7*
Total financial liabilities measured at amortized cost[3, 5]	523.1	41.2	52.2	24.0	42.8	29.8	12.7	725.8
Financial liabilities at fair value held for trading[3, 4]	29.5							29.5
Derivative financial instruments[3, 5]	154.9							154.9
Brokerage payables designated at fair value	45.1							45.1
Debt issued designated at fair value[6]	9.4	12.4	16.0	19.7	7.1	12.3		76.8
Other financial liabilities designated at fair value	27.1	1.4	0.4	0.4	0.5	5.0		34.8
Total financial liabilities measured at fair value through profit or loss	**266.0**	**13.8**	**16.4**	**20.0**	**7.5**	**17.3**		**341.1**
Total	789.2	55.0	68.6	44.0	50.3	47.1	12.7	1,066.9
Guarantees, commitments and forward starting transactions								
Loan commitments[7]	39.3	0.3	0.4	0.0				40.0
Guarantees	22.4							22.4
Forward starting transactions, reverse repurchase and securities borrowing agreements[7]	3.8							3.8
Total	65.4	0.3	0.4	0.0				66.2

	31.12.21							
USD bn	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 2 years	Due between 2 and 5 years	Due over 5 years	Perpetual / Not applicable	Total
Financial liabilities recognized on balance sheet[1]								
Amounts due to banks	6.7	2.4	3.5	0.0	0.5			13.1
Payables from securities financing transactions	3.8	0.3	1.6	0.0				5.7
Cash collateral payables on derivative instruments	31.8							31.8
Customer deposits	531.0	6.6	3.3	2.0	1.9	0.4		545.1
Funding from UBS Group AG[2]	0.2	3.3	2.3	7.8	21.1	16.9	13.7	65.3
Debt issued measured at amortized cost	3.8	9.4	38.8	9.0	16.1	7.6		84.7
Other financial liabilities measured at amortized cost	5.3	0.1	0.4	0.6	1.2	1.5		9.1
of which: lease liabilities	*0.1*	*0.1*	*0.4*	*0.6*	*1.2*	*1.5*		*3.9*
Total financial liabilities measured at amortized cost	582.6	22.1	49.9	19.4	40.8	26.4	13.7	754.8
Financial liabilities at fair value held for trading[3,4]	31.7							31.7
Derivative financial instruments[3,5]	121.3							121.3
Brokerage payables designated at fair value	44.0							44.0
Debt issued designated at fair value[6]	13.8	11.5	13.5	18.8	5.6	12.5		75.9
Other financial liabilities designated at fair value	28.1	0.4	0.5	0.2	0.2	7.1		36.5
Total financial liabilities measured at fair value through profit or loss	239.0	11.9	14.0	19.0	5.8	19.6		309.4
Total	**821.6**	**34.0**	**63.9**	**38.4**	**46.6**	**45.9**	**13.7**	**1,064.2**
Guarantees, commitments and forward starting transactions								
Loan commitments[7]	38.3	0.5	0.7	0.0				39.5
Guarantees	21.2							21.2
Forward starting transactions, reverse repurchase and securities borrowing agreements[7]	1.4							1.4
Total	**60.9**	**0.5**	**0.7**	**0.0**				**62.1**

1 Except for financial liabilities at fair value held for trading and derivative financial instruments (see footnote 3), the amounts presented generally represent undiscounted cash flows of future interest and principal payments. 2 The time-bucket Perpetual / Not applicable includes perpetual loss-absorbing additional tier 1 capital instruments. 3 Carrying amount is fair value. Management believes that this best represents the cash flows that would have to be paid if these positions had to be settled or closed out. 4 Contractual maturities of financial liabilities at fair value held for trading are: USD 27.8bn due within 1 month (31 December 2021: USD 30.8bn), USD 1.7bn due between 1 month and 1 year (31 December 2021: USD 0.9bn) and USD 0bn due between 1 and 5 years (31 December 2021: USD 0bn). 5 Includes USD 46m (31 December 2021: USD 34m) related to fair values of derivative loan commitments and forward starting reverse repurchase agreements classified as derivatives, presented within "Due within 1 month." The full contractual committed amount of USD 34.4bn (31 December 2021: USD 36.0bn) is presented in Note 10 under notional amounts. 6 Future interest payments on variable-rate liabilities are determined by reference to the applicable interest rate prevailing as of the reporting date. Future principal payments that are variable are determined by reference to the conditions existing at the relevant reporting date. 7 Excludes derivative loan commitments and forward starting reverse repurchase agreements measured at fair value (see footnote 5).

Note 24 Interest rate benchmark reform

Background

A market-wide reform of major interest rate benchmarks is being undertaken globally. The publication of London Interbank Offered Rates (LIBORs) ceased immediately after 31 December 2021 for all non-US dollar LIBORs, as well as for one-week and two-month USD LIBOR. Publication of the remaining USD LIBOR tenors will cease immediately after 30 June 2023.

In December 2022, the FCA consulted on the continued publication of one-, three- and six-month USD LIBOR under a synthetic format until the end of September 2024 to ensure an orderly winding down of remaining contracts that are not governed by US law. In addition, in December 2022, the US Federal Reserve Board adopted the final rules that implement the Adjustable Interest Rate (LIBOR) Act, which is substantially based on, and supersedes, the New York State LIBOR legislation. The Adjustable Interest Rate (LIBOR) Act provides a legislative solution for USD LIBOR legacy products governed by any US state law should such products fail to transition prior to the USD LIBOR cessation date of 30 June 2023.

A framework has been established within UBS AG to address the transition of contracts that do not contain adequate fallback provisions and to cease entering into new LIBOR contracts, with the exception of specific circumstances that are allowed by regulatory provisions for USD LIBOR.

Governance over the transition to alternative benchmark rates

Throughout the transition process UBS AG has been maintaining a global cross-divisional, cross-functional governance structure and change program to address the scale and complexity of the transition. This global program is sponsored by the Group CFO and led by senior representatives from the business divisions and UBS AG's control and support functions. The program includes governance and execution structures within each business division, together with cross-divisional teams from each control and support function. During 2022, progress was overseen centrally via a monthly Group LIBOR Transition Forum with an increased US regional focus.

Risks

A core part of UBS AG's change program is the identification, management and monitoring of the risks associated with IBOR reform and transition. These risks include, but are not limited to, the following:
- economic risks to UBS AG and its clients, through the repricing of existing contracts, reduced transparency and / or liquidity of pricing information, market uncertainty or disruption;
- accounting risks, where the transition affects the accounting treatment, including hedge accounting and consequential income statement volatility;
- valuation risks arising from the variation between benchmarks that will cease and ARRs, affecting the risk profile of financial instruments;
- operational risks arising from changes to UBS AG's front-to-back processes and systems to accommodate the transition (e.g., data sourcing and processing and bulk migration of contracts); and
- legal and conduct risks relating to UBS AG's engagement with clients and market counterparties around new benchmark products and amendments required for existing contracts referencing benchmarks that will cease.

Overall, the effort required to transition is affected by multiple factors, including whether negotiations need to take place with multiple stakeholders (as is the case for syndicated loans or certain listed securities), market readiness and a client's technical readiness to handle ARR market conventions. UBS AG remains confident that it has the transparency, oversight and operational preparedness to progress with the IBOR transition consistent with market timelines, given the significant progress made as of 31 December 2022. UBS AG did not have and does not expect changes to its risk management approach and strategy as a result of interest rate benchmark reform.

Transition progress

UBS AG's significant non-derivative exposures subject to IBOR reform primarily related to brokerage receivable and payable balances, corporate and private loans, and mortgages, linked to CHF and USD LIBORs. During 2020, UBS AG transitioned most of its CHF LIBOR-linked deposits to the Swiss Average Overnight Rate (SARON). In that same year, UBS AG launched SARON-based mortgages and corporate loans based on all major ARRs in the Swiss market, as well as Secure Overnight Financing Rate (SOFR)-based mortgages in the US market.

Throughout 2021, UBS AG transitioned substantially all of its private and corporate loans linked to non-USD IBORs, with the remaining CHF LIBOR-linked contracts transitioning on their first roll date in 2022. In addition, as of 31 December 2021 UBS AG had completed the transition of IBOR-linked non-derivative financial assets and liabilities related to brokerage accounts, except for balances originated in the US, which transitioned to SOFR in January 2022.

In 2022, UBS AG focused its efforts on the transition of USD LIBOR and the remaining non-USD LIBOR contracts, by leveraging industry solutions (e.g., the use of fallback provisions), through third-party actions (those by clearing houses, agents, etc.) and bi-lateral contract negotiations. As of 31 December 2022, the transition of non-USD IBORs is substantially complete.

In addition, in 2022, substantially all US securities-based lending has been transitioned to SOFR and UBS AG continues to make good progress on the transition of the remaining USD LIBOR non-derivative assets and liabilities, with the US mortgage portfolio of USD 9bn (31 December 2021: USD 11bn) the largest remaining exposure left to transition.

In August 2022, to facilitate the transition of derivatives linked to the USD LIBOR Swap Rate, UBS AG adhered to the June 2022 Benchmark Module of the ISDA 2021 Fallbacks Protocol on the USD LIBOR Swap Rate. UBS AG will begin gradually transitioning USD LIBOR derivatives not transacted with clearing houses or exchanges from the first quarter of 2023. The transition of USD LIBOR-cleared derivatives is planned to commence in the second quarter of 2023.

As of 31 December 2022, UBS AG had approximately USD 3bn equivalent of yen- and US dollar-denominated funding from UBS Group AG that, per current contractual terms, if not called on their respective call dates, would reset based directly on JPY LIBOR and USD LIBOR. In addition, certain US dollar-denominated contracts providing funding from UBS Group AG reference rates indirectly derived from IBORs, if they are not called on their respective call dates. These contracts have robust IBOR fallback language and the confirmation of interest rate calculation mechanics will be communicated as market standards formalize and in advance of any rate resets. These debt instruments have not been included in the table below, given their current fixed-rate coupon.

Financial instruments yet to transition to alternative benchmarks

The amounts included in the table below relate to financial instrument contracts across UBS AG's business divisions where UBS AG has material exposures subject to IBOR reform that have not yet transitioned to ARRs, and that:
– contractually reference an interest rate benchmark that will transition to an alternative benchmark; and
– have a contractual maturity date (including open-ended contracts) after the agreed cessation dates.

Contracts where penalty terms reference IBORs, or where exposure to an IBOR is not the primary purpose of the contract, have not been included, as these contracts do not have a material impact on the transition process.

In line with information provided to management and external parties monitoring UBS AG's transition progress, the table below includes the following financial metrics for instruments external to UBS AG that are subject to interest rate benchmark reform:
– gross carrying value / exposure for non-derivative financial instruments; and
– total trade count for derivative financial instruments.

The exposures included in the table below reflect the maximum IBOR exposure, without regard for early termination rights, with the actual exposure being dependent upon client preferences and investment decisions.

As of 31 December 2022, UBS AG had made significant progress in transitioning LIBOR exposures to ARRs. The remaining USD LIBOR-linked exposures included in the table below primarily relate to derivatives and US mortgages, with the transition planned to be completed by 30 June 2023.

		LIBOR benchmark rates					
		31.12.22[1]	31.12.21				
	Measure	USD	USD	CHF	GBP	EUR[2]	JPY
Carrying value of non-derivative financial instruments							
Total non-derivative financial assets	USD m	14,269[3]	65,234[3]	21,616[4]	45[5]	1	0
Total non-derivative financial liabilities	USD m	1,138[5]	1,985[5]	27[5]	3[5]	5[6]	0
Trade count of derivative financial instruments							
Total derivative financial instruments	Trade count	32,006[7]	40,500[7,8]	829[9]	183[9]	3,744[9]	184[9]
Off-balance sheet exposures							
Total irrevocable loan commitments	USD m	4,606[10]	11,863[11]	0	0	0	0

1 As of 31 December 2022, non-USD balances and trade counts are minimal. 2 Relates primarily to EUR LIBOR positions. 3 Includes USD 1bn (31 December 2021: USD 1bn) of loans related to revolving multi-currency credit lines, where IBOR transition efforts are complete, except for USD LIBOR. Balances as of 31 December 2021 also include USD 37bn USD LIBOR securities-based lending and USD 5bn brokerage accounts, which for the most part transitioned to SOFR in January 2022. The remaining balances as of 31 December 2022 and 31 December 2021 primarily relate to US mortgages and corporate lending. 4 Relates primarily to CHF LIBOR mortgages, which have automatically transitioned to SARON on their first roll date in 2022. 5 Relates to floating-rate notes that per their contractual terms can reset to rates linked to LIBOR, with transition dependent upon the actions of respective issuers. 6 Relates to contracts that transitioned in January 2022. 7 Includes approximately 2,000 (31 December 2021: 1,000) contracts having a contractual maturity after 30 June 2023, with the last USD LIBOR fixing occurring before 30 June 2023. No further contractual fixing is required for these contracts. 8 Includes approximately 5,000 cross-currency derivatives, of which approximately 500 have both a non-USD LIBOR leg and a USD LIBOR leg, where the non-USD leg transitioned in January 2022 before the next fixing date. The remainder represents cross-currency swaps with an ARR leg and a USD IBOR leg. 9 Includes predominantly bilateral derivatives, which transitioned in January 2022, and an insignificant amount of cleared derivatives, where the respective clearing houses' organized transition happened in January 2022. 10 Includes approximately USD 3bn of loan commitments that can be drawn in different currencies, however only USD LIBOR transition efforts remain open, with completion scheduled for 2023. 11 Includes loan commitments that can be drawn in different currencies at the client's discretion, of which approximately USD 3bn have only USD LIBOR exposure remaining and approximately USD 2bn retain a non-USD LIBOR interest rate, with transition dependent upon the actions of other parties. The remainder represents loan commitments that can be drawn in US dollars only and will transition on or before 30 June 2023.

Derivatives designated in hedge accounting relationships

UBS AG applies hedge accounting to interest rate risk and foreign exchange risk, including structural foreign exchange risk related to net investments in foreign operations.

› **Refer to "Market risk" in the "Risk management and control" section of this report for more information about how risks arise and how they are managed by UBS AG**

Hedging instruments and hedged risk

Interest rate swaps are designated in fair value hedges or cash flow hedges of interest rate risk arising solely from changes in benchmark interest rates. Fair value changes arising from such risk are usually the largest component of the overall change in the fair value of the hedged position in transaction currency.

Cross-currency swaps are designated as fair value hedges of foreign exchange risk. Foreign exchange forwards and foreign exchange swaps are mainly designated as hedges of structural foreign exchange risk related to net investments in foreign operations. In both cases the hedged risk arises solely from changes in the spot foreign exchange rate.

The notional of the designated hedging instruments matches the notional of the hedged items, except when the interest rate swaps are re-designated in cash flow hedges, in which case the hedge ratio designated is determined based on the swap sensitivity.

Hedged items and hedge designation

Fair value hedges of interest rate risk related to debt instruments and loan assets

Fair value hedges of interest rate risk related to debt instruments and loan assets involve swapping fixed cash flows associated with the debt issued, funding from UBS Group AG, debt securities held and long-term fixed-rate mortgage loans in Swiss francs to floating cash flows by entering into interest rate swaps that either receive fixed and pay floating cash flows or that pay fixed and receive floating cash flows.

Designations have been made in US dollars, euro, Swiss francs, Australian dollars, yen, pounds sterling and Singapore dollars. For new hedging instruments and hedged risk designations entered into starting from 2021 in these currencies (with the exception of euro), the benchmark rate was the relevant alternative reference rate (ARR). Following the interbank offered rate (IBOR) transition for swaps with LCH (formerly the London Clearing House) in December 2021, the benchmark hedge rate for Swiss franc, yen and pound sterling designations was changed from an IBOR rate to the relevant ARR with the hedge relationship continuing in accordance with *Interest Rate Benchmark Reform – Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16)*.

Cash flow hedges of forecast transactions

UBS AG hedges forecast cash flows on non-trading financial assets and liabilities that bear interest at variable rates or are expected to be refinanced or reinvested in the future, due to movements in future market rates. The amounts and timing of future cash flows, representing both principal and interest flows, are projected on the basis of contractual terms and other relevant factors, including estimates of prepayments and defaults. The aggregate principal balances and interest cash flows across all portfolios over time form the basis for identifying the non-trading interest rate risk of UBS AG, which is hedged with interest rate swaps, the maximum maturity of which is 15 years. Cash flow forecasts and risk exposures are monitored and adjusted on an ongoing basis, and consequently additional hedging instruments are traded and designated, or are terminated resulting in a hedge discontinuance. Hedge designations have been made in the following currencies: US dollars, euro, Swiss francs, pounds sterling and Hong Kong dollars. The cash flow hedges in Swiss francs, pounds sterling and certain cash flow hedges in US dollars were discontinued and replaced with new ARR designations in December 2021. In addition, the transition of floating rate hedged items in USD to ARR rates in January 2022 resulted in the update of the hedged risk to ARR in the affected hedge relationships without discontinuation of hedge accounting in accordance with *Interest Rate Benchmark Reform – Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16)*.

Fair value hedges of foreign exchange risk related to issued debt instruments

Debt instruments denominated in currencies other than the US dollar are designated in fair value hedges of spot foreign exchange risk, in addition to and separate from the fair value hedges of interest rate risk. Cross-currency swaps economically convert debt denominated in currencies other than the US dollar to US dollars.

Hedges of net investments in foreign operations

UBS AG applies hedge accounting for certain net investments in foreign operations, which include subsidiaries, branches and associates. Upon maturity of hedging instruments, typically two months, the hedge relationship is terminated and new designations are made to reflect any changes in the net investments in foreign operations.

Economic relationship between hedged item and hedging instrument

The economic relationship between the hedged item and the hedging instrument is determined based on a qualitative analysis of their critical terms. In cases where hedge designation takes place after origination of the hedging instrument, a quantitative analysis of the possible behavior of the hedging derivative and the hedged item during their respective terms is also performed.

Sources of hedge ineffectiveness

In hedges of interest rate risk, hedge ineffectiveness can arise from mismatches of critical terms and / or the use of different curves to discount the hedged item and instrument, or from entering into a hedge relationship after the trade date of the hedging derivative.

In hedges of foreign exchange risk related to debt issued, hedge ineffectiveness can arise due to the discounting of the hedging instruments and undesignated risk components and lack of such discounting and risk components in the hedged items.

In hedges of net investments in foreign operations, ineffectiveness is unlikely unless the hedged net assets fall below the designated hedged amount. The exceptions are hedges where the hedging currency is not the same as the currency of the foreign operation, where the currency basis may cause ineffectiveness.

Hedge ineffectiveness from financial instruments measured at fair value through profit or loss is recognized in *Other net income.*

Derivatives not designated in hedge accounting relationships

Non-hedge accounted derivatives are mandatorily held for trading with all fair value movements taken to *Other net income from financial instruments measured at fair value through profit or loss*, even when held as an economic hedge or to facilitate client clearing. The one exception relates to forward points on certain short- and long-duration foreign exchange contracts acting as economic hedges, which are reported in *Net interest income.*

All hedges: designated hedging instruments and hedge ineffectiveness

	As of or for the year ended					
	31.12.22					
		Carrying amount				
USD m	Notional amount	Derivative financial assets	Derivative financial liabilities	Changes in fair value of hedging instruments[1]	Changes in fair value of hedged items[1]	Hedge ineffectiveness recognized in the income statement
Interest rate risk						
Fair value hedges	92,415	0	0	(5,195)	5,169	(27)
Cash flow hedges	75,304	2	5	(5,813)	5,760	(53)
Foreign exchange risk						
Fair value hedges[2]	20,566	845	3	(1,088)	1,105	18
Hedges of net investments in foreign operations	13,844	7	528	318	(319)	(1)

	As of or for the year ended					
	31.12.21					
		Carrying amount				
USD m	Notional amount	Derivative financial assets	Derivative financial liabilities	Changes in fair value of hedging instruments[1]	Changes in fair value of hedged items[1]	Hedge ineffectiveness recognized in the income statement
Interest rate risk						
Fair value hedges	89,525	0	7	(1,604)	1,602	(2)
Cash flow hedges	79,573	12	1	(1,185)	990	(196)
Foreign exchange risk						
Fair value hedges[2]	27,875	87	261	(2,139)	2,181	42
Hedges of net investments in foreign operations	13,761	23	103	492	(491)	0

1 Amounts used as the basis for recognizing hedge ineffectiveness for the period. 2 The foreign currency basis spread of cross-currency swaps designated as hedging derivatives is excluded from the hedge accounting designation and accounted for as a cost of hedging with amounts deferred in Other comprehensive income within Equity.

Note 25 Hedge accounting (continued)

Fair value hedges: designated hedged items

USD m	31.12.22		31.12.21	
	Interest rate risk	FX risk	Interest rate risk	FX risk
Debt issued measured at amortized cost				
Carrying amount of designated debt issued	11,279	5,737	21,653	11,392
of which: accumulated amount of fair value hedge adjustment	*(1,002)*		*261*	
Funding from UBS Group AG				
Carrying amount of designated debt instruments	57,250	14,828	53,047	16,483
of which: accumulated amount of fair value hedge adjustment	*(5,055)*		*218*	
Other financial assets measured at amortized cost – debt securities				
Carrying amount of designated debt securities	4,577		2,677	
of which: accumulated amount of fair value hedge adjustment	*(180)*		*(7)*	
Loans and advances to customers				
Carrying amount of designated loans	14,270		13,835	
of which: accumulated amount of fair value hedge adjustment	*(1,249)*		*(109)*	
of which: accumulated amount of fair value hedge adjustment subject to amortization attributable to the portion of the portfolio that ceased to be part of hedge accounting	*(51)*		*3*	

Fair value hedges: profile of the timing of the nominal amount of the hedging instrument

	31.12.22					
USD bn	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years	Total
Interest rate swaps	0	4	10	53	26	92
Cross-currency swaps	0	1	2	12	5	21

	31.12.21					
USD bn	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years	Total
Interest rate swaps	0	8	10	49	22	90
Cross-currency swaps	1	1	6	13	6	28

Cash flow hedge reserve on a pre-tax basis

USD m	31.12.22	31.12.21
Amounts related to hedge relationships for which hedge accounting continues to be applied	(4,692)	26
Amounts related to hedge relationships for which hedge accounting is no longer applied	(540)	743
Total other comprehensive income recognized directly in equity related to cash flow hedges, on a pre-tax basis	(5,232)	769

Foreign currency translation reserve on a pre-tax basis

USD m	31.12.22	31.12.21
Amounts related to hedge relationships for which hedge accounting continues to be applied	250	(61)
Amounts related to hedge relationships for which hedge accounting is no longer applied	266	262
Total other comprehensive income recognized directly in equity related to hedging instruments designated as net investment hedges, on a pre-tax basis	515	201

Interest rate benchmark reform

UBS AG continues to apply the relief provided by *Interest Rate Benchmark Reform (amendments to IFRS 9, IAS 39 and IFRS 7)*, published by the IASB in September 2019, mainly to its hedges in USD. The cessation date for USD LIBOR is 30 June 2023.

The following table provides details on the notional amount and carrying amount of the hedging instruments in the hedge relationships where the designated risk is LIBOR and maturing after the cessation date of the applicable interest rate benchmarks.

Hedges of net investments in foreign operations are not affected by the amendments.

› **Refer to Note 1a item 2j for more information about the relief provided by the amendments to IFRS 9 and IFRS 7 related to interest rate benchmark reform**
› **Refer to Note 24 for more information about the transition progress**
› **Refer to earlier parts of this Note for the information about the transition progress of fair value and cash flow hedges**

Note 25 Hedge accounting (continued)

Hedging instruments referencing LIBOR

	31.12.22			31.12.21		
		Carrying amount			Carrying amount	
USD m	Notional amount	Derivative financial assets	Derivative financial liabilities	Notional amount	Derivative financial assets	Derivative financial liabilities
Interest rate risk						
Fair value hedges	20,383	0	0	23,367	0	0
Cash flow hedges	2,179	0	0	10,803	0	0

Note 26 Post-employment benefit plans

a) Defined benefit plans

UBS AG has established defined benefit plans for its employees in various jurisdictions in accordance with local regulations and practices. The major plans are located in Switzerland, the UK, the US and Germany. The level of benefits depends on the specific plan rules.

Swiss pension plan

The Swiss pension plan covers employees of UBS Group AG in Switzerland and employees of companies in Switzerland having close economic or financial ties with UBS Group AG, and exceeds the minimum benefit requirements under Swiss pension law. In 2017, a significant number of employees were transferred from UBS AG to UBS Business Solutions AG, which is a directly held subsidiary of UBS Group AG. There continues to be one pooled pension plan in Switzerland covering the employees of UBS AG and those transferred to UBS Business Solutions AG. UBS AG and UBS Business Solutions AG both are legal sponsors of UBS's Swiss pension plan. Since the date of the employee transfer, UBS AG and UBS Business Solutions AG apply proportionate defined benefit accounting, i.e., the net pension cost and the net pension asset / liability of the Swiss pension plan are allocated proportionally between UBS AG and UBS Business Solutions AG based on the aggregated net pension cost and defined benefit obligations related to their employees. The Swiss plan offers retirement, disability and survivor benefits and is governed by a Pension Foundation Board. The responsibilities of this board are defined by Swiss pension law and the plan rules.

Savings contributions to the Swiss plan are paid by both employer and employee. Depending on the age of the employee, UBS AG pays a savings contribution that ranges between 6.5% and 27.5% of contributory base salary and between 2.8% and 9% of contributory variable compensation. UBS AG also pays risk contributions that are used to fund disability and survivor benefits. Employees can choose the level of savings contributions paid by them, which vary between 2.5% and 13.5% of contributory base salary and between 0% and 9% of contributory variable compensation, depending on age and choice of savings contribution category.

The plan offers to members at the normal retirement age of 65 a choice between a lifetime pension and a partial or full lump sum payment. Participants can choose to draw early retirement benefits starting from the age of 58, but can also continue employment and remain active members of the plan until the age of 70. Employees have the opportunity to make additional purchases of benefits to fund early retirement benefits.

The pension amount payable to a participant is calculated by applying a conversion rate to the accumulated balance of the participant's retirement savings account at the retirement date. The balance is based on credited vested benefits transferred from previous employers, purchases of benefits, and the employee and employer contributions that have been made to the participant's retirement savings account, as well as the interest accrued. The annual interest rate credited to participants is determined by the Pension Foundation Board at the end of each year.

Although the Swiss plan is based on a defined contribution promise under Swiss pension law, it is accounted for as a defined benefit plan under International Financial Reporting Standards (IFRS), primarily because of the obligation to accrue interest on the participants' retirement savings accounts and the payment of lifetime pension benefits.

An actuarial valuation in accordance with Swiss pension law is performed regularly. Should an underfunded situation on this basis occur, the Pension Foundation Board is required to take the necessary measures to ensure that full funding can be expected to be restored within a maximum period of 10 years. If a Swiss plan were to become significantly underfunded on a Swiss pension law basis, additional employer and employee contributions could be required. In this situation, the risk is shared between employer and employees, and the employer is not legally obliged to cover more than 50% of the additional contributions required. As of 31 December 2022, the Swiss plan had a technical funding ratio in accordance with Swiss pension law of 119.0% (31 December 2021: 134.8%).

The investment strategy of the Swiss plan complies with Swiss pension law, including the rules and regulations relating to diversification of plan assets, and is derived from the risk budget defined by the Pension Foundation Board on the basis of regularly performed asset and liability management analyses. The Pension Foundation Board strives for a medium- and long-term balance between assets and liabilities.

As of 31 December 2022, the Swiss plan was in a surplus situation on an IFRS measurement basis, as the fair value of the plan's assets exceeded the defined benefit obligation (DBO) by USD 4,418m (31 December 2021: USD 3,716m). However, a surplus is only recognized on the balance sheet to the extent that it does not exceed the estimated future economic benefit, which equals the difference between the present value of the estimated future net service cost and the present value of the estimated future employer contributions. As of both 31 December 2022 and 31 December 2021, the estimated future economic benefit was zero and hence no net defined benefit asset was recognized on the balance sheet.

Changes to the Swiss pension plan in 2019

The Pension Foundation Board and UBS AG agreed to implement measures that took effect from the start of 2019 to support the long-term financial stability of the Swiss pension fund. The measures, among other things, lowered the conversion rate and increased the normal retirement age from 64 to 65. Pensions already in payment on 1 January 2019 were not affected.

To mitigate the effects for active participants, UBS AG committed to pay an extraordinary contribution and contributed CHF 390m (USD 421m) in three installments in 2020, 2021 and 2022. The installments of USD 143m, USD 152m and USD 126m paid in 2020, 2021 and 2022 reduced other comprehensive income with no effect on the income statement.

The regular employer contributions to be made to the Swiss plan in 2023 are estimated at USD 275m.

UK pension plan

The UK plan is a career-average revalued earnings scheme, and benefits increase automatically based on UK price inflation, subject to defined caps. The normal retirement age for participants in the UK plan is 60. The plan provides guaranteed lifetime pension benefits to participants upon retirement. The UK plan has been closed to new entrants for more than 20 years and, since 2013, participants are no longer accruing benefits for current or future service. Instead, employees participate in the UK defined contribution plan.

The governance responsibility for the UK plan lies jointly with the Pension Trustee Board and UBS AG. The employer contributions to the pension fund reflect agreed-upon deficit funding contributions, which are determined on the basis of the most recent actuarial valuation using assumptions agreed by the Pension Trustee Board and UBS AG. In the event of underfunding, UBS AG and the Pension Trustee Board must agree on a deficit recovery plan within statutory deadlines. In 2022, UBS AG made deficit funding contributions of USD 5m to the UK plan. In 2021, UBS AG made no deficit funding contributions.

The plan assets are invested in a diversified portfolio of financial assets, which include longevity swaps with an external insurance company. These swaps enable the UK pension plan to hedge the risk between expected and actual longevity, which should mitigate volatility in the net defined benefit asset / liability. As of 31 December 2022, the longevity swaps had a negative value of USD 1m (31 December 2021: negative USD 3m).

In 2019, UBS AG and the Pension Trustee Board entered into an arrangement whereby a collateral pool was established to provide security for the pension fund. The value of the collateral pool as of 31 December 2022 was USD 292m (31 December 2021: USD 337m) and includes corporate bonds, government-related debt instruments and other financial assets. The arrangement provides the Pension Trustee Board dedicated access to a pool of assets in the event of UBS AG's insolvency or not paying a required deficit funding contribution.

The employer contributions to be made to the UK defined benefit plan in 2023 are estimated at USD 18m, subject to regular funding reviews during the year.

US pension plans

There are two distinct major defined benefit plans in the US, with a normal retirement age of 65. Both plans were closed to new entrants more than 20 years ago. Since they closed, new employees have participated in a defined contribution plan.

One of the defined benefit plans is a contribution-based plan in which each participant accrues a percentage of salary in a retirement savings account. The retirement savings account is credited annually with interest based on a rate that is linked to the average yield on one-year US government bonds. For the other defined benefit plan, retirement benefits accrue based on the career-average earnings of each individual plan participant. Former employees with vested benefits have the option of taking a lump sum payment or a lifetime annuity.

As required under applicable pension laws, both plans have fiduciaries who, together with UBS AG, are responsible for the governance of the plans.

The plan assets of both plans are invested in diversified portfolios of financial assets. Each plan's fiduciaries are responsible for the investment decisions with respect to the plan assets.

The employer contributions to be made to the US defined benefit plans in 2023 are estimated at USD 11m.

German pension plans

There are two unfunded defined benefit plans in Germany. The normal retirement age is 65 and benefits are paid directly by UBS AG. In the larger of the two plans each participant accrues a percentage of salary in a retirement savings account. The accumulated account balance of the participant is credited on an annual basis with guaranteed interest at a rate of 5%. The plan has been closed to new entrants, and all participants younger than the age of 55 as of June 2021 no longer accrue benefits. In the other plan, amounts are accrued annually based on employee elections related to variable compensation. For this plan, the accumulated account balance is credited on an annual basis with a guaranteed interest rate of 6% for amounts accrued before 2010, of 4% for amounts accrued from 2010 to 2017 and of 0.9% for amounts accrued after 2017. Both plans are subject to German pension law, whereby the responsibility to pay pension benefits when they are due resides entirely with UBS AG. A portion of the pension payments is directly increased in line with price inflation.

In June 2021, UBS AG implemented a new funded pension plan with interest credited to participants equal to actual investment returns with a guaranteed minimum of 0%. The plan was implemented retrospectively for new hires since June 2018 and for all eligible active participants younger than 55 from July 2021. Each participant accrues a percentage of salary in a retirement savings account.

The employer contributions to be made to the German defined benefit plans in 2023 are estimated at USD 12m.

Financial information by plan

The tables below provide an analysis of the movement in the net asset / liability recognized on the balance sheet for defined benefit plans, as well as an analysis of amounts recognized in net profit and in *Other comprehensive income*.

Note 26 Post-employment benefit plans (continued)

Defined benefit plans

USD m	Swiss pension plan		UK pension plan		US and German pension plans		Total	
	2022	2021	2022	2021	2022	2021	2022	2021
Defined benefit obligation at the beginning of the year	15,480	15,619	4,105	4,162	1,740	1,905	21,324	21,686
Current service cost	240	285	0	0	5	6	244	291
Interest expense	195	33	67	58	35	30	297	122
Plan participant contributions	154	161	0	0	0	0	154	161
Remeasurements	(2,424)	490	(1,474)	71	(267)	(62)	(4,165)	498
of which: actuarial (gains) / losses due to changes in demographic assumptions	*2*	*26*	*(6)*	*14*	*1*	*4*	*(3)*	*45*
of which: actuarial (gains) / losses due to changes in financial assumptions	*(2,653)*	*(385)*	*(1,575)*	*(3)*	*(279)*	*(78)*	*(4,506)*	*(466)*
of which: experience (gains) / losses [1]	*226*	*848*	*107*	*59*	*11*	*12*	*344*	*919*
Past service cost related to plan amendments	0	0	0	0	0	4	0	4
Curtailments	(13)	(49)	0	0	0	0	(13)	(49)
Benefit payments	(796)	(602)	(123)	(148)	(111)	(112)	(1,030)	(862)
Other movements	(5)	0	0	0	0	1	(5)	1
Foreign currency translation	(291)	(456)	(408)	(38)	(28)	(33)	(727)	(527)
Defined benefit obligation at the end of the year	12,539	15,480	2,166	4,105	1,375	1,740	16,080	21,324
of which: amounts owed to active members	*7,103*	*8,604*	*65*	*150*	*169*	*222*	*7,336*	*8,976*
of which: amounts owed to deferred members	*0*	*0*	*656*	*1,593*	*528*	*669*	*1,184*	*2,262*
of which: amounts owed to retirees	*5,436*	*6,876*	*1,445*	*2,362*	*678*	*849*	*7,560*	*10,086*
of which: funded plans	*12,539*	*15,480*	*2,166*	*4,105*	*1,011*	*1,222*	*15,717*	*20,806*
of which: unfunded plans	*0*	*0*	*0*	*0*	*363*	*518*	*363*	*518*
Fair value of plan assets at the beginning of the year	19,196	18,358	4,297	4,149	1,329	1,360	24,821	23,867
Return on plan assets excluding interest income	(1,942)	1,319	(1,312)	277	(223)	40	(3,476)	1,637
Interest income	274	42	70	58	31	26	376	127
Employer contributions	401	450	5	0	16	16	422	466
Plan participant contributions	154	161	0	0	0	0	154	161
Benefit payments	(796)	(602)	(123)	(148)	(111)	(112)	(1,030)	(862)
Administration expenses, taxes and premiums paid	(7)	(8)	0	0	(3)	(4)	(11)	(11)
Other movements	(1)	0	0	0	0	1	(1)	1
Foreign currency translation	(322)	(524)	(450)	(39)	0	0	(772)	(563)
Fair value of plan assets at the end of the year	16,957	19,196	2,488	4,297	1,039	1,329	20,484	24,821
Surplus / (deficit)	4,418	3,716	321	192	(335)	(411)	4,404	3,497
Asset ceiling effect at the beginning of the year	3,716	2,739	0	0	0	0	3,716	2,739
Interest expense on asset ceiling effect	77	8	0	0	0	0	77	8
Asset ceiling effect excluding interest expense and foreign currency translation on asset ceiling effect	656	1,037	0	0	0	0	656	1,037
Foreign currency translation	(31)	(68)	0	0	0	0	(31)	(68)
Asset ceiling effect at the end of the year	4,418	3,716	0	0	0	0	4,418	3,716
Net defined benefit asset / (liability) of major plans	0	0	321	192	(335)	(411)	(14)	(219)
Net defined benefit asset / (liability) of remaining plans							(80)	(96)
Total net defined benefit asset / (liability)							(94)	(315)
of which: Net defined benefit asset							*355*	*302*
of which: Net defined benefit liability [2]							*(449)*	*(617)*

1 Experience (gains) / losses are a component of actuarial remeasurements of the defined benefit obligation and reflect the effects of differences between the previous actuarial assumptions and what has actually occurred. 2 Refer to Note 18c.

Note 26 Post-employment benefit plans (continued)

Income statement – expenses related to defined benefit plans[1]

USD m	Swiss pension plan		UK pension plan		US and German pension plans		Total	
For the year ended	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Current service cost	240	285	0	0	5	6	244	291
Interest expense related to defined benefit obligation	195	33	67	58	35	30	297	122
Interest income related to plan assets	(274)	(42)	(70)	(58)	(31)	(26)	(376)	(127)
Interest expense on asset ceiling effect	77	8	0	0	0	0	77	8
Administration expenses, taxes and premiums paid	7	8	0	0	3	4	11	11
Past service cost related to plan amendments	0	0	0	0	0	4	0	4
Curtailments	(13)	(49)	0	0	0	0	(13)	(49)
Net periodic expenses recognized in net profit for major plans	230	243	(3)	0	12	18	239	261
Net periodic expenses recognized in net profit for remaining plans[2]							17	19
Total net periodic expenses recognized in net profit							256	280

1 Refer to Note 6. 2 Includes differences between actual and estimated performance award accruals.

Other comprehensive income – gains / (losses) on defined benefit plans

USD m	Swiss pension plan		UK pension plan		US and German pension plans		Total	
For the year ended	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Remeasurement of defined benefit obligation	2,424	(490)	1,474	(71)	267	62	4,165	(498)
of which: change in discount rate assumption	*3,078*	*494*	*1,451*	*319*	*317*	*77*	*4,846*	*890*
of which: change in rate of pension increase assumption	*0*	*0*	*123*	*(316)*	*(5)*	*(1)*	*118*	*(318)*
of which: change in rate of interest credit on retirement savings assumption	*(408)*	*(110)*	*0*	*0*	*(82)*	*(1)*	*(490)*	*(110)*
of which: change in life expectancy	*0*	*0*	*5*	*9*	*(1)*	*(3)*	*4*	*5*
of which: change in other actuarial assumptions	*(19)*	*(26)*	*1*	*(23)*	*48*	*2*	*30*	*(47)*
of which: experience gains / (losses)[1]	*(226)*	*(848)*	*(107)*	*(59)*	*(11)*	*(12)*	*(344)*	*(919)*
Return on plan assets excluding interest income	(1,942)	1,319	(1,312)	277	(223)	40	(3,476)	1,637
Asset ceiling effect excluding interest expense and foreign currency translation	(656)	(1,037)	0	0	0	0	(656)	(1,037)
Total gains / (losses) recognized in other comprehensive income for major plans	(173)	(207)	162	207	43	102	32	102
Total gains / (losses) recognized in other comprehensive income for remaining plans							8	31
Total gains / (losses) recognized in other comprehensive income[2]							40	133

1 Experience (gains) / losses are a component of actuarial remeasurements of the defined benefit obligation and reflect the effects of differences between the previous actuarial assumptions and what has actually occurred. 2 Refer to the "Statement of comprehensive income."

The table below provides information about the duration of the DBO and the timing for expected benefit payments.

	Swiss pension plan		UK pension plan		US and German pension plans[1]	
	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Duration of the defined benefit obligation (in years)	13.4	15.5	13.7	18.8	7.9	9.5
Maturity analysis of benefits expected to be paid						
USD m						
Benefits expected to be paid within 12 months	702	719	107	110	123	123
Benefits expected to be paid between 1 and 3 years	1,445	1,440	234	248	232	237
Benefits expected to be paid between 3 and 6 years	2,183	2,097	384	418	335	338
Benefits expected to be paid between 6 and 11 years	3,751	3,467	667	743	502	495
Benefits expected to be paid between 11 and 16 years	3,519	3,156	667	751	388	392
Benefits expected to be paid in more than 16 years	13,243	10,733	2,570	3,028	516	519

1 The duration of the defined benefit obligation represents a weighted average across US and German plans.

Actuarial assumptions

The actuarial assumptions used for the defined benefit plans are based on the economic conditions prevailing in the jurisdiction in which they are offered. Changes in the defined benefit obligation are most sensitive to changes in the discount rate. The discount rate is based on the yield of high-quality corporate bonds quoted in an active market in the currency of the respective plan. A decrease in the discount curve increases the DBO. UBS AG regularly reviews the actuarial assumptions used in calculating the DBO to determine their continuing relevance.

› **Refer to Note 1a item 5 for a description of the accounting policy for defined benefit plans**

The tables below show the significant actuarial assumptions used in calculating the DBO at the end of the year.

Significant actuarial assumptions

	Swiss pension plan		UK pension plan		US pension plans		German pension plans	
In %	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Discount rate	2.34	0.34	5.02	1.82	4.92[1]	2.47[1]	3.81	0.99
Rate of pension increase	0.00	0.00	3.08	3.32	0.00	0.00	2.20	1.80
Rate of interest credit on retirement savings	3.39	1.04	0.00	0.00	5.73[2]	1.18[2]	0.00	0.00

1 Represents weighted average across US pension plans. 2 Only applicable to one of the US pension plans

Mortality tables and life expectancies for major plans

		Life expectancy at age 65 for a male member currently			
		aged 65		aged 45	
Country	Mortality table	31.12.22	31.12.21	31.12.22	31.12.21
Switzerland	BVG 2020 G with CMI 2021 projections[1]	21.7	21.7	23.4	23.3
UK	S3PA with CMI 2021 projections[2]	23.5	23.4	24.6	24.5
USA	Pri-2012 with MP-2021 projection scale	22.0	21.9	23.3	23.3
Germany	Dr. K. Heubeck 2018 G	20.6	20.5	23.4	23.2

		Life expectancy at age 65 for a female member currently			
		aged 65		aged 45	
Country	Mortality table	31.12.22	31.12.21	31.12.22	31.12.21
Switzerland	BVG 2020 G with CMI 2021 projections[1]	23.5	23.4	25.1	25.0
UK	S3PA with CMI 2021 projections[2]	25.0	24.9	26.4	26.3
USA	Pri-2012 with MP-2021 projection scale	23.4	23.3	24.8	24.7
Germany	Dr. K. Heubeck 2018 G	24.0	23.9	26.3	26.1

1 In 2021, BVG 2020 G with CMI 2019 projections was used. 2 In 2021, S3PA with CMI 2020 projections was used.

Sensitivity analysis of significant actuarial assumptions

The table below presents a sensitivity analysis for each significant actuarial assumption, showing how the DBO would have been affected by changes in the relevant actuarial assumption that were reasonably possible at the balance sheet date. Unforeseen circumstances may arise, which could result in variations that are outside the range of alternatives deemed reasonably possible. Caution should be used in extrapolating the sensitivities below on the DBO, as the sensitivities may not be linear.

Sensitivity analysis of significant actuarial assumptions[1]

Increase / (decrease) in defined benefit obligation	Swiss pension plan		UK pension plan		US and German pension plans	
USD m	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Discount rate						
Increase by 50 basis points	(641)	(975)	(141)	(361)	(51)	(78)
Decrease by 50 basis points	723	1,116	157	411	55	84
Rate of pension increase						
Increase by 50 basis points	487	749	127	334	4	6
Decrease by 50 basis points	–[2]	–[2]	(118)	(306)	(3)	(6)
Rate of interest credit on retirement savings						
Increase by 50 basis points	106	134	–[3]	–[3]	9	8
Decrease by 50 basis points	(106)	(134)	–[3]	–[3]	(8)	(7)
Life expectancy						
Increase in longevity by one additional year	304	475	65	184	39	56

1 The sensitivity analyses are based on a change in one assumption while holding all other assumptions constant, so that interdependencies between the assumptions are excluded. 2 As the assumed rate of pension increase was 0% as of 31 December 2022 and as of 31 December 2021, a downward change in assumption is not applicable. 3 As the UK plan does not provide interest credits on retirement savings, a change in assumption is not applicable.

Note 26 Post-employment benefit plans (continued)

Fair value of plan assets

The tables below provide information about the composition and fair value of plan assets of the major pension plans.

Composition and fair value of plan assets

Swiss pension plan

	31.12.22				31.12.21			
	Fair value			Plan asset allocation %	Fair value			Plan asset allocation %
USD m	Quoted in an active market	Other	Total		Quoted in an active market	Other	Total	
Cash and cash equivalents	183	0	183	1	106	0	106	1
Real estate / property								
Domestic	0	2,130	2,130	13	0	1,994	1,994	10
Foreign	0	517	517	3	0	328	328	2
Investment funds								
Equity								
Domestic	418	0	418	2	476	0	476	2
Foreign	2,794	1,222	4,017	24	3,510	1,498	5,009	26
Bonds[1]								
Domestic, AAA to BBB–	2,117	0	2,117	12	2,512	0	2,512	13
Foreign, AAA to BBB–	3,395	0	3,395	20	2,877	0	2,877	15
Foreign, below BBB–	598	0	598	4	742	0	742	4
Other	867	1,997	2,864	17	2,379	2,010	4,389	23
Other investments	351	367	718	4	377	385	762	4
Total fair value of plan assets	10,724	6,233	16,957	100	12,980	6,216	19,196	100

	31.12.22	31.12.21
Total fair value of plan assets	16,957	19,196
of which:[2]		
Bank accounts at UBS AG	*189*	*109*
UBS AG debt instruments	*28*	*16*
UBS Group AG shares	*15*	*14*
Securities lent to UBS AG[3]	*489*	*608*
Property occupied by UBS	*51*	*52*
Derivative financial instruments, counterparty UBS AG[3]	*43*	*72*

1 The bond credit ratings are primarily based on S&P's credit ratings. Ratings AAA to BBB– and below BBB– represent investment grade and non-investment grade ratings, respectively. In cases where credit ratings from other rating agencies were used, these were converted to the equivalent rating in S&P's rating classification. 2 Bank accounts at UBS AG encompass accounts in the name of the Swiss pension fund. The other positions disclosed in the table encompass both direct investments in UBS AG instruments and UBS Group AG shares and indirect investments, i.e., those made through funds that the pension fund invests in. 3 Securities lent to UBS AG and derivative financial instruments are presented gross of any collateral. Securities lent to UBS AG were fully covered by collateral as of 31 December 2022 and 31 December 2021. Net of collateral, derivative financial instruments amounted to negative USD 5m as of 31 December 2022 (31 December 2021: positive USD 24m).

Note 26 Post-employment benefit plans (continued)

Composition and fair value of plan assets (continued)

UK pension plan

	31.12.22				31.12.21			
	Fair value			Plan asset allocation %	Fair value			Plan asset allocation %
USD m	Quoted in an active market	Other	Total		Quoted in an active market	Other	Total	
Cash and cash equivalents	104	0	104	4	147	0	147	3
Bonds[1]								
Domestic, AAA to BBB–	1,729	0	1,729	69	2,605	0	2,605	61
Foreign, AAA to BBB–	297	0	297	12	372	0	372	9
Foreign, below BBB–	7	0	7	0	4	0	4	0
Investment funds								
Equity								
Domestic	19	3	22	1	44	4	47	1
Foreign	366	0	366	15	921	0	921	21
Bonds[1]								
Domestic, AAA to BBB–	367	90	457	18	532	147	679	16
Domestic, below BBB–	1	0	1	0	12	0	12	0
Foreign, AAA to BBB–	90	0	90	4	179	0	179	4
Foreign, below BBB–	114	0	114	5	115	0	115	3
Real estate								
Domestic	64	0	64	3	110	12	122	3
Foreign	6	31	36	1	6	34	40	1
Other	(280)	0	(280)	(11)	(313)	0	(313)	(7)
Repurchase agreements	(612)	0	(612)	(25)	(725)	0	(725)	(17)
Other investments	66	27	94	4	65	26	91	2
Total fair value of plan assets	2,336	151	2,488	100	4,074	223	4,297	100

1 The bond credit ratings are primarily based on S&P's credit ratings. Ratings AAA to BBB– and below BBB– represent investment grade and non-investment grade ratings, respectively. In cases where credit ratings from other rating agencies were used, these were converted to the equivalent rating in S&P's rating classification.

US and German pension plans

	31.12.22				31.12.21			
	Fair value			Plan asset allocation %	Fair value			Plan asset allocation %
USD m	Quoted in an active market	Other	Total		Quoted in an active market	Other	Total	
Cash and cash equivalents	7	0	7	1	11	0	11	1
Equity								
Domestic	55	0	55	5	79	0	79	6
Foreign	24	0	24	2	31	0	31	2
Bonds[1]								
Domestic, AAA to BBB–	359	0	359	35	486	0	486	37
Domestic, below BBB–	4	0	4	0	17	0	17	1
Foreign, AAA to BBB–	74	0	74	7	97	0	97	7
Foreign, below BBB–	3	0	3	0	6	0	6	0
Investment funds								
Equity								
Domestic	27	0	27	3	3	0	3	0
Foreign	33	0	33	3	56	0	56	4
Bonds[1]								
Domestic, AAA to BBB–	266	0	266	26	269	0	269	20
Domestic, below BBB–	109	0	109	10	147	0	147	11
Foreign, AAA to BBB–	2	0	2	0	11	0	11	1
Foreign, below BBB–	5	0	5	0	2	0	2	0
Real estate								
Domestic	0	11	11	1	0	9	9	1
Other	54	0	54	5	99	0	99	7
Other investments	5	1	6	1	5	1	6	0
Total fair value of plan assets	1,027	12	1,039	100	1,319	10	1,329	100

1 The bond credit ratings are primarily based on S&P's credit ratings. Ratings AAA to BBB– and below BBB– represent investment grade and non-investment grade ratings, respectively. In cases where credit ratings from other rating agencies were used, these were converted to the equivalent rating in S&P's rating classification.

b) Defined contribution plans

UBS AG sponsors a number of defined contribution plans, with the most significant plans in the US and the UK. UBS AG's obligation is limited to its contributions made in accordance with each plan, which may include direct contributions and matching contributions. Employer contributions to defined contribution plans are recognized as an expense and were USD 299m in 2022, USD 303m in 2021 and USD 291m in 2020.

› **Refer to Note 6 for more information**

c) Related-party disclosure

UBS AG is the principal provider of banking services for the pension fund of UBS AG in Switzerland. In this capacity, UBS AG is engaged to execute most of the pension fund's banking activities. These activities can include, but are not limited to, trading, securities lending and borrowing and derivative transactions. The non-Swiss UBS AG pension funds do not have a similar banking relationship with UBS AG. During 2022, UBS AG received USD 20m in fees for banking services from the major post-employment benefit plans (2021: USD 22m). As of 31 December 2022, the major post-employment benefit plans held USD 253m in UBS Group AG shares (31 December 2021: USD 241m).

› **Refer to the "Composition and fair value of plan assets" table in Note 26a for more information about fair value of investments in UBS AG and UBS Group AG instruments held by the Swiss pension fund**

Note 27 Employee benefits: variable compensation

a) Plans offered

UBS has several share-based and other deferred compensation plans that align the interests of Group Executive Board (GEB) members and other employees with the interests of investors.

Share-based awards are granted in the form of notional shares and, where permitted, carry a dividend equivalent that may be paid in notional shares or cash. Awards are settled by delivering UBS shares at vesting, except in jurisdictions where this is not permitted for legal or tax reasons.

Deferred compensation awards are generally forfeitable upon, among other circumstances, voluntary termination of employment with UBS. These compensation plans are also designed to meet regulatory requirements and include special provisions for regulated employees. For the majority of variable compensation awards granted under such plans to employees of UBS AG, the grantor entity is UBS Group AG. Expenses associated with these awards are charged by UBS Group AG to UBS AG. For the purpose of this Note, references to shares refer to UBS Group AG shares.

The most significant deferred compensation plans are described below.

› **Refer to Note 1a item 4 for a description of the accounting policy related to share-based and other deferred compensation plans**

Mandatory deferred compensation plans

Long-Term Incentive Plan

The Long-Term Incentive Plan (LTIP) is a mandatory deferred share-based compensation plan for GEB members for the performance year 2022. For prior performance years, LTIP was granted to senior leaders of the Group (i.e., GEB members and selected senior management).

The number of notional shares delivered at vesting depends on two equally weighted performance metrics over a three-year performance period: return on common equity tier 1 (CET1) capital and relative total shareholder return, which compares the total shareholder return (TSR) of UBS with the TSR of an index consisting of listed Global Systemically Important Banks as determined by the Financial Stability Board (excluding UBS). The final number of shares vest over three years following the performance period for GEB members, and cliff-vest in the year following the performance period for selected senior management.

Equity Ownership Plan / Fund Ownership Plan

The Equity Ownership Plan (EOP) is the deferred share-based compensation plan for employees outside of the GEB that are subject to deferral requirements. EOP awards generally vest over three years.

Certain Asset Management employees receive some or all of their EOP in the form of notional funds (Fund Ownership Plan or FOP, previously named AM EOP). This plan is generally delivered in cash and vests over three years. The amount delivered depends on the value of the underlying investment funds at the time of vesting.

Deferred Contingent Capital Plan

The Deferred Contingent Capital Plan (DCCP) is a deferred compensation plan for all employees who are subject to deferral requirements. Such employees are awarded notional additional tier 1 (AT1) capital instruments, which, at the discretion of UBS, can be settled in cash or a perpetual, marketable AT1 capital instrument. DCCP awards generally bear notional interest paid annually (except for certain regulated employees) and vest in full after five years. Awards are forfeited if a viability event occurs (i.e., if FINMA notifies the firm that the DCCP awards must be written down to mitigate the risk of insolvency, bankruptcy or failure of UBS) or if the firm receives a commitment of extraordinary support from the public sector that is necessary to prevent such an event. DCCP awards are also written down if the Group's CET1 capital ratio falls below a defined threshold. In addition, GEB members forfeit 20% of DCCP awards for each loss-making year during the vesting period.

Financial advisor variable compensation

In line with market practice for US wealth management businesses, the compensation for US financial advisors in Global Wealth Management consists of cash compensation and deferred compensation awards, determined using a formulaic approach based on production.

Cash compensation reflects a percentage of the compensable production that each financial advisor generates. Compensable production is generally based on transaction revenue and investment advisory fees and may reflect further adjustments. The percentage rate generally varies based on the level of the production and firm tenure.

Financial advisors may also be granted annual deferred compensation. These amounts generally vest over a six-year period. The annual deferred compensation amount reflects the overall percentage rate and production.

Cash compensation and deferred compensation awards may be reduced for, among other things, errors, negligence or carelessness, or failure to comply with the firm's rules, standards, practices and / or policies, and / or applicable laws and regulations.

Financial advisors may also participate in additional programs to support promoting and developing their business or supporting the transition of client relationships where appropriate. Financial advisor compensation also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements.

b) Effect on the income statement

Effect on the income statement for the financial year and future periods

The table below provides information about compensation expenses related to total variable compensation that were recognized in the financial year ended 31 December 2022, as well as expenses that were deferred and will be recognized in the income statement for 2023 and later. The majority of expenses deferred to 2023 and later that are related to the 2022 performance year pertain to awards granted in February 2023. The total unamortized compensation expense for unvested share-based awards granted up to 31 December 2022 will be recognized in future periods over a weighted average period of 2.5 years.

Variable compensation

	Expenses recognized in 2022			Expenses deferred to 2023 and later[1]		
USD m	Related to the 2022 performance year	Related to prior performance years	Total	Related to the 2022 performance year	Related to prior performance years	Total
Non-deferred cash	2,012	(9)	2,003	0	0	0
Deferred compensation awards	346	561	907	582	730	1,312
of which: Equity Ownership Plan	*191*	*225*	*416*	*294*	*240*	*534*
of which: Deferred Contingent Capital Plan	*123*	*211*	*334*	*238*	*395*	*634*
of which: Long-Term Incentive Plan	*11*	*30*	*41*	*30*	*40*	*70*
of which: Fund Ownership Plan	*21*	*95*	*116*	*20*	*54*	*74*
Variable compensation – performance awards	**2,358**	**552**	**2,910**	**582**	**730**	**1,312**
Variable compensation – financial advisors[2]	**3,799**	**709**	**4,508**	**1,290**	**2,652**	**3,942**
of which: non-deferred cash	*3,481*	*0*	*3,481*	*0*	*0*	*0*
of which: deferred share-based awards	*104*	*62*	*166*	*122*	*180*	*302*
of which: deferred cash-based awards	*185*	*215*	*400*	*588*	*636*	*1,224*
of which: compensation commitments with recruited financial advisors	*29*	*432*	*461*	*580*	*1,836*	*2,416*
Variable compensation – other[3]	**146**	**72**	**217**	**230**	**189**	**419**
Total variable compensation	**6,304**	**1,332**	**7,636[4]**	**2,101**	**3,571**	**5,672**

1 Estimate as of 31 December 2022. Actual amounts to be expensed in future periods may vary; e.g., due to forfeiture of awards. 2 Financial advisor compensation consists of cash and deferred compensation awards and is based on compensable revenues and firm tenure using a formulaic approach. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 3 Consists of replacement payments, forfeiture credits, severance payments, retention plan payments and interest expense related to the Deferred Contingent Capital Plan. 4 Includes USD 680m in expenses related to share-based compensation (performance awards: USD 457m; other variable compensation: USD 56m; financial advisor compensation: USD 166m). A further USD 80m in expenses related to share-based compensation was recognized within other expense categories included in Note 6 (salaries: USD 4m, related to role-based allowances; social security: USD 57m; other personnel expenses: USD 19m related to the Equity Plus Plan).

Note 27 Employee benefits: variable compensation (continued)

Variable compensation (continued)

	Expenses recognized in 2021			Expenses deferred to 2022 and later[1]		
USD m	Related to the 2021 performance year	Related to prior performance years	Total	Related to the 2021 performance year	Related to prior performance years	Total
Non-deferred cash	2,136	(8)	2,128	0	0	0
Deferred compensation awards	389	399	788	767	606	1,373
of which: Equity Ownership Plan	*175*	*174*	*350*	*374*	*180*	*553*
of which: Deferred Contingent Capital Plan	*134*	*151*	*285*	*290*	*318*	*608*
of which: Long-Term Incentive Plan	*51*	*17*	*69*	*48*	*32*	*79*
of which: Fund Ownership Plan	*29*	*55*	*84*	*56*	*77*	*133*
Variable compensation – performance awards	**2,525**	**391**	**2,916**	**767**	**606**	**1,373**
Variable compensation – financial advisors[2]	**4,175**	**685**	**4,860**	**1,097**	**2,323**	**3,419**
of which: non-deferred cash	*3,858*	*(6)*	*3,853*	*0*	*0*	*0*
of which: deferred share-based awards	*106*	*51*	*157*	*123*	*146*	*269*
of which: deferred cash-based awards	*170*	*202*	*372*	*311*	*495*	*806*
of which: compensation commitments with recruited financial advisors	*41*	*438*	*479*	*662*	*1,682*	*2,344*
Variable compensation – other[3]	**163**	**33**	**196**	**210**	**178**	**388**
Total variable compensation	**6,863**	**1,109**	**7,973[4]**	**2,074**	**3,107**	**5,181**

1 Estimate as of 31 December 2021. Actual amounts expensed may vary; e.g., due to forfeiture of awards. 2 Financial advisor compensation consists of cash and deferred compensation awards and is based on compensable revenues and firm tenure using a formulaic approach. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 3 Consists of replacement payments, forfeiture credits, severance payments, retention plan payments and interest expense related to the Deferred Contingent Capital Plan. 4 Includes USD 631m in expenses related to share-based compensation (performance awards: USD 419m; other variable compensation: USD 56m; financial advisor compensation: USD 157m). A further USD 77m in expenses related to share-based compensation was recognized within other expense categories included in Note 6 (salaries: USD 5m related to role-based allowances; social security: USD 59m; other personnel expenses: USD 13m related to the Equity Plus Plan).

Variable compensation (continued)

	Expenses recognized in 2020			Expenses deferred to 2021 and later[1]		
USD m	Related to the 2020 performance year	Related to prior performance years	Total	Related to the 2020 performance year	Related to prior performance years	Total
Non-deferred cash	1,948	(29)	1,920	0	0	0
Deferred compensation awards	329	704	1,034	734	277	1,011
of which: Equity Ownership Plan	*131*	*315*	*446*	*298*	*67*	*365*
of which: Deferred Contingent Capital Plan	*108*	*339*	*448*	*271*	*189*	*459*
of which: Long-Term Incentive Plan	*41*	*11*	*52*	*46*	*9*	*55*
of which: Fund Ownership Plan	*49*	*39*	*88*	*120*	*12*	*132*
Variable compensation – performance awards	**2,278**	**675**	**2,953**	**734**	**277**	**1,011**
Variable compensation – financial advisors[2]	**3,378**	**713**	**4,091**	**822**	**2,284**	**3,106**
of which: non-deferred cash	*3,154*	*0*	*3,154*	*0*	*0*	*0*
of which: deferred share-based awards	*69*	*50*	*119*	*79*	*135*	*214*
of which: deferred cash-based awards	*133*	*183*	*316*	*271*	*467*	*738*
of which: compensation commitments with recruited financial advisors	22	480	502	473	1,682	2,155
Variable compensation – other[3]	**109**	**92**	**201**	**176**	**189**	**364**
Total variable compensation	**5,765**	**1,481**	**7,246[4]**	**1,732**	**2,749**	**4,481**

1 Estimate as of 31 December 2020. Actual amounts expensed may vary; e.g., due to forfeiture of awards. 2 Financial advisor compensation consists of cash and deferred compensation awards and is based on compensable revenues and firm tenure using a formulaic approach. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 3 Consists of replacement payments, forfeiture credits, severance payments, retention plan payments and interest expense related to the Deferred Contingent Capital Plan. 4 Includes USD 666m in expenses related to share-based compensation (performance awards: USD 498m; other variable compensation: USD 49m; financial advisor compensation: USD 119m). A further USD 88m in expenses related to share-based compensation was recognized within other expense categories included in Note 6 (salaries: USD 4m related to role-based allowances; social security: USD 51m; other personnel expenses: USD 34m related to the Equity Plus Plan).

Note 27 Employee benefits: variable compensation (continued)

c) Outstanding share-based compensation awards

Share and performance share awards

Movements in outstanding share-based awards granted by UBS AG and its subsidiaries to employees during 2022 and 2021 are provided in the table below.

Movements in outstanding share-based compensation awards

	Number of shares 2022	Weighted average grant date fair value (USD)	Number of shares 2021	Weighted average grant date fair value (USD)
Outstanding, at the beginning of the year	295,921	15	54,557	13
Awarded during the year	358,424	19	278,756	15
Distributed during the year	(37,994)	14	(24,176)	13
Forfeited during the year	(1,923)	15	(13,215)	15
Outstanding, at the end of the year	614,428	17	295,921	15
of which: shares vested for accounting purposes	*174,329*		*116,775*	

The total carrying amount of the liability related to cash-settled share-based awards as of 31 December 2022 and 31 December 2021 was USD 7m and USD 3m, respectively.

d) Valuation

UBS share awards

UBS measures compensation expense based on the average market price of UBS shares on the grant date as quoted on the SIX Swiss Exchange, taking into consideration post-vesting sale and hedge restrictions, non-vesting conditions and market conditions, where applicable. The fair value of the share awards subject to post-vesting sale and hedge restrictions is discounted on the basis of the duration of the post-vesting restriction and is referenced to the cost of purchasing an at-the-money European put option for the term of the transfer restriction. The grant date fair value of notional shares without dividend entitlements also includes a deduction for the present value of future expected dividends to be paid between the grant date and distribution.

Note 28 Interests in subsidiaries and other entities

a) Interests in subsidiaries

UBS AG defines its significant subsidiaries as those entities that, either individually or in aggregate, contribute significantly to UBS AG's financial position or results of operations, based on a number of criteria, including the subsidiaries' equity and contribution to UBS AG's total assets and profit or loss before tax, in accordance with the requirements set by IFRS 12, Swiss regulations and the rules of the US Securities and Exchange Commission (the SEC).

Individually significant subsidiaries

The table below lists UBS AG's individually significant subsidiaries as of 31 December 2022. Unless otherwise stated, the subsidiaries listed below have share capital consisting solely of ordinary shares held entirely by UBS AG and the proportion of ownership interest held is equal to the voting rights held by UBS AG.

The country where the respective registered office is located is also the principal place of business. UBS AG operates through a global branch network and a significant proportion of its business activity is conducted outside Switzerland, including in the UK, the US, Singapore, the Hong Kong SAR and other countries. UBS Europe SE has branches and offices in a number of EU Member States, including Germany, Italy, Luxembourg and Spain. Share capital is provided in the currency of the legally registered office.

Note 28 Interests in subsidiaries and other entities (continued)

Individually significant subsidiaries of UBS AG as of 31 December 2022[1]

Company	Registered office	Primary business	Share capital in million		Equity interest accumulated in %
UBS Americas Holding LLC	Wilmington, Delaware, USA	Group Functions	USD	5,150.0[2]	100.0
UBS Americas Inc.	Wilmington, Delaware, USA	Group Functions	USD	0.0	100.0
UBS Asset Management AG	Zurich, Switzerland	Asset Management	CHF	43.2	100.0
UBS Bank USA	Salt Lake City, Utah, USA	Global Wealth Management	USD	0.0	100.0
UBS Europe SE	Frankfurt, Germany	Global Wealth Management	EUR	446.0	100.0
UBS Financial Services Inc.	Wilmington, Delaware, USA	Global Wealth Management	USD	0.0	100.0
UBS Securities LLC	Wilmington, Delaware, USA	Investment Bank	USD	1,283.1[3]	100.0
UBS Switzerland AG	Zurich, Switzerland	Personal & Corporate Banking	CHF	10.0	100.0

1 Includes direct and indirect subsidiaries of UBS AG. 2 Consists of common share capital of USD 1,000 and non-voting preferred share capital of USD 5,150,000,000. 3 Consists of common share capital of USD 100,000 and non-voting preferred share capital of USD 1,283,000,000.

Other subsidiaries

The table below lists other direct and indirect subsidiaries of UBS AG that are not individually significant but contribute to UBS AG's total assets and aggregated profit before tax thresholds and are thus disclosed in accordance with requirements set by the SEC.

Other subsidiaries of UBS AG as of 31 December 2022

Company	Registered office	Primary business	Share capital in million		Equity interest accumulated in %
UBS Asset Management (Americas) Inc.	Wilmington, Delaware, USA	Asset Management	USD	0.0	100.0
UBS Asset Management (Hong Kong) Limited	Hong Kong SAR, China	Asset Management	HKD	153.8	100.0
UBS Asset Management Life Ltd	London, United Kingdom	Asset Management	GBP	15.0	100.0
UBS Asset Management Switzerland AG	Zurich, Switzerland	Asset Management	CHF	0.5	100.0
UBS Business Solutions US LLC	Wilmington, Delaware, USA	Group Functions	USD	0.0	100.0
UBS Credit Corp.	Wilmington, Delaware, USA	Global Wealth Management	USD	0.0	100.0
UBS (France) S.A.	Paris, France	Global Wealth Management	EUR	197.0	100.0
UBS Fund Management (Luxembourg) S.A.	Luxembourg, Luxembourg	Asset Management	EUR	13.0	100.0
UBS Fund Management (Switzerland) AG	Basel, Switzerland	Asset Management	CHF	1.0	100.0
UBS (Monaco) S.A.	Monte Carlo, Monaco	Global Wealth Management	EUR	49.2	100.0
UBS O'Connor LLC	Wilmington, Delaware, USA	Asset Management	USD	1.0	100.0
UBS Realty Investors LLC	Boston, Massachusetts, USA	Asset Management	USD	9.0	100.0
UBS Securities Australia Ltd	Sydney, Australia	Investment Bank	AUD	0.3[1]	100.0
UBS Securities Hong Kong Limited	Hong Kong SAR, China	Investment Bank	HKD	3,354.2	100.0
UBS Securities Japan Co., Ltd.	Tokyo, Japan	Investment Bank	JPY	34,708.7	100.0
UBS SuMi TRUST Wealth Management Co., Ltd.	Tokyo, Japan	Global Wealth Management	JPY	5,165.0	51.0

1 Includes a nominal amount relating to redeemable preference shares.

Consolidated structured entities

Consolidated structured entities (SEs) include certain investment funds, securitization vehicles and client investment vehicles. UBS AG has no individually significant subsidiaries that are SEs.

In 2022 and 2021, UBS AG did not enter into any contractual obligation that could require UBS AG to provide financial support to consolidated SEs. In addition, UBS AG did not provide support, financial or otherwise, to a consolidated SE when UBS AG was not contractually obligated to do so, nor does UBS AG have any intention to do so in the future. Furthermore, UBS AG did not provide support, financial or otherwise, to a previously unconsolidated SE that resulted in UBS AG controlling the SE during the reporting period.

b) Interests in associates and joint ventures

As of 31 December 2022 and 2021, no associate or joint venture was individually material to UBS AG. Also, there were no significant restrictions on the ability of associates or joint ventures to transfer funds to UBS AG or its subsidiaries as cash dividends or to repay loans or advances made. There were no quoted market prices for any associates or joint ventures of UBS AG.

In 2022, UBS AG reclassified its minority investment (49%) in its Japanese real estate joint venture, Mitsubishi Corp.-UBS Realty Inc., of USD 44m to *Properties and other non-current assets held for sale* and sold the shareholding. The sale resulted in a pre-tax gain of USD 848m in 2022, which was recognized in *Other income*. UBS AG's asset management, wealth management and investment banking businesses operating in Japan were not affected by the sale.

Investments in associates and joint ventures

USD m	2022	2021
Carrying amount at the beginning of the year	1,243	1,557
Additions	3	1
Reclassifications[1]	(44)	(386)
Share of comprehensive income	(41)	150
of which: share of net profit[2]	*32*	*105*
of which: share of other comprehensive income[3]	*(73)*	*45*
Share of changes in retained earnings	0	1
Dividends received	(31)	(39)
Foreign currency translation	(30)	(39)
Carrying amount at the end of the year	1,101	1,243
of which: associates	*1,098*	*1,200*
of which: SIX Group AG, Zurich[4]	*954*	*1,043*
of which: other associates	*144*	*157*
of which: joint ventures	*3*	*43*
of which: Mitsubishi Corp.-UBS Realty Inc., Tokyo[1]		*40*
of which: other joint ventures	*3*	*3*

1 In 2022, UBS AG reclassified its minority investment (49%) in Mitsubishi Corp.-UBS Realty Inc. of USD 44m to Properties and other non-current assets held for sale and sold the investment in the same year. In 2021, UBS AG reclassified its minority investment (48.8%) in Clearstream Fund Centre AG of USD 386m to Properties and other non-current assets held for sale and sold the investment in the same year. 2 For 2022, consists of USD 27m from associates and USD 5m from joint ventures (for 2021, consists of USD 79m from associates and USD 26m from joint ventures). 3 For 2022, consists of negative USD 73m from associates (for 2021, consists of USD 44m from associates and USD 1m from joint ventures). 4 In 2022, UBS AG's equity interest amounted to 17.31%. UBS AG is represented on the Board of Directors.

c) Unconsolidated structured entities

UBS AG is considered to sponsor another entity if, in addition to ongoing involvement with that entity, it had a key role in establishing that entity or in bringing together relevant counterparties for a transaction facilitated by that entity. During 2022, UBS AG sponsored the creation of various SEs and interacted with a number of non-sponsored SEs, including securitization vehicles, client vehicles and certain investment funds, that UBS AG did not consolidate as of 31 December 2022 because it did not control them.

Interests in unconsolidated structured entities

The table below presents UBS AG's interests in and maximum exposure to loss from unconsolidated SEs, as well as the total assets held by the SEs in which UBS had an interest as of year-end, except for investment funds sponsored by third parties, for which the carrying amount of UBS's interest as of year-end has been disclosed.

Sponsored unconsolidated structured entities in which UBS did not have an interest at year-end

During 2022 and 2021, UBS AG did not earn material income from sponsored unconsolidated SEs in which UBS did not have an interest at year-end.

During 2022 and 2021, UBS AG and third parties did not transfer any assets into sponsored securitization vehicles created in the year. UBS AG and third parties transferred assets, alongside deposits and debt issuances (which are assets from the perspective of the vehicle), of USD 1bn and USD 3bn, respectively, into sponsored client vehicles created in 2022 (2021: USD 1bn and USD 2bn, respectively). For sponsored investment funds, transfers arose during the period as investors invested and redeemed positions, thereby changing the overall size of the funds, which, when combined with market movements, resulted in a total closing net asset value of USD 38bn (31 December 2021: USD 46bn).

Note 28 Interests in subsidiaries and other entities (continued)

Interests in unconsolidated structured entities

	31.12.22				
USD m, except where indicated	Securitization vehicles	Client vehicles	Investment funds	Total	Maximum exposure to loss[1]
Financial assets at fair value held for trading	278	81	5,884	6,243	6,243
Derivative financial instruments	3	160	115	278	278
Loans and advances to customers			119	119	119
Financial assets at fair value not held for trading			108	108	108
Financial assets measured at fair value through other comprehensive income[2]					
Other financial assets measured at amortized cost[2]	837	4,977[3]	2	5,817	6,066
Total assets	1,118[4]	5,219	6,228	12,565	
Derivative financial instruments	1	35	763	798	2
Total liabilities	1	35	763	798	
Assets held by the unconsolidated structured entities in which UBS AG had an interest (USD bn)	50[5]	107[6]	95[7]		

	31.12.21				
USD m, except where indicated	Securitization vehicles	Client vehicles	Investment funds	Total	Maximum exposure to loss[1]
Financial assets at fair value held for trading	246	162	6,743	7,151	7,151
Derivative financial instruments	5	45	155	205	205
Loans and advances to customers			125	125	125
Financial assets at fair value not held for trading	35		100	135	135
Financial assets measured at fair value through other comprehensive income	324	4,525		4,849	4,849
Other financial assets measured at amortized cost		0[3]	0	1	250
Total assets	610[4]	4,732	7,124	12,466	
Derivative financial instruments	2	11	281	294	
Total liabilities	2	11	281	294	
Assets held by the unconsolidated structured entities in which UBS AG had an interest (USD bn)	30[5]	81[6]	103[7]		

1 For the purpose of this disclosure, maximum exposure to loss amounts do not consider the risk-reducing effects of collateral or other credit enhancements. 2 Effective 1 April 2022, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost. Refer to Note 1b for more information. 3 Includes the carrying amount of loan commitments. The maximum exposure to loss for these instruments is equal to the notional amount. 4 As of 31 December 2022, USD 0.1bn of the USD 1.1bn (31 December 2021: USD 0.1bn of the USD 0.6bn) was held in Group Functions – Non-core and Legacy Portfolio. 5 Represents the principal amount outstanding. 6 Represents the market value of total assets. 7 Represents the net asset value of the investment funds sponsored by UBS AG and the carrying amount of UBS AG's interests in the investment funds not sponsored by UBS AG.

UBS AG retains or purchases interests in unconsolidated SEs in the form of direct investments, financing, guarantees, letters of credit and derivatives, as well as through management contracts. UBS AG's maximum exposure to loss is generally equal to the carrying amount of UBS AG's interest in the given SE, with this subject to change over time with market movements. Guarantees, letters of credit and credit derivatives are an exception, with the given contract's notional amount, adjusted for losses already incurred, representing the maximum loss that UBS AG is exposed to.

The maximum exposure to loss disclosed in the table above does not reflect UBS AG's risk management activities, including effects from financial instruments that may be used to economically hedge risks inherent in the given unconsolidated SE or risk-reducing effects of collateral or other credit enhancements.

In 2022 and 2021, UBS AG did not provide support, financial or otherwise, to any unconsolidated SE when not contractually obligated to do so, nor does UBS AG have any intention to do so in the future.

In 2022 and 2021, income and expenses from interests in unconsolidated SEs primarily resulted from mark-to-market movements recognized in *Other net income from financial instruments measured at fair value through profit or loss*, which were generally hedged with other financial instruments, as well as fee and commission income received from UBS-sponsored funds.

Interests in securitization vehicles

As of 31 December 2022 and 31 December 2021, UBS AG held interests, both retained and acquired, in various securitization vehicles that relate to financing, underwriting, secondary market and derivative trading activities.

The numbers outlined in the table above may differ from the securitization positions presented in the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors,* for the following reasons: (i) exclusion of synthetic securitizations transacted with entities that are not SEs and transactions in which UBS AG did not have an interest because it did not absorb any risk; (ii) a different measurement basis in certain cases (e.g., IFRS carrying amount within the previous table compared with net exposure amount at default for Pillar 3 disclosures); and (iii) different classification of vehicles viewed as sponsored by UBS AG versus sponsored by third parties.

› **Refer to the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at *ubs.com/investors,* for more information**

Interests in client vehicles

Client vehicles are established predominantly for clients to gain exposure to specific assets or risk exposures. Such vehicles may enter into derivative agreements, with UBS or a third party, to align the cash flows of the entity with the investor's intended investment objective, or to introduce other desired risk exposures.

As of 31 December 2022 and 31 December 2021, UBS AG retained interests in client vehicles sponsored by UBS and third parties that relate to financing, secondary market and derivative trading activities, and to hedge structured product offerings.

Interests in investment funds

Investment funds have a collective investment objective, and are either passively managed, so that any decision-making does not have a substantive effect on variability, or are actively managed and investors or their governing bodies do not have substantive voting or similar rights.

UBS AG holds interests in a number of investment funds, primarily resulting from seed investments or in order to hedge structured product offerings. In addition to the interests disclosed in the table above, UBS AG manages the assets of various pooled investment funds and receives fees based, in whole or in part, on the net asset value of the fund and / or the performance of the fund. The specific fee structure is determined based on various market factors and considers the fund's nature and the jurisdiction of incorporation, as well as fee schedules negotiated with clients. These fee contracts represent an interest in the fund, as they align UBS AG's exposure with investors, providing a variable return based on the performance of the entity. Depending on the structure of the fund, these fees may be collected directly from the fund's assets and / or from the investors. Any amounts due are collected on a regular basis and are generally backed by the fund's assets. Therefore, interest in such funds is not represented by the on-balance sheet fee receivable but rather by the future exposure to variable fees. The total assets of such funds were USD 336bn and USD 425bn as of 31 December 2022 and 31 December 2021, respectively, and have been excluded from the table above. UBS AG did not have any material exposure to loss from these interests as of 31 December 2022 or as of 31 December 2021.

Note 29 Changes in organization and acquisitions and disposals of subsidiaries and businesses

Disposals of subsidiaries and businesses

Sale of UBS Swiss Financial Advisers AG

In the third quarter of 2022, UBS AG completed the sale of its wholly owned subsidiary UBS Swiss Financial Advisers AG (SFA) to Vontobel. UBS AG continues to refer US clients that want to have discretionary portfolio management or investment advisory services booked in Switzerland to Vontobel SFA. Upon completion of the sale, UBS AG recorded a pre-tax gain of USD 86m in 2022, which was recognized in *Other income*.

Prior to completion of the sale, the assets and liabilities that were subject to the transaction were presented as a disposal group held for sale within *Other non-financial assets* and *Other non-financial liabilities* (31 December 2021: USD 446m and USD 475m, respectively).

Sale of wealth management business in Spain

UBS AG completed the sale of its domestic wealth management business in Spain to Singular Bank in the third quarter of 2022. The sale included the transition of employees, client relationships, products and services of the wealth management business of UBS AG in Spain and resulted in a pre-tax gain of USD 133m in 2022, which was recognized in *Other income*.

Prior to completion of the sale, the assets and liabilities that were subject to the transaction were presented as a disposal group held for sale within *Other non-financial assets* and *Other non-financial liabilities* (31 December 2021: USD 647m and USD 823m, respectively).

Sale of US alternative investments administration business

In the fourth quarter of 2022, UBS AG sold its US alternative investments administration business and recorded a pre-tax gain of USD 41m gain in *Other income*.

Sale of investments in associates and joint ventures

UBS AG sold its minority investment (49%) in its Japanese real estate joint venture, Mitsubishi Corp.-UBS Realty Inc., in 2022.

› **Refer to Note 28b for more information**

Acquisitions of subsidiaries and businesses

Wealthfront

In August 2022, UBS AG and Wealthfront mutually agreed to terminate their merger agreement, under which Wealthfront was to be acquired by UBS Americas Inc. In the third quarter of 2022, UBS AG purchased a USD 69.7m note convertible into Wealthfront shares.

Note 30 Related parties

UBS AG defines related parties as associates (entities that are significantly influenced by UBS), joint ventures (entities in which UBS shares control with another party), post-employment benefit plans for UBS AG employees, key management personnel, close family members of key management personnel and entities that are, directly or indirectly, controlled or jointly controlled by key management personnel or their close family members. Key management personnel is defined as members of the Board of Directors (the BoD) and Executive Board (the EB).

a) Remuneration of key management personnel

The Vice Chairman of the BoD has a specific management employment contract and receives pension benefits upon retirement. Total remuneration of the Chairman and the Vice Chairman of the BoD and all EB members is included in the table below.

Remuneration of key management personnel

USD m, except where indicated	31.12.22	31.12.21	31.12.20
Base salaries and other cash payments[1]	26	30	31
Incentive awards – cash[2]	16	17	17
Annual incentive award under DCCP	23	26	26
Employer's contributions to retirement benefit plans	2	2	2
Benefits in kind, fringe benefits (at market value)	1	1	1
Share-based compensation[3]	42	45	45
Total	110	122	122
Total (CHF m)[4]	106	112	115

1 May include role-based allowances in line with market practice and regulatory requirements. 2 The cash portion may also include blocked shares in line with regulatory requirements. 3 Compensation expense is based on the share price on grant date taking into account performance conditions. Refer to Note 27 for more information. For EB members, share-based compensation for 2022, 2021 and 2020 was entirely composed of LTIP awards. For the Chairman of the BoD, the share-based compensation for 2022, 2021 and 2020 was entirely composed of UBS shares. 4 Swiss franc amounts disclosed represent the respective US dollar amounts translated at the applicable performance award currency exchange rates (2022: USD / CHF 0.96; 2021: USD / CHF 0.92; 2020: USD / CHF 0.94).

The independent members of the BoD, including the Chairman, do not have employment or service contracts with UBS AG, and thus are not entitled to benefits upon termination of their service on the BoD. Payments to these individuals for their services as independent members of the BoD amounted to USD 11.1m (CHF 10.7m) in 2022, USD 7.5m (CHF 6.9m) in 2021 and USD 7.0m (CHF 6.6m) in 2020.

b) Equity holdings of key management personnel

Equity holdings of key management personnel[1]

	31.12.22	31.12.21
Number of UBS Group AG shares held by members of the BoD, EB and parties closely linked to them[2]	2,443,580	4,175,515

1 No options were held in 2022 and 2021 by non-independent members of the BoD and any EB member or any of its related parties. 2 Excludes shares granted under variable compensation plans with forfeiture provisions.

Of the share totals above, no shares were held by close family members of key management personnel on 31 December 2022 and 31 December 2021. No shares were held by entities that are directly or indirectly controlled or jointly controlled by key management personnel or their close family members on 31 December 2022 and 31 December 2021. As of 31 December 2022, no member of the BoD or EB was the beneficial owner of more than 1% of the shares in UBS Group AG.

c) Loans, advances and mortgages to key management personnel

The non-independent members of the BoD and EB members are granted loans, fixed advances and mortgages in the ordinary course of business on substantially the same terms and conditions that are available to other employees, including interest rates and collateral, and neither involve more than the normal risk of collectability nor contain any other unfavorable features for the firm. Independent BoD members are granted loans and mortgages in the ordinary course of business at general market conditions.

Movements in the loan, advances and mortgage balances are as follows.

Loans, advances and mortgages to key management personnel[1]

USD m, except where indicated	2022	2021
Balance at the beginning of the year	28	31
Additions	8	11
Reductions	(7)	(15)
Balance at the end of the year[2]	28	28
Balance at the end of the year (CHF m)[2, 3]	26	25

1 All loans are secured loans. 2 There were no unused uncommitted credit facilities as of 31 December 2022 and 31 December 2021. 3 Swiss franc amounts disclosed represent the respective US dollar amounts translated at the relevant year-end closing exchange rate.

d) Other related-party transactions with entities controlled by key management personnel

In 2022 and 2021, UBS AG did not enter into transactions with entities that are directly or indirectly controlled or jointly controlled by UBS AG's key management personnel or their close family members and as of 31 December 2022, 31 December 2021 and 31 December 2020, there were no outstanding balances related to such transactions. Furthermore, in 2022 and 2021, entities controlled by key management personnel did not sell any goods or provide any services to UBS AG, and therefore did not receive any fees from UBS AG. UBS AG also did not provide services to such entities in 2022 and 2021, and therefore also received no fees.

e) Transactions with associates and joint ventures

Loans to and outstanding receivables from associates and joint ventures

USD m	2022	2021
Carrying amount at the beginning of the year	251	630
Additions	402	133
Reductions	(438)	(497)
Foreign currency translation	1	(14)
Carrying amount at the end of the year	217	251
of which: unsecured loans and receivables	*209*	*243*

Other transactions with associates and joint ventures

	As of or for the year ended	
USD m	31.12.22	31.12.21
Payments to associates and joint ventures for goods and services received	138	157
Fees received for services provided to associates and joint ventures	4	104
Liabilities to associates and joint ventures	90	127
Commitments and contingent liabilities to associates and joint ventures	7	7

› **Refer to Note 28 for an overview of investments in associates and joint ventures**

f) Receivables and payables from / to UBS Group AG and other subsidiaries of UBS Group AG

USD m	31.12.22	31.12.21
Receivables		
Loans and advances to customers	2,807	1,049
Financial assets at fair value held for trading	146	187
Other financial assets measured at amortized cost	147	45
Payables		
Customer deposits	2,119	2,828
Funding from UBS Group AG	56,147	57,295
Other financial liabilities measured at amortized cost	1,985	1,887
Other financial liabilities designated at fair value[1]	1,796	2,340

1 Represents funding recognized from UBS Group AG that is designated at fair value. Refer to Note 18b for more information.

Note 31 Invested assets and net new money

The following disclosures provide a breakdown of UBS AG's invested assets and a presentation of their development, including net new money, as required by the Swiss Financial Market Supervisory Authority (FINMA).

Invested assets

Invested assets consist of all client assets managed by or deposited with UBS AG for investment purposes. Invested assets include managed fund assets, managed institutional assets, discretionary and advisory wealth management portfolios, fiduciary deposits, time deposits, savings accounts, and wealth management securities or brokerage accounts. All assets held for purely transactional purposes and custody-only assets, including corporate client assets held for cash management and transactional purposes, are excluded from invested assets, as UBS AG only administers the assets and does not offer advice on how they should be invested. Also excluded are non-bankable assets (e.g., art collections) and deposits from third-party banks for funding or trading purposes.

Discretionary assets are defined as client assets that UBS AG decides how to invest. Other invested assets are those where the client ultimately decides how the assets are invested. When a single product is created in one business division and sold in another, it is counted in both the business division managing the investment and the one distributing it. This results in double counting within UBS AG's total invested assets and net new money, as both business divisions are independently providing a service to their respective clients, and both add value and generate revenue.

Net new money

Net new money in a reporting period is the amount of invested assets entrusted to UBS AG by new and existing clients, less those withdrawn by existing clients and clients who terminated relationships with UBS AG.

Net new money is calculated using the direct method, under which inflows and outflows to / from invested assets are determined at the client level, based on transactions. Interest and dividend income from invested assets are not counted as net new money inflows. Market and currency movements, as well as fees, commissions and interest on loans charged, are excluded from net new money, as are effects resulting from any acquisition or divestment of a UBS subsidiary or business. Reclassifications between invested assets and custody-only assets as a result of a change in service level delivered are generally treated as net new money flows. However, where the change in service level directly results from an externally imposed regulation or a strategic decision by UBS AG to exit a market or specific service offering, the one-time net effect is reported as *Other effects*.

The Investment Bank does not track invested assets and net new money. However, when a client is transferred from the Investment Bank to another business division, this may produce net new money even though the client's assets were already with UBS AG.

Invested assets and net new money

	As of or for the year ended	
USD bn	31.12.22	31.12.21
Fund assets managed by UBS	390	419
Discretionary assets	1,440	1,705
Other invested assets	2,127	2,472
Total invested assets[1]	3,957	4,596
of which: double counts	*340*	*356*
Net new money[1]	68	159

1 Includes double counts.

Development of invested assets

USD bn	2022	2021
Total invested assets at the beginning of the year[1]	4,596	4,187
Net new money	68	159
Market movements[2]	(595)	339
Foreign currency translation	(72)	(65)
Other effects	(40)	(24)
of which: acquisitions / (divestments)	*(19)*	*(5)*
Total invested assets at the end of the year[1]	3,957	4,596

1 Includes double counts. 2 Includes interest and dividend income.

Note 32 Currency translation rates

The following table shows the rates of the main currencies used to translate the financial information of UBS AG's operations with a functional currency other than the US dollar into US dollars.

	Closing exchange rate		Average rate[1]		
	As of		For the year ended		
	31.12.22	31.12.21	31.12.22	31.12.21	31.12.20
1 CHF	1.08	1.10	1.05	1.09	1.07
1 EUR	1.07	1.14	1.05	1.18	1.15
1 GBP	1.21	1.35	1.23	1.37	1.29
100 JPY	0.76	0.87	0.76	0.91	0.94

1 Monthly income statement items of operations with a functional currency other than the US dollar are translated into US dollars using month-end rates. Disclosed average rates for a year represent an average of twelve month-end rates, weighted according to the income and expense volumes of all operations of UBS AG with the same functional currency for each month. Weighted average rates for individual business divisions may deviate from the weighted average rates for UBS AG.

Note 33 Main differences between IFRS and Swiss GAAP

The consolidated financial statements of UBS AG are prepared in accordance with International Financial Reporting Standards (IFRS). The Swiss Financial Market Supervisory Authority (FINMA) requires financial groups presenting financial statements under IFRS to provide a narrative explanation of the main differences between IFRS and Swiss generally accepted accounting principles (GAAP) (the FINMA Accounting Ordinance, FINMA Circular 2020/1 "Accounting – banks" and the Banking Ordinance (the BO)). Included in this Note are the significant differences in the recognition and measurement between IFRS and the provisions of the BO and the guidelines of FINMA governing true and fair view financial statement reporting pursuant to Art. 25 to Art. 42 of the BO.

1. Consolidation

Under IFRS, all entities that are controlled by the holding entity are consolidated. Under Swiss GAAP controlled entities deemed immaterial to a group or those held only temporarily are exempt from consolidation, but instead are recorded as participations accounted for under the equity method of accounting or as financial investments measured at the lower of cost or market value.

2. Classification and measurement of financial assets

Under IFRS, debt instruments are measured at amortized cost, fair value through other comprehensive income (FVOCI) or fair value through profit or loss (FVTPL), depending on the nature of the business model within which the particular asset is held and the characteristics of the contractual cash flows of the asset. Equity instruments are accounted for at FVTPL by UBS. Under Swiss GAAP, trading assets and derivatives are measured at FVTPL, in line with IFRS. However, non-trading debt instruments are generally measured at amortized cost, even when the assets are managed on a fair value basis. In addition, the measurement of financial assets in the form of securities depends on the nature of the asset: debt instruments not held to maturity, i.e., instruments available for sale, and equity instruments with no permanent holding intent, are classified as *Financial investments* and measured at the lower of (amortized) cost or market value. Market value adjustments up to the original cost amount and realized gains or losses upon disposal of the investment are recorded in the income statement as *Other income from ordinary activities.* Equity instruments with a permanent holding intent are classified as participations in *Non-consolidated investments in subsidiaries and other participations* and are measured at cost less impairment. Impairment losses are recorded in the income statement as *Impairment of investments in non-consolidated subsidiaries and other participations.* Reversals of impairments up to the original cost amount and realized gains or losses upon disposal of the investment are recorded as *Extraordinary income / Extraordinary expenses*.

3. Fair value option applied to financial liabilities

Under IFRS, UBS applies the fair value option to certain financial liabilities not held for trading. Instruments for which the fair value option is applied are accounted for at FVTPL. The amount of change in the fair value attributable to changes in UBS's own credit is presented in *Other comprehensive income* directly within *Retained earnings*. The fair value option is applied primarily to issued structured debt instruments, certain non-structured debt instruments, certain payables under repurchase agreements and cash collateral on securities lending agreements, amounts due under unit-linked investment contracts, and brokerage payables.

Under Swiss GAAP, the fair value option can only be applied to structured debt instruments consisting of a debt host contract and one or more embedded derivatives that do not relate to own equity. Furthermore, unrealized changes in fair value attributable to changes in UBS's own credit are not recognized, whereas realized own credit is recognized in *Net trading income*.

4. Allowances and provisions for credit losses

Swiss GAAP permit use of IFRS for accounting for allowances and provisions for credit losses based on an expected credit loss (ECL) model. UBS has chosen to apply the IFRS 9 ECL approach to those exposures that are in the ECL scope of both frameworks, IFRS and Swiss GAAP.

For the small residual exposures within the scope of Swiss GAAP ECL requirements, which are not subject to ECL under IFRS due to classification differences, UBS applies alternative approaches.

- For exposures for which Pillar 1 internal ratings-based models are applied to measure credit risk, ECL is determined by the regulatory expected loss (EL), with an add-on for scaling up to the residual maturity of exposures maturing beyond the next 12 months, as appropriate. For detailed information on regulatory EL, refer to the "Risk management and control" section of this report.
- For exposures for which the Pillar 1 standardized approach is used to measure credit risk, ECL is determined using a portfolio approach that derives a conservative probability of default (PD) and a conservative loss given default (LGD) for the entire portfolio.

5. Hedge accounting

Under IFRS, when cash flow hedge accounting is applied, the fair value gain or loss on the effective portion of a derivative designated as a cash flow hedge is recognized initially in equity and reclassified to the income statement when certain conditions are met. When fair value hedge accounting is applied, the fair value change of the hedged item attributable to the hedged risk is reflected in the measurement of the hedged item and is recognized in the income statement along with the change in the fair value of the hedging derivative. Under Swiss GAAP, the effective portion of the fair value change of a derivative instrument designated as a cash flow or as a fair value hedge is deferred on the balance sheet as *Other assets* or *Other liabilities*. The carrying amount of the hedged item designated in fair value hedges is not adjusted for fair value changes attributable to the hedged risk.

6. Goodwill and intangible assets

Under IFRS, goodwill acquired in a business combination is not amortized but tested annually for impairment. Intangible assets with an indefinite useful life are also not amortized but tested annually for impairment. Under Swiss GAAP, goodwill and intangible assets with indefinite useful lives are amortized over a period not exceeding five years, unless a longer useful life, which may not exceed 10 years, can be justified. In addition, these assets are tested annually for impairment.

7. Post-employment benefit plans

Swiss GAAP permit the use of IFRS or Swiss accounting standards for post-employment benefit plans, with the election made on a plan-by-plan basis.

UBS has elected to apply IFRS (IAS 19) for the non-Swiss defined benefit plans in the UBS AG standalone financial statements and Swiss GAAP (FER 16) for the Swiss pension plan in the UBS AG and the UBS Switzerland AG standalone financial statements. The requirements of Swiss GAAP are better aligned with the specific nature of Swiss pension plans, which are hybrid in that they combine elements of defined contribution and defined benefit plans, but are treated as defined benefit plans under IFRS. Key differences between Swiss GAAP and IFRS include the treatment of dynamic elements, such as future salary increases and future interest credits on retirement savings, which are not considered under the static method used in accordance with Swiss GAAP. Also, the discount rate used to determine the defined benefit obligation in accordance with IFRS is based on the yield of high-quality corporate bonds of the market in the respective pension plan country. The discount rate used in accordance with Swiss GAAP (i.e., the technical interest rate) is determined by the Pension Foundation Board based on the expected returns of the Board's investment strategy.

For defined benefit plans, IFRS require the full defined benefit obligation net of the plan assets to be recorded on the balance sheet subject to the asset ceiling rules, with changes resulting from remeasurements recognized directly in equity. However, for non-Swiss defined benefit plans for which IFRS accounting is elected, changes due to remeasurements are recognized in the income statement of UBS AG standalone under Swiss GAAP.

Swiss GAAP require employer contributions to the pension fund to be recognized as personnel expenses in the income statement. Swiss GAAP also require an assessment of whether, based on the pension fund's financial statements prepared in accordance with Swiss accounting standards (FER 26), an economic benefit to, or obligation of, the employer arises from the pension fund that is recognized in the balance sheet when conditions are met. Conditions for recording a pension asset or liability would be met if, for example, an employer contribution reserve is available or the employer is required to contribute to the reduction of a pension deficit (on an FER 26 basis).

8. Leasing

Under IFRS, a single lease accounting model applies that requires UBS to record a right-of-use (RoU) asset and a corresponding lease liability on the balance sheet when UBS is a lessee in a lease arrangement. The RoU asset and the lease liability are recognized when UBS acquires control of the physical use of the asset. The lease liability is measured based on the present value of the lease payments over the lease term, discounted using UBS's unsecured borrowing rate. The RoU asset is recorded at an amount equal to the lease liability but is adjusted for rent prepayments, initial direct costs, any costs to refurbish the leased asset and / or lease incentives received. The RoU asset is depreciated over the shorter of the lease term or the useful life of the underlying asset.

Under Swiss GAAP, leases that transfer substantially all the risks and rewards, but not necessarily legal title in the underlying assets, are classified as finance leases. All other leases are classified as operating leases. Whereas finance leases are recognized on the balance sheet and measured in line with IFRS, operating leases are not recognized on the balance sheet, with payments recognized as *General and administrative expenses* on a straight-line basis over the lease term, which commences with control of the physical use of the asset. Lease incentives are treated as a reduction of rental expense and recognized on a consistent basis over the lease term.

9. Netting of derivative assets and liabilities

Under IFRS, derivative assets, derivative liabilities and related cash collateral not settled to market are reported on a gross basis unless the restrictive IFRS netting requirements are met: (i) existence of master netting agreements and related collateral arrangements that are unconditional and legally enforceable, in both the normal course of business and the event of default, bankruptcy or insolvency of UBS and its counterparties; and (ii) UBS's intention to either settle on a net basis or to realize the asset and settle the liability simultaneously. Under Swiss GAAP, derivative assets, derivative liabilities and related cash collateral not settled to market are generally reported on a net basis, provided the master netting and the related collateral agreements are legally enforceable in the event of default, bankruptcy or insolvency of UBS's counterparties.

10. Negative interest

Under IFRS, negative interest income arising on a financial asset does not meet the definition of interest income and, therefore, negative interest on financial assets and negative interest on financial liabilities are presented within interest expense and interest income, respectively. Under Swiss GAAP, negative interest on financial assets is presented within interest income and negative interest on financial liabilities is presented within interest expense.

11. Extraordinary income and expense

Certain non-recurring and non-operating income and expense items, such as realized gains or losses from the disposal of participations, fixed and intangible assets, and reversals of impairments of participations and fixed assets, are classified as extraordinary items under Swiss GAAP. This distinction is not available under IFRS. ▲

Note 34 Supplemental guarantor information required under SEC regulations

Joint liability of UBS Switzerland AG

In 2015, the Personal & Corporate Banking and Wealth Management businesses booked in Switzerland were transferred from UBS AG to UBS Switzerland AG through an asset transfer in accordance with the Swiss Merger Act. Under the terms of the asset transfer agreement, UBS Switzerland AG assumed joint liability for contractual obligations of UBS AG existing on the asset transfer date, including the full and unconditional guarantee of certain registered debt securities issued by UBS AG. To reflect this joint liability, UBS Switzerland AG is presented in a separate column as a subsidiary co-guarantor.

The joint liability of UBS Switzerland AG for contractual obligations of UBS AG decreased in 2022 by USD 1.4bn to USD 4.3bn as of 31 December 2022. The decrease substantially relates to a combination of contractual maturities, early extinguishments, fair value movements and foreign currency effects.

Supplemental guarantor consolidated income statement

USD m For the year ended 31 December 2022	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income	4,824	3,894	4,661	(1,575)	11,803
Interest expense from financial instruments measured at amortized cost	(5,449)	(736)	(2,604)	2,093	(6,696)
Net interest income from financial instruments measured at fair value through profit or loss and other	881	546	431	(449)	1,410
Net interest income	257	3,704	2,488	68	6,517
Other net income from financial instruments measured at fair value through profit or loss	5,541	900	940	112	7,493
Fee and commission income	2,875	4,865	13,766	(660)	20,846
Fee and commission expense	(684)	(464)	(1,327)	652	(1,823)
Net fee and commission income	2,191	4,401	12,439	(8)	19,023
Other income	6,732	203	3,329	(8,382)	1,882
Total revenues	14,721	9,208	19,197	(8,210)	34,915
Credit loss expense / (release)	(17)	50	(3)	(1)	29
Personnel expenses	3,251	1,995	9,835	0	15,080
General and administrative expenses	3,374	3,258	5,029	(2,660)	9,001
Depreciation, amortization and impairment of non-financial assets	871	340	744	(109)	1,845
Operating expenses	7,496	5,592	15,607	(2,769)	25,927
Operating profit / (loss) before tax	7,242	3,566	3,592	(5,440)	8,960
Tax expense / (benefit)	(28)	638	1,083	151	1,844
Net profit / (loss)	7,270	2,928	2,509	(5,592)	7,116
Net profit / (loss) attributable to non-controlling interests	0	0	32	0	32
Net profit / (loss) attributable to shareholders	7,270	2,928	2,477	(5,592)	7,084

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information" at ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 The "Other subsidiaries" column includes consolidated information for the UBS Americas Holding LLC, UBS Europe SE and UBS Asset Management AG significant sub-groups, as well as standalone information for other subsidiaries.

Note 34 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of comprehensive income

USD m For the year ended 31 December 2022	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Comprehensive income attributable to shareholders					
Net profit / (loss)	7,270	2,928	2,477	(5,592)	7,084
Other comprehensive income					
Other comprehensive income that may be reclassified to the income statement					
Foreign currency translation, net of tax	(114)	(197)	(506)	298	(519)
Financial assets measured at fair value through other comprehensive income, net of tax[3]	(3)	0	9	0	6
Cash flow hedges, net of tax	(2,791)	(1,359)	(631)	(12)	(4,793)
Cost of hedging, net of tax	45				45
Total other comprehensive income that may be reclassified to the income statement, net of tax	(2,863)	(1,555)	(1,128)	286	(5,260)
Other comprehensive income that will not be reclassified to the income statement					
Defined benefit plans, net of tax	170	(112)	23	0	81
Own credit on financial liabilities designated at fair value, net of tax	796				796
Total other comprehensive income that will not be reclassified to the income statement, net of tax	966	(112)	23	0	877
Total other comprehensive income	(1,897)	(1,667)	(1,104)	286	(4,383)
Total comprehensive income attributable to shareholders	5,373	1,261	1,373	(5,306)	2,701
Total comprehensive income attributable to non-controlling interests			18		18
Total comprehensive income	5,373	1,261	1,391	(5,306)	2,719

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information" at ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 The "Other subsidiaries" column includes consolidated information for the UBS Americas Holding LLC, UBS Europe SE and UBS Asset Management AG significant sub-groups, as well as standalone information for other subsidiaries. 3 Effective 1 April 2022, a portfolio of assets previously classified as Financial assets measured at fair value through other comprehensive income was reclassified to Other financial assets measured at amortized cost. Refer to Note 1b for more information.

Supplemental guarantor consolidated balance sheet

USD m As of 31 December 2022	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Assets					
Cash and balances at central banks	48,689	84,465	36,291	0	169,445
Loans and advances to banks	39,691	6,357	19,063	(50,441)	14,671
Receivables from securities financing transactions measured at amortized cost	51,493	903	34,110	(18,691)	67,814
Cash collateral receivables on derivative instruments	35,594	1,221	10,074	(11,856)	35,033
Loans and advances to customers	90,168	229,861	101,231	(31,233)	390,027
Other financial assets measured at amortized cost	24,005	9,532	21,880	(2,029)	53,389
Total financial assets measured at amortized cost	289,641	332,339	222,649	(114,250)	730,379
Financial assets at fair value held for trading	95,810	173	13,899	(1,848)	108,034
of which: assets pledged as collateral that may be sold or repledged by counterparties	*41,056*	*0*	*5,578*	*(9,892)*	*36,742*
Derivative financial instruments	149,447	5,925	35,106	(40,368)	150,109
Brokerage receivables	9,763	0	7,814	0	17,576
Financial assets at fair value not held for trading	45,302	4,354	26,843	(17,091)	59,408
Total financial assets measured at fair value through profit or loss	300,321	10,453	83,661	(59,308)	335,127
Financial assets measured at fair value through other comprehensive income	1,953	0	286	0	2,239
Investments in subsidiaries and associates	54,323	33	0	(53,255)	1,101
Property, equipment and software	5,852	1,654	4,077	(267)	11,316
Goodwill and intangible assets	213	0	6,050	5	6,267
Deferred tax assets	1,624	276	7,470	(16)	9,354
Other non-financial assets	6,930	1,768	951	4	9,652
Total assets	660,856	346,522	325,144	(227,087)	1,105,436
Liabilities					
Amounts due to banks	41,395	37,123	51,555	(118,477)	11,596
Payables from securities financing transactions measured at amortized cost	9,425	247	13,303	(18,774)	4,202
Cash collateral payables on derivative instruments	35,528	1,518	11,191	(11,800)	36,436
Customer deposits	98,628	273,316	132,619	22,608	527,171
Funding from UBS Group AG	56,147	0		0	56,147
Debt issued measured at amortized cost	50,706	8,965	1	(173)	59,499
Other financial liabilities measured at amortized cost	4,903	2,221	5,554	(2,287)	10,391
Total financial liabilities measured at amortized cost	296,733	323,391	214,222	(128,903)	705,442
Financial liabilities at fair value held for trading	25,059	183	5,843	(1,570)	29,515
Derivative financial instruments	153,778	6,177	35,314	(40,363)	154,906
Brokerage payables designated at fair value	32,346	0	12,746	(7)	45,085
Debt issued designated at fair value	71,444	0	508	(110)	71,842
Other financial liabilities designated at fair value	17,888	0	17,074	(2,928)	32,033
Total financial liabilities measured at fair value through profit or loss	300,514	6,360	71,484	(44,977)	333,382
Provisions	1,904	239	1,041	(2)	3,183
Other non-financial liabilities	1,630	1,019	3,742	98	6,489
Total liabilities	600,782	331,009	290,490	(173,785)	1,048,496
Equity attributable to shareholders	60,075	15,513	34,313	(53,303)	56,598
Equity attributable to non-controlling interests			342	0	342
Total equity	60,075	15,513	34,655	(53,303)	56,940
Total liabilities and equity	660,856	346,522	325,144	(227,087)	1,105,436

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements, available under "Complementary financial information" at ubs.com/investors, for information prepared in accordance with Swiss GAAP. 2 The "Other subsidiaries" column includes consolidated information for the UBS Americas Holding LLC, UBS Europe SE and UBS Asset Management AG significant sub-groups, as well as standalone information for other subsidiaries.

Note 34 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of cash flows

USD m For the year ended 31 December 2022	UBS AG[1]	UBS Switzerland AG[1]	Other subsidiaries[1]	UBS AG (consolidated)
Net cash flow from / (used in) operating activities	17,286	(1,165)	(5,491)	10,630
Cash flow from / (used in) investing activities				
Purchase of subsidiaries, associates and intangible assets	0	(3)	0	(3)
Disposal of subsidiaries, associates and intangible assets[2]	157	453	1,120	1,729
Purchase of property, equipment and software	(562)	(292)	(624)	(1,478)
Disposal of property, equipment and software	161	0	0	161
Purchase of financial assets measured at fair value through other comprehensive income	(4,131)	0	(652)	(4,783)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	3,188	0	896	4,084
Net (purchase) / redemption of debt securities measured at amortized cost	(8,159)	(1,820)	(2,013)	(11,993)
Net cash flow from / (used in) investing activities	(9,346)	(1,663)	(1,274)	(12,283)
Cash flow from / (used in) financing activities				
Net short-term debt issued / (repaid)	(12,215)	(3)	(31)	(12,249)
Distributions paid on UBS AG shares	(4,200)	0	0	(4,200)
Issuance of debt designated at fair value and long-term debt measured at amortized cost[3]	78,866	550	41	79,457
Repayment of debt designated at fair value and long-term debt measured at amortized cost[3]	(66,526)	(860)	(284)	(67,670)
Net cash flows from other financing activities	(258)	0	(337)	(595)
Net activity related to group internal capital transactions and dividends	5,217	(2,088)	(3,128)	0
Net cash flow from / (used in) financing activities	884	(2,401)	(3,740)	(5,257)
Total cash flow				
Cash and cash equivalents at the beginning of the year	57,895	92,799	57,061	207,755
Net cash flow from / (used in) operating, investing and financing activities	8,824	(5,229)	(10,505)	(6,911)
Effects of exchange rate differences on cash and cash equivalents	(3,111)	(1,338)	(1,196)	(5,645)
Cash and cash equivalents at the end of the year[4]	63,608	86,232	45,359	195,200
of which: cash and balances at central banks	*48,607*	*84,465*	*36,291*	*169,363*
of which: loans and advances to banks	*2,957*	*1,550*	*8,821*	*13,329*
of which: money market paper[5]	*12,044*	*216*	*248*	*12,508*

1 Cash flows generally represent a third-party view from a UBS AG consolidated perspective, except for Net activity related to group internal capital transactions and dividends. 2 Includes cash proceeds from the sales of: UBS AG's shareholding in Mitsubishi Corp.-UBS Realty Inc.; UBS AG's wholly owned subsidiary UBS Swiss Financial Advisers AG (including a loan portfolio in UBS Switzerland AG); UBS AG's US alternative investments administration business; and UBS AG's domestic wealth management business in Spain. Also includes dividends received from associates. 3 Includes funding from UBS Group AG to UBS AG. 4 Balances with an original maturity of three months or less. USD 4,253m of cash and cash equivalents were restricted. 5 Money market paper is included in the balance sheet under Financial assets at fair value held for trading, Financial assets measured at fair value through other comprehensive income, Financial assets at fair value not held for trading and Other financial assets measured at amortized cost.

Note 34 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated income statement

USD m For the year ended 31 December 2021	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income	3,130	3,652	2,456	(703)	8,534
Interest expense from financial instruments measured at amortized cost	(2,847)	(520)	(1,024)	1,025	(3,366)
Net interest income from financial instruments measured at fair value through profit or loss and other	1,229	254	228	(274)	1,437
Net interest income	1,512	3,386	1,660	48	6,605
Other net income from financial instruments measured at fair value through profit or loss	3,751	807	1,369	(83)	5,844
Fee and commission income	3,837	5,204	16,151	(770)	24,422
Fee and commission expense	(810)	(481)	(1,450)	755	(1,985)
Net fee and commission income	3,027	4,723	14,702	(14)	22,438
Other income	7,555	221	1,560	(8,396)	941
Total revenues	15,845	9,137	19,291	(8,445)	35,828
Credit loss expense / (release)	(65)	(98)	(10)	24	(148)
Personnel expenses	3,401	2,098	10,161	1	15,661
General and administrative expenses	4,255	3,442	4,474	(2,696)	9,476
Depreciation, amortization and impairment of non-financial assets	949	285	755	(114)	1,875
Operating expenses	8,605	5,825	15,390	(2,809)	27,012
Operating profit / (loss) before tax	7,305	3,409	3,910	(5,660)	8,964
Tax expense / (benefit)	203	622	1,090	(11)	1,903
Net profit / (loss)	7,102	2,788	2,820	(5,649)	7,061
Net profit / (loss) attributable to non-controlling interests	0	0	29	0	29
Net profit / (loss) attributable to shareholders	7,102	2,788	2,792	(5,649)	7,032

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information" at ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 The "Other subsidiaries" column includes consolidated information for the UBS Americas Holding LLC, UBS Europe SE and UBS Asset Management AG significant sub-groups, as well as standalone information for other subsidiaries.

Supplemental guarantor consolidated statement of comprehensive income

USD m For the year ended 31 December 2021	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Comprehensive income attributable to shareholders					
Net profit / (loss)	7,102	2,788	2,792	(5,649)	7,032
Other comprehensive income					
Other comprehensive income that may be reclassified to the income statement					
Foreign currency translation, net of tax	(1)	(419)	(607)	517	(510)
Financial assets measured at fair value through other comprehensive income, net of tax	0		(157)	0	(157)
Cash flow hedges, net of tax	(1,129)	(279)	(250)	(17)	(1,675)
Cost of hedging, net of tax	(26)				(26)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(1,155)	(699)	(1,014)	500	(2,368)
Other comprehensive income that will not be reclassified to the income statement					
Defined benefit plans, net of tax	170	(135)	67	0	102
Own credit on financial liabilities designated at fair value, net of tax	46				46
Total other comprehensive income that will not be reclassified to the income statement, net of tax	217	(135)	67	0	148
Total other comprehensive income	(939)	(834)	(947)	500	(2,220)
Total comprehensive income attributable to shareholders	6,163	1,954	1,845	(5,149)	4,813
Total comprehensive income attributable to non-controlling interests			13		13
Total comprehensive income	6,163	1,954	1,858	(5,149)	4,826

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information" at ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 The "Other subsidiaries" column includes consolidated information for the UBS Americas Holding LLC, UBS Europe SE and UBS Asset Management AG significant sub-groups, as well as standalone information for other subsidiaries.

Supplemental guarantor consolidated balance sheet

USD m As of 31 December 2021	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Assets					
Cash and balances at central banks	53,839	91,031	47,946		192,817
Loans and advances to banks	39,681	7,066	19,858	(51,245)	15,360
Receivables from securities financing transactions measured at amortized cost	50,566	5,438	40,585	(21,577)	75,012
Cash collateral receivables on derivative instruments	29,939	779	10,314	(10,518)	30,514
Loans and advances to customers	101,458	230,170	93,252	(26,188)	398,693
Other financial assets measured at amortized cost	8,902	6,828	12,377	(1,870)	26,236
Total financial assets measured at amortized cost	284,385	341,312	224,332	(111,397)	738,632
Financial assets at fair value held for trading	116,370	79	16,740	(2,156)	131,033
of which: assets pledged as collateral that may be sold or repledged by counterparties	*47,891*	*0*	*6,073*	*(10,568)*	*43,397*
Derivative financial instruments	113,426	4,199	35,567	(35,047)	118,145
Brokerage receivables	14,563		7,283	(7)	21,839
Financial assets at fair value not held for trading	37,532	5,413	33,940	(17,243)	59,642
Total financial assets measured at fair value through profit or loss	281,891	9,691	93,531	(54,454)	330,659
Financial assets measured at fair value through other comprehensive income	1,007		7,837		8,844
Investments in subsidiaries and associates	54,204	37	40	(53,038)	1,243
Property, equipment and software	6,501	1,456	4,048	(293)	11,712
Goodwill and intangible assets	213		6,138	28	6,378
Deferred tax assets	936		7,903		8,839
Other non-financial assets	5,757	2,424	1,656	(1)	9,836
Total assets	634,894	354,921	345,484	(219,154)	1,116,145
Liabilities					
Amounts due to banks	34,691	33,453	50,405	(105,448)	13,101
Payables from securities financing transactions measured at amortized cost	16,711	526	9,910	(21,615)	5,533
Cash collateral payables on derivative instruments	30,260	153	11,845	(10,458)	31,801
Customer deposits	101,093	286,488	142,967	14,287	544,834
Funding from UBS Group AG	57,295				57,295
Debt issued measured at amortized cost	73,045	9,460		(73)	82,432
Other financial liabilities measured at amortized cost	4,477	2,477	5,057	(2,245)	9,765
Total financial liabilities measured at amortized cost	317,572	332,556	220,184	(125,551)	744,762
Financial liabilities at fair value held for trading	25,711	372	7,652	(2,046)	31,688
Derivative financial instruments	116,588	4,053	35,731	(35,063)	121,309
Brokerage payables designated at fair value	30,497		13,548	(1)	44,045
Debt issued designated at fair value	70,660		785	14	71,460
Other financial liabilities designated at fair value	11,127		24,454	(3,167)	32,414
Total financial liabilities measured at fair value through profit or loss	254,584	4,425	82,171	(40,263)	300,916
Provisions	2,023	297	1,153	(21)	3,452
Other non-financial liabilities	1,799	1,278	5,528	(33)	8,572
Total liabilities	575,978	338,556	309,036	(165,868)	1,057,702
Equity attributable to shareholders	58,916	16,365	36,108	(53,287)	58,102
Equity attributable to non-controlling interests			340		340
Total equity	58,916	16,365	36,448	(53,287)	58,442
Total liabilities and equity	634,894	354,921	345,484	(219,154)	1,116,145

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements, available under "Complementary financial information" at ubs.com/investors, for information prepared in accordance with Swiss GAAP. 2 The "Other subsidiaries" column includes consolidated information for the UBS Americas Holding LLC, UBS Europe SE and UBS Asset Management AG significant sub-groups, as well as standalone information for other subsidiaries.

Supplemental guarantor consolidated statement of cash flows

USD m For the year ended 31 December 2021	UBS AG[1]	UBS Switzerland AG[1]	Other subsidiaries[1]	UBS AG (consolidated)
Net cash flow from / (used in) operating activities	5,714	2,131	22,718	30,563
Cash flow from / (used in) investing activities				
Purchase of subsidiaries, associates and intangible assets	0	(1)	0	(1)
Disposal of subsidiaries, associates and intangible assets[2]	16	0	577	593
Purchase of property, equipment and software	(656)	(276)	(650)	(1,581)
Disposal of property, equipment and software	294	0	1	295
Purchase of financial assets measured at fair value through other comprehensive income	(1,006)	0	(4,795)	(5,802)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	189	0	4,863	5,052
Net (purchase) / redemption of debt securities measured at amortized cost	(807)	772	(380)	(415)
Net cash flow from / (used in) investing activities	(1,970)	495	(385)	(1,860)
Cash flow from / (used in) financing activities				
Net short-term debt issued / (repaid)	(3,073)	(21)	0	(3,093)
Distributions paid on UBS AG shares	(4,539)	0	0	(4,539)
Issuance of debt designated at fair value and long-term debt measured at amortized cost[3]	97,250	1,177	193	98,619
Repayment of debt designated at fair value and long-term debt measured at amortized cost[3]	(78,385)	(1,093)	(320)	(79,799)
Net cash flows from other financing activities	(280)	0	20	(261)
Net activity related to group internal capital transactions and dividends	5,240	(537)	(4,702)	0
Net cash flow from / (used in) financing activities	16,212	(475)	(4,811)	10,927

Total cash flow

Cash and cash equivalents at the beginning of the year	39,400	93,342	40,689	173,430
Net cash flow from / (used in) operating, investing and financing activities	19,957	2,151	17,523	39,630
Effects of exchange rate differences on cash and cash equivalents	(1,462)	(2,693)	(1,151)	(5,306)
Cash and cash equivalents at the end of the year[4]	57,895	92,799	57,061	207,755
of which: cash and balances at central banks	*53,729*	*91,031*	*47,946*	*192,706*
of which: loans and advances to banks	*3,258*	*1,588*	*8,975*	*13,822*
of which: money market paper[5]	*908*	*179*	*139*	*1,227*

1 Cash flows generally represent a third-party view from a UBS AG consolidated perspective, except for Net activity related to group internal capital transactions and dividends. 2 Includes cash proceeds from the sale of the minority stake in Clearstream Fund Centre AG and dividends received from associates. 3 Includes funding from UBS Group AG to UBS AG. 4 Balances with an original maturity of three months or less. USD 3,408m of cash and cash equivalents were restricted. 5 Money market paper is included in the balance sheet under Financial assets at fair value held for trading, Financial assets measured at fair value through other comprehensive income, Financial assets at fair value not held for trading and Other financial assets measured at amortized cost.

Note 34 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated income statement

USD m For the year ended 31 December 2020	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income	3,386	3,636	2,612	(818)	8,816
Interest expense from financial instruments measured at amortized cost	(3,694)	(513)	(1,261)	1,134	(4,333)
Net interest income from financial instruments measured at fair value through profit or loss and other	1,103	164	311	(273)	1,305
Net interest income	794	3,288	1,662	43	5,788
Other net income from financial instruments measured at fair value through profit or loss	4,857	911	1,044	118	6,930
Fee and commission income	3,731	4,585	13,651	(984)	20,982
Fee and commission expense	(644)	(829)	(1,263)	961	(1,775)
Net fee and commission income	3,087	3,756	12,388	(23)	19,207
Other income	4,671	233	2,585	(5,941)	1,549
Total revenues	13,410	8,188	17,679	(5,803)	33,474
Credit loss expense / (release)	352	286	56	0	695
Personnel expenses	3,458	2,017	9,211	0	14,686
General and administrative expenses	3,507	3,313	4,147	(2,481)	8,486
Depreciation, amortization and impairment of non-financial assets	1,013	261	750	(115)	1,909
Operating expenses	7,978	5,591	14,108	(2,596)	25,081
Operating profit / (loss) before tax	5,079	2,311	3,515	(3,207)	7,699
Tax expense / (benefit)	238	444	912	(107)	1,488
Net profit / (loss)	4,840	1,868	2,603	(3,100)	6,211
Net profit / (loss) attributable to non-controlling interests	0	0	15	0	15
Net profit / (loss) attributable to shareholders	4,840	1,868	2,588	(3,100)	6,196

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information" at ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 The "Other subsidiaries" column includes consolidated information for the UBS Americas Holding LLC, UBS Europe SE and UBS Asset Management AG significant sub-groups, as well as standalone information for other subsidiaries.

Supplemental guarantor consolidated statement of comprehensive income

USD m For the year ended 31 December 2020	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Comprehensive income attributable to shareholders					
Net profit / (loss)	4,840	1,868	2,588	(3,100)	6,196
Other comprehensive income					
Other comprehensive income that may be reclassified to the income statement					
Foreign currency translation, net of tax	81	1,228	690	(969)	1,030
Financial assets measured at fair value through other comprehensive income, net of tax	0	0	137	0	136
Cash flow hedges, net of tax	902	26	101	(18)	1,011
Cost of hedging, net of tax	(13)				(13)
Total other comprehensive income that may be reclassified to the income statement, net of tax	971	1,254	928	(988)	2,165
Other comprehensive income that will not be reclassified to the income statement					
Defined benefit plans, net of tax	(67)	(107)	40	0	(134)
Own credit on financial liabilities designated at fair value, net of tax	(293)				(293)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	(360)	(107)	40	0	(427)
Total other comprehensive income	611	1,147	968	(988)	1,738
Total comprehensive income attributable to shareholders	5,451	3,015	3,556	(4,088)	7,934
Total comprehensive income attributable to non-controlling interests			36		36
Total comprehensive income	5,451	3,015	3,592	(4,088)	7,970

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information" at ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 The "Other subsidiaries" column includes consolidated information for the UBS Americas Holding LLC, UBS Europe SE and UBS Asset Management AG significant sub-groups, as well as standalone information for other subsidiaries.

Note 34 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of cash flows

USD m For the year ended 31 December 2020	UBS AG[1]	UBS Switzerland AG[1]	Other subsidiaries[1]	UBS AG (consolidated)
Net cash flow from / (used in) operating activities	(14,883)	24,661	26,804	36,581
Cash flow from / (used in) investing activities				
Purchase of subsidiaries, associates and intangible assets	0	(3)	(43)	(46)
Disposal of subsidiaries, associates and intangible assets[2]	14	0	660	674
Purchase of property, equipment and software	(714)	(162)	(697)	(1,573)
Disposal of property, equipment and software	361	0	3	364
Purchase of financial assets measured at fair value through other comprehensive income	(77)	0	(6,213)	(6,290)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	79	0	4,451	4,530
Net (purchase) / redemption of debt securities measured at amortized cost	(3,021)	132	(1,277)	(4,166)
Net cash flow from / (used in) investing activities	(3,357)	(33)	(3,117)	(6,506)
Cash flow from / (used in) financing activities				
Net short-term debt issued / (repaid)	23,828	17	0	23,845
Distributions paid on UBS AG shares	(3,848)	0	0	(3,848)
Issuance of debt designated at fair value and long-term debt measured at amortized cost[3]	78,867	1,057	229	80,153
Repayment of debt designated at fair value and long-term debt measured at amortized cost[3]	(86,204)	(776)	(118)	(87,099)
Net cash flows from other financing activities	(290)	0	(263)	(553)
Net activity related to group internal capital transactions and dividends	2,984	(1,307)	(1,677)	0
Net cash flow from / (used in) financing activities	15,336	(1,009)	(1,829)	12,498

Total cash flow

Cash and cash equivalents at the beginning of the year	39,598	62,551	17,655	119,804
Net cash flow from / (used in) operating, investing and financing activities	(2,905)	23,619	21,859	42,573
Effects of exchange rate differences on cash and cash equivalents	2,706	7,171	1,175	11,053
Cash and cash equivalents at the end of the year[4]	39,400	93,342	40,689	173,430
of which: cash and balances at central banks	*34,283*	*91,638*	*32,167*	*158,088*
of which: loans and advances to banks	*4,085*	*1,695*	*8,148*	*13,928*
of which: money market paper[5]	*1,032*	*9*	*374*	*1,415*

1 Cash flows generally represent a third-party view from a UBS AG consolidated perspective, except for Net activity related to group internal capital transactions and dividends. 2 Includes cash proceeds from the sale of the majority stake in Fondcenter AG and dividends received from associates. 3 Includes funding from UBS Group AG to UBS AG. 4 Balances with an original maturity of three months or less. USD 3,828m of cash and cash equivalents were restricted. 5 Money market paper is included in the balance sheet under Financial assets at fair value held for trading, Financial assets measured at fair value through other comprehensive income, Financial assets at fair value not held for trading and Other financial assets measured at amortized cost.

Standalone financial statements

Table of contents

UBS Group AG standalone financial statements

Audited |

Income statement

		USD m		CHF m	
		For the year ended		For the year ended	
	Note	31.12.22	31.12.21	31.12.22	31.12.21
Dividend income from investments in subsidiaries	3	4,373	4,672	4,255	4,270
Other operating income	4	48	12	46	12
Financial income	5	2,002	1,806	1,911	1,653
Operating income		6,423	6,490	6,212	5,935
Personnel expenses	6	20	21	19	19
Other operating expenses	7	15	44	14	40
Amortization of intangible assets		0	4	0	4
Financial expenses	8	1,987	1,751	1,897	1,603
Operating expenses		2,022	1,819	1,930	1,665
Profit / (loss) before income taxes		4,401	4,671	4,282	4,270
Tax expense / (benefit)		12	7	11	6
Net profit / (loss)		4,389	4,664	4,271	4,264

Balance sheet

		USD m		CHF m	
	Note	31.12.22	31.12.21	31.12.22	31.12.21
Assets					
Liquid assets	9	1,312	1,901	1,213	1,733
Marketable securities	10	106	102	98	93
Other short-term receivables	11	2,638	4,942	2,438	4,505
Accrued income and prepaid expenses	12	839	703	775	641
Total current assets		4,895	7,648	4,524	6,973
Investments in subsidiaries	13	41,199	41,199	38,080	37,560
of which: investment in UBS AG		*40,889*	*40,889*	*37,793*	*37,277*
Financial assets	14	62,975	56,350	58,207	51,373
Other non-current assets	15	336	250	310	228
Total non-current assets		104,509	97,800	96,597	89,161
Total assets		109,404	105,448	101,121	96,133
of which: amounts due from subsidiaries		*67,514*	*63,587*	*62,403*	*57,970*
Liabilities					
Current interest-bearing liabilities	16	4,344	4,732	4,015	4,314
Accrued expenses and deferred income	17	2,084	1,846	1,927	1,683
Total short-term liabilities		6,429	6,578	5,942	5,997
Long-term interest-bearing liabilities	18	61,682	55,034	57,012	50,172
Compensation-related long-term liabilities	19	3,201	3,116	2,959	2,841
Total long-term liabilities		64,883	58,149	59,971	53,013
Total liabilities		71,311	64,727	65,913	59,010
of which: amounts due to subsidiaries		*2,614*	*741*	*2,416*	*675*
Equity					
Share capital	20	359	377	352	370
General reserves		23,826	26,161	23,522	25,682
of which: statutory capital reserve		*23,826*	*26,161*	*23,522*	*25,682*
of which: capital contribution reserve		*23,826*	*26,161*	*23,522*	*25,682*
Voluntary earnings reserve		16,364	14,146	13,620	11,153
Treasury shares	21	(6,844)	(4,629)	(6,557)	(4,345)
of which: against capital contribution reserve		*(2,525)*	*(1,242)*	*(2,407)*	*(1,145)*
Net profit / (loss)		4,389	4,664	4,271	4,264
Equity attributable to shareholders		38,093	40,720	35,209	37,124
Total liabilities and equity		109,404	105,448	101,121	96,133

Statement of proposed appropriation of total profit and dividend distribution out of total profit and capital contribution reserve

The Board of Directors (the BoD) proposes that the Annual General Meeting of Shareholders (the AGM) on 5 April 2023 approve the appropriation of total profit and an ordinary dividend distribution of USD 0.55 (gross) in cash per share of CHF 0.10 nominal value under the terms set out below:

Appropriation of and distribution out of total profit

	USD m	CHF m
	For the year ended	For the year ended
	31.12.22	31.12.22
Net profit for the period	4,389	4,271
Profit / (loss) carried forward	0	0
Total profit available for appropriation	4,389	4,271
Appropriation to voluntary earnings reserve	(3,419)	(3,373)
Dividend distribution: USD 0.55 (gross) per dividend-bearing share, USD 0.275 of which out of total profit[1]	(969)	(897)[2]
Profit / (loss) carried forward	0	0

1 Dividend-bearing shares are all shares issued except for treasury shares held by UBS Group AG as of the record date. The amount of USD 969m presented is based on the total number of shares issued as of 31 December 2022. If the final total amount of the dividend is higher / lower, the difference will be balanced through the appropriation to the voluntary earnings reserve. 2 For illustrative purposes, converted at the closing exchange rate as of 31 December 2022 (CHF / USD 1.08).

Distribution out of capital contribution reserve

	USD m	CHF m
	For the year ended	For the year ended
	31.12.22	31.12.22
Total statutory capital reserve: capital contribution reserve before proposed distribution[1]	23,826	23,522
Dividend distribution: USD 0.55 (gross) per dividend-bearing share, USD 0.275 of which out of capital contribution reserve[2]	(969)	(897)[3]
Total statutory capital reserve: capital contribution reserve after proposed distribution	22,856	22,625

1 The Swiss Federal Tax Administration's current position is that, of the CHF 23.5bn capital contribution reserve available as of 31 December 2022, an amount limited to CHF 8.9bn is available from which dividends may be paid without a Swiss withholding tax deduction. This amount includes a reduction of capital contribution reserves of CHF 1,379m in 2022 (based on the purchase price). 2 Dividend-bearing shares are all shares issued except for treasury shares held by UBS Group AG as of the record date. The amount of USD 969m presented is based on the total number of shares issued as of 31 December 2022. 3 For illustrative purposes, converted at the closing exchange rate as of 31 December 2022 (CHF / USD 1.08).

As set out above, half of the ordinary dividend distribution of USD 0.55 (gross) in cash per share is payable out of total profit and the other half is payable out of the capital contribution reserve. The portion of the dividend paid out of total profit will be subject to a 35% Swiss withholding tax.

The ordinary dividend distribution is declared in US dollars. Shareholders whose shares are held through SIX SIS AG will receive dividends in Swiss francs, based on a published exchange rate calculated up to five decimal places on the day prior to the ex-dividend date. Shareholders holding shares through DTC or directly registered in the US share register with Computershare will be paid dividends in US dollars. The total amount of the dividend distribution will be capped at CHF 3,366m (the Cap). To the extent that the Swiss franc equivalent of the total dividend distribution would exceed the Cap on the day of the AGM, based on the exchange rate determined by the Board of Directors in its reasonable opinion, the US dollar per share amount of the dividend will be reduced on a pro rata basis so that the total Swiss franc amount does not exceed the Cap.

Provided that the proposed dividend distribution out of the total profit and the capital contribution reserve is approved, the payment of the dividend will be made on 14 April 2023 to holders of shares on the record date of 13 April 2023. The shares will be traded ex-dividend as of 12 April 2023 and, accordingly, the last day on which the shares may be traded with entitlement to receive the dividend will be 11 April 2023.

Notes to the UBS Group AG standalone financial statements

Note 1 Corporate information

UBS Group AG is incorporated and domiciled in Switzerland and its registered office is at Bahnhofstrasse 45, CH-8001 Zurich, Switzerland. UBS Group AG operates under Art. 620 et seq. of the Swiss Code of Obligations as an *Aktiengesellschaft* (a corporation limited by shares).

The UBS Group AG standalone financial statements are prepared in accordance with the principles of the Swiss law on accounting and financial reporting (32nd title of the Swiss Code of Obligations).

The significant accounting and valuation principles applied are described in Note 2 Accounting policies.

UBS Group AG is the ultimate holding company of the UBS Group, the grantor of the majority of UBS's deferred compensation plans and the issuer of loss-absorbing capital notes which qualify as Basel III additional tier 1 (AT1) capital on a consolidated UBS Group basis and senior unsecured debt which contributes to the total loss-absorbing capacity (TLAC) of the Group.

The proceeds from the issuances of loss-absorbing AT1 capital notes and TLAC-eligible senior unsecured debt instruments are on lent to UBS AG.

› **Refer to Notes 16 and 18 for more information about the main terms and conditions of the loss-absorbing AT1 capital notes and TLAC-eligible senior unsecured debt instruments issued**

Furthermore, UBS Group AG grants Deferred Contingent Capital Plan (DCCP) awards to UBS Group employees. These DCCP awards also qualify as Basel III AT1 capital on a consolidated UBS Group basis.

As of 31 December 2022, UBS Group AG's distributable items for the purpose of AT1 capital instruments were USD 37.7bn (CHF 34.8bn) (31 December 2021: USD 40.3bn (CHF 36.7bn)). For this purpose, distributable items are defined in the terms and conditions of the relevant instruments as the aggregate of (i) net profits carried forward and (ii) freely distributable reserves, in each case less any amounts that must be contributed to legal reserves under applicable law.

In 2022, as approved by shareholders at the Annual General Meeting (the AGM) held on 6 April 2022, the cancellation of 177,787,273 shares, each with a nominal value of CHF 0.10, acquired under the 2021 share repurchase program from its inception in 2021 until 18 February 2022, was executed. The cancellation of these shares resulted in reclassifications within equity but had no net effect on the total equity attributable to shareholders. Share capital has been reduced by the nominal value of the repurchased shares upon cancellation, i.e., USD 18m (CHF 18m). Following the requirements of Swiss tax law for Switzerland-domiciled companies with shares listed on a Swiss stock exchange, effective 1 January 2020, the capital contribution reserve and the voluntary earnings reserve were each reduced by 50% of the total capital reduction amount exceeding the nominal value upon cancellation of the shares, i.e., each by USD 1,502m (CHF 1,383m).

Following revisions to Swiss Corporate Law that are effective from 1 January 2023, the Board of Directors (the BoD) will propose at the 2023 AGM that the shareholders approve the conversion of the share capital currency of UBS Group AG from the Swiss franc to the US dollar. This would align the share capital currency with the functional currency of UBS Group AG. If the change is approved, the share capital of UBS Group AG will be slightly reduced to a nominal value per share of USD 0.10 (from CHF 0.10 currently), with the amount of the reduction allocated to the capital contribution reserve. If approved, the conversion will be implemented with retroactive effect as of 1 January 2023 for accounting purposes based on the closing exchange rate from 30 December 2022. Total equity reported for UBS Group AG will not change.

Presentation currencies

The primary presentation currency of the standalone financial statements of UBS Group AG is the US dollar, in line with its functional currency. Amounts in Swiss francs are additionally presented for each component of the financial statements. UBS Group AG applies the modified closing rate method for converting US dollar amounts into Swiss francs: assets and liabilities are translated at the closing rate, equity positions at historic rates, and income and expense items at the weighted average rate for the period. All resulting currency translation effects are recognized separately in *Voluntary earnings reserve*, amounting to a negative currency translation effect of CHF 2,343m as of 31 December 2022 (31 December 2021: negative CHF 2,808m).

Foreign currency translation

Transactions denominated in foreign currency are translated into US dollars at the spot exchange rate on the date of the transaction. At the balance sheet date, all current assets and short-term liabilities, as well as *Financial assets* measured at fair value that are denominated in a foreign currency, are translated into US dollars using the closing exchange rate. For *Other non-current assets* and long-term liabilities, where the asset mirrors the terms of a corresponding liability or the asset and liability otherwise form an economic hedge relationship, the asset and liability are treated as one unit of account for foreign currency translation purposes, with offsetting unrealized foreign currency translation gains and losses based on the closing exchange rate presented net in the income statement. *Investments in subsidiaries* measured at historic cost are translated at the spot exchange rate on the date of the transaction. Currency translation effects from dividends paid in Swiss francs are recognized in equity. All other currency translation effects are recognized in the income statement.

The main currency translation rates used by UBS Group AG are provided in Note 32 of the consolidated financial statements.

Marketable securities

Marketable securities include investments in alternative investment vehicles (AIVs) with a short-term holding period. The holding period is deemed short term if the vesting of the awards hedged by the AIV is within 12 months after the balance sheet date. These are equity instruments and are measured at fair value based on quoted market prices or other observable market prices as of the balance sheet date. Gains and losses resulting from fair value changes are recognized in *Financial income* and *Financial expenses,* respectively.

Financial assets

Financial assets include investments in AIVs with a long-term holding period. The holding period is deemed long term if the vesting of the awards hedged by the AIV is more than 12 months after the balance sheet date. These are equity instruments and are measured at fair value based on their quoted market prices or other observable market prices as of the balance sheet date. Gains and losses resulting from fair value changes are recognized in *Financial income* and *Financial expenses,* respectively.

Investments in AIVs that have no quoted market price or no other observable market price are recognized as *Financial assets* and are measured at their acquisition cost adjusted for impairment losses.

Financial assets further include loans granted to UBS AG that substantially mirror the terms of the perpetual AT1 capital notes and the TLAC-eligible senior unsecured debt instruments issued, as well as fixed-term deposits with UBS AG with maturities more than 12 months after the balance sheet date. The loans and deposits are measured at cost value.

› **Refer to Note 14 for more information**

Derivative instruments

UBS Group AG uses derivative instruments to manage exposures to foreign currency risks from investments in foreign subsidiaries. The derivative instruments are entered into with UBS AG, mirroring the conditions of the closing transactions UBS AG enters into with third parties.

Derivative instruments are measured at fair value based on quoted market prices or other observable market prices as of the balance sheet date. Unrealized gains and losses are recognized on the balance sheet as *Accrued income and prepaid expenses* and *Accrued expenses and deferred income*, respectively. Corresponding gains and losses resulting from fair value changes are recognized in *Financial income* and *Financial expenses,* respectively.

Investments in subsidiaries

Investments in subsidiaries are equity interests that are held to carry on the business of the UBS Group or for other strategic purposes. They include all subsidiaries directly held by UBS Group AG through which UBS conducts its business on a global basis. The investments are measured individually and carried at cost less impairment.

› **Refer to Note 13 for more information**
› **Refer to Note 2 in the “Consolidated financial statements” section of this report for a description of businesses of the UBS Group**

Long-term interest-bearing liabilities

Long-term interest-bearing liabilities include perpetual loss-absorbing capital notes that qualify as Basel III AT1 capital and TLAC-eligible senior unsecured debt instruments at Group level. They are measured at nominal value. Any difference to nominal value, e.g., premium, discount or external costs that are directly related to the issue, is deferred as *Other non-current assets* or *Accrued expenses and deferred income* and amortized to *Financial expenses* or *Financial income* over the maturity of the instrument or until the first call date or optional redemption date, where applicable.

› **Refer to Note 18 for more information**

Treasury shares

Treasury shares acquired by UBS Group AG are recognized at acquisition cost and are presented as a deduction from shareholders' equity.

Upon disposal of treasury shares or settlement of related share-based awards, any realized gain or loss is recognized in *Voluntary earnings reserve*. Realized gains and losses from settlement of share-based awards represent the difference between the acquisition cost of the UBS Group AG shares and the grant date fair value of the share-based awards. For the year ended 31 December 2022, a net loss of USD 111m (CHF 102m) from settlement of share-based awards was recognized in *Voluntary earnings reserve* (2021 comparative period: a net gain of USD 9m (CHF 8m)).

For UBS Group AG shares acquired by a direct or indirect subsidiary, a *Reserve for own shares held by subsidiaries* is generally created in UBS Group AG's equity. However, where UBS AG or UBS Switzerland AG acquire UBS Group AG shares and hold such in their trading portfolios, no *Reserve for own shares held by subsidiaries* is created.

› **Refer to Note 21 for more information**

Share-based and other deferred compensation plans

Share-based compensation plans

The grant date fair value of equity-settled share-based compensation awards granted to employees is generally recognized over the vesting period of the awards. Awards granted in the form of UBS Group AG shares and notional shares are settled by delivering UBS Group AG shares at vesting, except in jurisdictions where this is not permitted for legal or tax reasons. They are recognized as *Compensation-related long-term liabilities* if vesting is more than 12 months after the balance sheet date, or as *Accrued expenses and deferred income* if vesting is within 12 months of the balance sheet date. The amount recognized is adjusted for forfeiture assumptions, such that the amount ultimately recognized is based on the number of awards that meet the related service conditions at the vesting date. The grant date fair value is based on the UBS Group AG share price on the date of grant, taking into consideration post-vesting sale and hedge restrictions, dividend rights, non-vesting conditions, and market conditions, where applicable.

Upon settlement of the share-based awards, any realized gain or loss on the treasury shares is recognized in *Voluntary earnings reserve*. Realized gains and losses from settlement of share-based awards represent the difference between the acquisition cost of the UBS Group AG shares and the grant date fair value of the share-based awards.

Other deferred compensation plans

Deferred compensation plans that are not share-based, including DCCP awards and awards in the form of AIVs, are accounted for as cash-settled awards. The present value or fair value of the amount payable to employees that is settled in cash is recognized as a liability generally over the vesting period, as *Compensation-related long-term liabilities* if vesting is more than 12 months after the balance sheet date, and as *Accrued expenses and deferred income* if vesting is within 12 months from the balance sheet date. The liabilities are remeasured at each balance sheet date at the present value of the corresponding DCCP award and the fair value of investments in AIVs. Gains and losses resulting from remeasurement of the liabilities are recognized in *Other operating income* and *Other operating expenses*, respectively.

Recharge of compensation expenses

Expenses related to deferred compensation plans are recharged by UBS Group AG to its subsidiaries employing the personnel. Upon recharge, UBS Group AG recognizes a receivable from its subsidiaries corresponding to a liability representing its obligation toward the employees.

Dispensations in the standalone financial statements

As UBS Group AG prepares consolidated financial statements in accordance with IFRS, UBS Group AG is exempt from various disclosures in the standalone financial statements. The dispensations include the management report and the statement of cash flows, as well as certain note disclosures.

Note 3 Dividend income from investments in subsidiaries

Dividend income from investments in subsidiaries in 2022 consisted of USD 4,200m (CHF 4,087m) received from UBS AG related to the financial year ended 31 December 2021, which was approved by the annual general meeting of the shareholders (the AGM) of UBS AG on 5 April 2022, and USD 173m (CHF 168m) received from UBS Business Solutions AG related to the financial year ended 31 December 2021, which was approved by the AGM of UBS Business Solutions AG on 5 April 2022. In 2021, dividend income from investments in subsidiaries consisted of USD 4,539m (CHF 4,149m) received from UBS AG related to the financial year ended 31 December 2020, which was approved by the AGM of UBS AG on 7 April 2021, USD 133m (CHF 122m) received from UBS Business Solutions AG related to the financial year ended 31 December 2020, which was approved by the AGM of UBS Business Solutions AG on 7 April 2021, and a USD 0.2m (CHF 0.2m) net liquidation dividend received from UBS Group Funding (Switzerland) AG in Liquidation following liquidation of the entity in the course of 2020, which was approved by the extraordinary general meeting of the shareholders of UBS Group Funding (Switzerland) AG in Liquidation held on 8 October 2020.

Note 4 Other operating income

	USD m		CHF m	
	For the year ended		For the year ended	
	31.12.22	31.12.21	31.12.22	31.12.21
Fair value gains on AIV awards	45	0	44	0
Gains related to equity-settled awards	3	12	2	12
Total other operating income	48	12	46	12

Note 5 Financial income

	USD m		CHF m	
	For the year ended		For the year ended	
	31.12.22	31.12.21	31.12.22	31.12.21
Interest income on onward lending to UBS AG[1]	1,929	1,756	1,841	1,608
Interest income on other interest-bearing assets	55	21	53	19
Fair value gains on investments in AIVs	0	23	0	21
Other	18	6	17	6
Total financial income	2,002	1,806	1,911	1,653

1 Interest income on onward lending to UBS AG of the proceeds from the issuances of TLAC-eligible senior unsecured debt and loss-absorbing additional tier 1 perpetual capital notes. Refer to Note 1 for more information.

Note 6 Personnel expenses

Personnel expenses include recharges from UBS AG and UBS Business Solutions AG for personnel-related costs for activities performed by the personnel of those companies for the benefit of UBS Group AG.

UBS Group AG had no employees throughout 2022 and 2021. All employees of the UBS Group, including the members of the Group Executive Board (the GEB) of UBS Group AG, were employed by subsidiaries of UBS Group AG. As of 31 December 2022, the UBS Group employed 72,597 personnel (31 December 2021: 71,385) on a full-time equivalent basis.

Note 7 Other operating expenses

	USD m		CHF m	
	For the year ended		For the year ended	
	31.12.22	31.12.21	31.12.22	31.12.21
Fair value losses on AIV awards	0	23	0	21
Capital tax	5	9	5	8
Other	10	11	10	10
Total other operating expenses	15	44	14	40

Note 8 Financial expenses

	USD m		CHF m	
	For the year ended		For the year ended	
	31.12.22	31.12.21	31.12.22	31.12.21
Interest expense on interest-bearing liabilities	1,931	1,740	1,842	1,593
Fair value losses on investments in AIVs	44	0	42	0
Other	13	11	13	10
Total financial expenses	1,987	1,751	1,897	1,603

Note 9 Liquid assets

As of 31 December 2022, liquid assets consisted of USD 1,039m (CHF 960m) held in current accounts at UBS Switzerland AG and UBS AG and USD 274m (CHF 253m) of time deposits placed with UBS AG. As of 31 December 2021, liquid assets consisted of USD 590m (CHF 538m) held in current accounts at UBS Switzerland AG and UBS AG and USD 1,311m (CHF 1,195m) of time deposits placed with UBS AG.

Note 10 Marketable securities

Marketable securities include investments in alternative investment vehicles (AIVs) related to compensation awards vesting within 12 months after the balance sheet date.

Note 11 Other short-term receivables

	USD m		CHF m	
	31.12.22	31.12.21	31.12.22	31.12.21
Onward lending to UBS AG[1]	2,000	4,252	1,849	3,876
Receivables from employing entities related to compensation awards	590	639	545	583
Other	48	51	44	46
Total other short-term receivables	2,638	4,942	2,438	4,505

1 Short-term receivables from the onward lending to UBS AG of the proceeds from the issuances of TLAC-eligible senior unsecured debt and loss-absorbing additional tier 1 perpetual capital notes. Refer to Note 1 for more information.

Note 12 Accrued income and prepaid expenses

	USD m		CHF m	
	31.12.22	31.12.21	31.12.22	31.12.21
Accrued interest income	839	703	775	641
Other accrued income and prepaid expenses	0	0	0	0
Total accrued income and prepaid expenses	839	703	775	641

Note 13 Investments in subsidiaries

Unless otherwise stated, the subsidiaries listed below have share capital consisting solely of ordinary shares, which are held by UBS Group AG or UBS AG. The proportion of ownership interest held is equal to the voting rights held by UBS Group AG or UBS AG. The country where the respective registered office is located is also the principal place of business. UBS AG operates through a global network of branches and a significant proportion of its business activity is conducted outside Switzerland, in the UK, the US, Singapore, the Hong Kong SAR and other countries. UBS Europe SE has branches and offices in a number of EU Member States, including Germany, Italy, Luxembourg and Spain. Share capital is provided in the currency of the legally registered office.

Individually significant subsidiaries of UBS Group AG as of 31 December 2022

Company	Registered office	Share capital in million		Equity interest accumulated in %
UBS AG	Zurich and Basel, Switzerland	CHF	385.8	100.0
UBS Business Solutions AG[1]	Zurich, Switzerland	CHF	1.0	100.0

1 UBS Business Solutions AG holds subsidiaries in China, India, Israel and Poland.

Individually significant subsidiaries of UBS AG as of 31 December 2022[1]

Company	Registered office	Primary business	Share capital in million		Equity interest accumulated in %
UBS Americas Holding LLC	Wilmington, Delaware, USA	Group Functions	USD	5,150.0[2]	100.0
UBS Americas Inc.	Wilmington, Delaware, USA	Group Functions	USD	0.0	100.0
UBS Asset Management AG	Zurich, Switzerland	Asset Management	CHF	43.2	100.0
UBS Bank USA	Salt Lake City, Utah, USA	Global Wealth Management	USD	0.0	100.0
UBS Europe SE	Frankfurt, Germany	Global Wealth Management	EUR	446.0	100.0
UBS Financial Services Inc.	Wilmington, Delaware, USA	Global Wealth Management	USD	0.0	100.0
UBS Securities LLC	Wilmington, Delaware, USA	Investment Bank	USD	1,283.1[3]	100.0
UBS Switzerland AG	Zurich, Switzerland	Personal & Corporate Banking	CHF	10.0	100.0

1 Includes direct and indirect subsidiaries of UBS AG. 2 Consists of common share capital of USD 1,000 and non-voting preferred share capital of USD 5,150,000,000. 3 Consists of common share capital of USD 100,000 and non-voting preferred share capital of USD 1,283,000,000.

Individually significant subsidiaries of UBS AG are those entities that contribute significantly to the Group's financial position or results of operations, based on a number of criteria, including the subsidiaries' equity and their contribution to the Group's total assets and profit or loss before tax, in accordance with Swiss regulations.

› **Refer to Note 28 in the "Consolidated financial statements" section of this report for more information**

Note 14 Financial assets

	USD m		CHF m	
	31.12.22	31.12.21	31.12.22	31.12.21
Long-term receivables from UBS AG	62,455	55,763	57,727	50,837
of which: onward lending[1]	*61,371*	*54,781*	*56,724*	*49,942*
Investments in alternative investment vehicles at fair value related to awards vesting after 12 months	281	332	260	303
Investments in alternative investment vehicles at cost less impairment	1	2	1	2
Other	238	253	220	230
Total financial assets	62,975	56,350	58,207	51,373

1 Onward lending to UBS AG of the proceeds from the issuances of TLAC-eligible senior unsecured debt and loss-absorbing additional tier 1 perpetual capital notes. Refer to Note 1 for more information.

Note 15 Other non-current assets

	USD m		CHF m	
	31.12.22	31.12.21	31.12.22	31.12.21
Unamortized issuance fees and discounts	303	224	280	204
Receivables from employing entities related to compensation awards	33	26	30	24
Total other non-current assets	336	250	310	228

Note 16 Current interest-bearing liabilities

As of 31 December 2022, current interest-bearing liabilities totaled USD 4,344m (CHF 4,015m), consisting of loss-absorbing additional tier 1 (AT1) perpetual capital notes of USD 2,000m (CHF 1,849m) and loans from UBS AG and UBS Switzerland AG of USD 2,344m (CHF 2,167m). As of 31 December 2021, current interest-bearing liabilities totaled USD 4,732m (CHF 4,314m), consisting of total loss absorbing capacity (TLAC)-eligible senior unsecured debt instruments of USD 4,252m (CHF 3,876m) and loans from UBS AG and UBS Switzerland AG of USD 480m (CHF 437m).

Notes issued, overview by amount, maturity and coupon				31.12.22			31.12.21		
				Carrying amount			Carrying amount		
In m, except where indicated	Contractual maturity	First optional call date	Coupon[1]	in transaction currency	in USD	in CHF	in transaction currency	in USD	in CHF
US dollar-denominated TLAC-eligible senior unsecured notes	1.2.22	n/a	3M USD LIBOR + 153 bps	0	0	0	500	500	456
US dollar-denominated TLAC-eligible senior unsecured notes	1.2.22	n/a	2.65%	0	0	0	2,000	2,000	1,823
Swiss franc-denominated TLAC-eligible senior unsecured notes	22.2.22	n/a	0.75%	0	0	0	300	329	300
Euro-denominated TLAC-eligible senior unsecured notes	16.11.22	n/a	1.75%	0	0	0	1,250	1,423	1,297
US dollar-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	31.1.23[2]	5%	2,000	2,000	1,849	0	0	0
Total notes issued					2,000	1,849		**4,252**	**3,876**

1 For TLAC-eligible senior unsecured notes, the disclosed coupon rate refers to the contractual coupon rate applied from the issue date up to the contractual maturity date or, if applicable, to the first optional call date. For the loss-absorbing additional tier 1 perpetual capital notes, the disclosed coupon rate refers to the contractual fixed coupon rate from the issue date up to the first optional call date. 2 On 5 December 2022 we announced that we intended to redeem the instrument on 31 January 2023, the first call date.

Note 17 Accrued expenses and deferred income

	USD m		CHF m	
	31.12.22	31.12.21	31.12.22	31.12.21
Short-term portion of compensation-related liabilities	1,191	1,157	1,101	1,054
of which: Deferred Contingent Capital Plan	*391*	*384*	*361*	*350*
of which: other deferred compensation plans	*801*	*773*	*740*	*705*
Accrued interest expense	796	664	736	606
Other	97	25	90	23
Total accrued expenses and deferred income	2,084	1,846	1,927	1,683

Note 18 Long-term interest-bearing liabilities

As of 31 December 2022, long-term interest-bearing liabilities totaled USD 61,682m (CHF 57,012m), consisting of loss-absorbing AT1 perpetual capital notes and TLAC-eligible senior unsecured debt instruments of USD 61,444m (CHF 56,792m) and fixed-term loans from UBS AG of USD 238m (CHF 220m). As of 31 December 2021, long-term interest-bearing liabilities totaled USD 55,034m (CHF 50,172m), consisting of loss-absorbing AT1 perpetual capital notes and TLAC-eligible senior unsecured debt instruments of USD 54,781m (CHF 49,942m) and fixed-term loans from UBS AG of USD 253m (CHF 230m).

Notes issued, overview by amount, maturity and coupon

				31.12.22			31.12.21		
				Carrying amount			Carrying amount		
In m, except where indicated	Contractual maturity	First optional call date	Coupon[1]	in transaction currency	in USD	in CHF	in transaction currency	in USD	in CHF
US dollar-denominated TLAC-eligible senior unsecured notes[2]	23.5.23	23.5.22	3.491%	0	0	0	2,000	2,000	1,823
US dollar-denominated TLAC-eligible senior unsecured notes[2]	23.5.23	23.5.22	3M USD LIBOR + 122 bps	0	0	0	1,000	1,000	912
US dollar-denominated TLAC-eligible senior unsecured notes[3]	15.8.23	15.8.22	3M USD LIBOR + 95 bps	0	0	0	1,250	1,250	1,140
US dollar-denominated TLAC-eligible senior unsecured notes[3]	15.8.23	15.8.22	2.859%	0	0	0	2,000	2,000	1,823
Euro-denominated low-trigger loss-absorbing additional tier 1 perpetual capital notes[4]	Perpetual	19.2.22	5.75%	0	0	0	1,000	1,138	1,038
US dollar-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes[5]	Perpetual	31.1.23	5%	0	0	0	2,000	2,000	1,823
Euro-denominated TLAC-eligible senior unsecured notes	4.3.24	n/a	2.125%	750	802	742	750	854	778
Swiss franc-denominated TLAC-eligible senior unsecured notes	18.5.24	18.5.23	0.625%	400	433	400	400	439	400
US dollar-denominated TLAC-eligible senior unsecured notes	30.7.24	30.7.23	1.008%	1,300	1,300	1,202	1,300	1,300	1,185
Yen-denominated TLAC-eligible senior unsecured notes	8.11.24	8.11.23	0.719%	130,000	991	916	130,000	1,130	1,030
Euro-denominated TLAC-eligible senior unsecured notes	30.11.24	30.11.23	1.5%	1,250	1,337	1,236	1,250	1,423	1,297
Swiss franc-denominated TLAC-eligible senior unsecured notes	30.1.25	30.1.24	0.875%	400	433	400	400	439	400
Euro-denominated TLAC-eligible senior unsecured notes	21.3.25	21.3.24	1%	1,500	1,605	1,483	0	0	0
Euro-denominated TLAC-eligible senior unsecured notes	17.4.25	17.4.24	1.25%	1,750	1,872	1,731	1,750	1,992	1,816
US dollar-denominated TLAC-eligible senior unsecured notes	5.8.25	5.8.24	4.49%	1,750	1,750	1,618	0	0	0
US dollar-denominated TLAC-eligible senior unsecured notes	24.9.25	n/a	4.125%	2,500	2,500	2,311	2,500	2,500	2,279
Euro-denominated TLAC-eligible senior unsecured notes	29.1.26	29.1.25	0.25%	1,500	1,605	1,483	1,500	1,708	1,557
Swiss franc-denominated TLAC-eligible senior unsecured notes	23.2.26	n/a	1.25%	150	162	150	150	165	150
US dollar-denominated TLAC-eligible senior unsecured notes	15.4.26	n/a	4.125%	2,000	2,000	1,849	2,000	2,000	1,823
US dollar-denominated TLAC-eligible senior unsecured notes	12.5.26	12.5.25	4.488%	1,200	1,200	1,109	0	0	0
US dollar-denominated TLAC-eligible senior unsecured notes	12.5.26	12.5.25	SOFR + 158bps	600	600	555	0	0	0
Euro-denominated TLAC-eligible senior unsecured notes	1.9.26	1.6.26	1.25%	1,250	1,337	1,236	1,250	1,423	1,297
Euro-denominated TLAC-eligible senior unsecured notes	3.11.26	3.11.25	0.25%	1,250	1,337	1,236	1,250	1,423	1,297
US dollar-denominated TLAC-eligible senior unsecured notes	30.1.27	30.1.26	1.364%	1,300	1,300	1,202	1,300	1,300	1,185
Euro-denominated TLAC-eligible senior unsecured notes	15.6.27	15.6.26	2.75%	1,000	1,070	989	0	0	0
US dollar-denominated TLAC-eligible senior unsecured notes	5.8.27	5.8.26	4.703%	1,750	1,750	1,618	0	0	0

Note 18 Long-term interest-bearing liabilities (continued)

Notes issued, overview by amount, maturity and coupon (continued)				31.12.22			31.12.21		
				Carrying amount			Carrying amount		
In m, except where indicated	Contractual maturity	First optional call date	Coupon[1]	in transaction currency	in USD	in CHF	in transaction currency	in USD	in CHF
US dollar-denominated TLAC-eligible senior unsecured notes	10.8.27	10.8.26	1.494%	2,000	2,000	1,849	2,000	2,000	1,823
Euro-denominated TLAC-eligible senior unsecured notes	24.2.28	n/a	0.25%	1,000	1,070	989	1,000	1,138	1,038
US dollar-denominated TLAC-eligible senior unsecured notes	23.3.28	23.3.27	4.253%	2,000	2,000	1,849	2,000	2,000	1,823
US dollar-denominated TLAC-eligible senior unsecured notes	12.5.28	12.5.27	4.751%	1,200	1,200	1,109	0	0	0
Euro-denominated TLAC-eligible senior unsecured notes	5.11.28	5.11.27	0.25%	1,500	1,605	1,483	1,500	1,708	1,557
Yen-denominated TLAC-eligible senior unsecured notes	9.11.28	9.11.27	0.973%	20,000	152	141	20,000	174	158
Swiss franc-denominated TLAC-eligible senior unsecured notes	9.11.28	9.11.27	0.435%	440	476	440	440	483	440
Swiss franc-denominated TLAC-eligible senior unsecured notes	24.8.29	24.8.28	0.375%	360	389	360	360	395	360
Pound sterling-denominated TLAC-eligible senior unsecured notes	3.11.29	3.11.28	1.875%	400	483	446	400	541	494
Euro-denominated TLAC-eligible senior unsecured notes	15.6.30	15.6.29	3.125%	1,000	1,070	989	0	0	0
US dollar-denominated TLAC-eligible senior unsecured notes	13.8.30	13.8.29	3.126%	1,500	1,500	1,386	1,500	1,500	1,368
Euro-denominated TLAC-eligible senior unsecured notes	3.11.31	n/a	0.875%	1,250	1,337	1,236	1,250	1,423	1,297
US dollar-denominated TLAC-eligible senior unsecured notes	11.2.32	11.2.31	2.095%	2,000	2,000	1,849	2,000	2,000	1,823
Australian dollar-denominated TLAC-eligible senior unsecured notes	25.3.32	25.3.25	Zero coupon accreting (annual yield of 4.5%)	36	25	23	0	0	0
Euro-denominated TLAC-eligible senior unsecured notes	21.9.32	21.9.27	4.03%	30	32	30	0	0	0
US dollar-denominated TLAC-eligible senior unsecured notes	11.2.33	11.2.32	2.746%	1,500	1,500	1,386	0	0	0
Euro-denominated TLAC-eligible senior unsecured notes	24.2.33	n/a	0.625%	1,250	1,337	1,236	1,250	1,423	1,297
US dollar-denominated TLAC-eligible senior unsecured notes	5.8.33	5.8.32	4.988%	1,500	1,500	1,386	0	0	0
Australian dollar-denominated TLAC-eligible senior unsecured notes	18.8.35	18.8.30	Zero coupon accreting (annual yield of 2.5%)	38	26	24	37	27	25
US dollar-denominated TLAC-eligible senior unsecured notes	24.11.35	24.11.23	2.21%	40	40	37	40	40	36
Australian dollar-denominated TLAC-eligible senior unsecured notes	3.12.35	3.12.23	2.3%	45	31	28	45	33	30
US dollar-denominated TLAC-eligible senior unsecured notes	25.2.36	25.2.24	2.37%	25	25	23	25	25	23
US dollar-denominated TLAC-eligible senior unsecured notes	4.3.36	4.3.24	2.49%	40	40	37	40	40	36
Euro-denominated TLAC-eligible senior unsecured notes	17.5.37	16.5.27	3.73%	45	48	45	0	0	0
Australian dollar-denominated TLAC-eligible senior unsecured notes	18.5.37	18.5.25	Zero coupon accreting (simple interest of 8.92%)	57	39	36	0	0	0
Euro-denominated TLAC-eligible senior unsecured notes	15.9.37	15.9.34	4.1%	120	128	119	0	0	0
Euro-denominated TLAC-eligible senior unsecured notes	22.6.42	22.6.29	3.63%	25	27	25	0	0	0
Euro-denominated TLAC-eligible senior unsecured notes	8.9.42	8.9.32	4.09%	37	40	37	0	0	0
Yen-denominated TLAC-eligible senior unsecured notes	28.9.42	n/a	1.79%	10,000	76	70	0	0	0
US dollar-denominated TLAC-eligible senior unsecured notes	11.2.43	11.2.42	3.179%	1,500	1,500	1,386	0	0	0
US dollar-denominated TLAC-eligible senior unsecured notes	29.3.47	29.3.27	Zero coupon accreting (annual yield of 4.02%)	82	82	76	0	0	0
US dollar-denominated TLAC-eligible senior unsecured notes	4.11.49	4.11.24	Zero coupon accreting (annual yield of 3.8%)	157	157	146	152	152	138
US dollar-denominated TLAC-eligible senior unsecured notes	4.3.50	4.3.25	Zero coupon accreting (annual yield of 3.6%)	133	133	123	128	128	117

Note 18 Long-term interest-bearing liabilities (continued)

Notes issued, overview by amount, maturity and coupon (continued)				31.12.22			31.12.21		
				Carrying amount			Carrying amount		
In m, except where indicated	Contractual maturity	First optional call date	Coupon[1]	in transaction currency	in USD	in CHF	in transaction currency	in USD	in CHF
US dollar-denominated TLAC-eligible senior unsecured notes	14.4.50	14.4.25	Zero coupon accreting (annual yield of 4%)	222	222	206	214	214	195
US dollar-denominated TLAC-eligible senior unsecured notes	22.5.50	22.5.25	Zero coupon accreting (annual yield of 3.5%)	109	109	101	106	106	96
US dollar-denominated TLAC-eligible senior unsecured notes	27.5.50	27.5.25	Zero coupon accreting (annual yield of 3.5%)	547	547	505	528	528	482
US dollar-denominated TLAC-eligible senior unsecured notes	22.9.50	22.9.23	Zero coupon accreting (annual yield of 2.8%)	59	59	54	57	57	52
US dollar-denominated TLAC-eligible senior unsecured notes	12.1.51	12.1.26	Zero coupon accreting (annual yield of 2.7%)	105	105	97	103	103	94
US dollar-denominated TLAC-eligible senior unsecured notes	29.1.51	29.1.26	Zero coupon accreting (annual yield of 2.8%)	348	348	322	338	338	309
US dollar-denominated TLAC-eligible senior unsecured notes	26.2.51	26.2.26	Zero coupon accreting (annual yield of 3%)	180	180	166	174	174	159
Australian dollar-denominated TLAC-eligible senior unsecured notes	26.2.51	26.2.26	Zero coupon accreting (annual yield of 3.01%)	95	65	60	92	67	61
US dollar-denominated TLAC-eligible senior unsecured notes	26.5.51	26.5.26	Zero coupon accreting (annual yield of 3.5%)	280	280	259	271	271	247
Euro-denominated TLAC-eligible senior unsecured notes	16.8.52	16.8.32	Zero coupon accreting (annual yield of 4.04%)	98	105	97	0	0	0
Singapore dollar-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	28.11.23	5.875%	700	523	483	700	519	473
US dollar-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	31.1.24	7%	2,500	2,500	2,311	2,500	2,500	2,279
Australian dollar-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	27.8.24	4.375%	700	477	440	700	509	464
Singapore dollar-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	4.9.24	4.85%	750	560	518	750	556	507
US dollar-denominated low-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	19.2.25	7%	1,250	1,250	1,155	1,250	1,250	1,140
US dollar-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	7.8.25	6.875%	1,575	1,575	1,456	1,575	1,575	1,436
Swiss franc-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	13.11.25	3%	275	298	275	275	302	275
US dollar-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	2.6.26	3.875%	750	750	693	750	750	684
US dollar-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	29.7.26	5.125%	750	750	693	750	750	684
US dollar-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	12.2.27	4.875%	1,500	1,500	1,386	0	0	0
Swiss franc-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	16.2.27	3.375%	265	287	265	0	0	0
US dollar-denominated high-trigger loss-absorbing additional tier 1 perpetual capital notes	Perpetual	10.2.31	4.375%	1,500	1,500	1,386	1,500	1,500	1,368
Total notes issued					**61,444**	**56,792**		**54,781**	**49,942**

1 For TLAC-eligible senior unsecured notes, the disclosed coupon rate refers to the contractual coupon rate applied from the issue date up to the contractual maturity date or, if applicable, to the first optional call date. For the loss-absorbing additional tier 1 perpetual capital notes, the disclosed coupon rate refers to the contractual fixed coupon rate from the issue date up to the first optional call date. 2 Instrument was redeemed on 23 May 2022. 3 Instrument was redeemed on 15 August 2022. 4 Instrument was redeemed on 19 February 2022. 5 On 5 December 2022 we announced that we intended to redeem the instrument on 31 January 2023, the first call date.

Note 19 Compensation-related long-term liabilities

	USD m		CHF m	
	31.12.22	31.12.21	31.12.22	31.12.21
Long-term portion of compensation-related liabilities	3,201	3,116	2,959	2,841
of which: Deferred Contingent Capital Plan	*1,209*	*1,231*	*1,118*	*1,122*
of which: other deferred compensation plans	*1,992*	*1,885*	*1,841*	*1,719*
Total compensation-related long-term liabilities	3,201	3,116	2,959	2,841

Note 20 Share capital

As of 31 December 2022, the issued share capital consisted of 3,524,635,722 (31 December 2021: 3,702,422,995) registered shares with a nominal value of CHF 0.10 each. In 2022, as approved by the AGM held on 6 April 2022, the cancellation of 177,787,273 shares, each with a nominal value of CHF 0.10, acquired under the 2021 share repurchase program from its inception in 2021 until 18 February 2022, was executed. Share capital was reduced by the nominal value of the repurchased shares upon cancellation, i.e., USD 18m (CHF 18m).

› **Refer to Note 1 for information on the planned conversion of the share capital currency of UBS Group AG from the Swiss franc to the US dollar**

› **Refer to "UBS shares" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information about UBS Group AG shares**

Note 21 Treasury shares

	Number of registered shares	Average price in USD	Average price in CHF
Balance as of 31 December 2020	**307,477,002**	**13.14**	**12.80**
of which: treasury shares held by UBS Group AG	*306,114,513*	*13.13*	*12.80*
of which: treasury shares held by UBS AG and other subsidiaries	*1,362,490*	*14.13*	*12.62*
Acquisitions	214,650,175	16.34	15.06
Disposals	(4,015,711)	14.95	13.63
Cancellation[1]	(156,632,400)	13.05	12.78
Delivery of shares to settle equity-settled awards	(58,283,738)	13.55	12.75
Balance as of 31 December 2021	**303,195,328**	**15.35**	**14.41**
of which: treasury shares held by UBS Group AG[2]	*301,812,111*	*15.34*	*14.40*
of which: treasury shares held by UBS AG	*1,383,217*	*17.87*	*16.03*
Acquisitions	360,148,093	17.32	16.46
Disposals	(7,112,184)	17.55	16.59
Cancellation[1]	(177,787,273)	17.00	15.66
Delivery of shares to settle equity-settled awards	(60,392,076)	14.56	13.53
Balance as of 31 December 2022	418,051,888	16.42	15.73
of which: treasury shares held by UBS Group AG[2]	*416,881,911*	*16.42*	*15.73*
of which: treasury shares held by UBS AG	*1,169,977*	*18.67*	*17.40*

1 In 2022, as approved by the shareholders at the Annual General Meeting held on 6 April 2022, the cancellation of 177,787,273 shares, each with a nominal value of CHF 0.10, acquired under the 2021 share repurchase program from its inception in 2021 until 18 February 2022, was executed (In 2021, as approved by the shareholders at the Annual General Meeting held on 8 April 2021, the cancellation of 156,632,400 shares, each with a nominal value of CHF 0.10, repurchased under the 2018–2021 share repurchase program, was executed). Refer to Note 1 for more information. 2 Treasury shares held by UBS Group AG had a carrying value of USD 6,844m (CHF 6,557m) as of 31 December 2022 (31 December 2021: USD 4,629m (CHF 4,345m)). Shares acquired under the 2021 and 2022 share repurchase programs are expected to be canceled by means of a capital reduction, whereby the capital contribution reserve within the statutory capital reserve is expected to be reduced by USD 2,525m (CHF 2,417m, based on purchase price), subject to shareholder approval. Refer to "UBS shares" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information.

Additional information

Note 22 Assets pledged to secure own liabilities

As of 31 December 2022, total pledged assets of UBS Group AG amounted to USD 3,401m (CHF 3,143m). These assets consisted of certain liquid assets, marketable securities and financial assets and were pledged to UBS AG. As of 31 December 2021, total pledged assets of UBS Group AG amounted to USD 3,476m (CHF 3,169m). The associated liabilities secured by these pledged assets were USD 2,543m (CHF 2,351m) and USD 676m (CHF 617m) as of 31 December 2022 and 31 December 2021, respectively.

Note 23 Contingent liabilities

UBS Group AG is jointly and severally liable for the combined value added tax (VAT) liability of UBS entities that belong to the VAT group of UBS in Switzerland.

Note 24 Significant shareholders

Shareholders registered in the UBS Group AG share register with 3% or more of the total share capital[1]

% of share capital	31.12.22	31.12.21
Chase Nominees Ltd., London[2]	8.60	8.89
DTC (Cede & Co.), New York[2,3]	7.12	5.78
Nortrust Nominees Ltd., London[2]	4.33	4.80

1 As registration in the UBS share register is optional, shareholders crossing the threshold percentages requiring SIX notification under the FMIA do not necessarily appear in this table. 2 Nominee companies and securities clearing organizations cannot autonomously decide how voting rights are exercised and are therefore not obligated to notify UBS and SIX if they reach, exceed or fall below the threshold percentages requiring disclosure notification under the FMIA. Consequently, they do not appear in the "Shareholders subject to FMIA disclosure notifications" section below. 3 DTC (Cede & Co.), New York, "The Depository Trust Company," is a US securities clearing organization.

General rules

Under the Swiss Federal Act on Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading of 19 June 2015 (the FMIA), anyone directly, indirectly or acting in concert with third parties holding shares in a company listed in Switzerland or holding derivative rights related to shares in such a company directly, indirectly or in concert with third parties must notify the company and the SIX Swiss Exchange (SIX) if the holding reaches, falls below or exceeds one of the following percentage thresholds: 3, 5, 10, 15, 20, 25, 33⅓, 50 or 66⅔% of voting rights, regardless of whether or not such rights may be exercised. Nominee companies that cannot autonomously decide how voting rights are exercised are not required to notify the company and SIX if they reach, exceed or fall below the aforementioned thresholds.

Pursuant to the Swiss Code of Obligations, UBS Group AG discloses in its financial statements the identity of any shareholder with a holding of more than 5% of the total share capital of UBS Group AG.

Shareholders subject to FMIA disclosure notifications

According to the mandatory FMIA disclosure notifications filed with UBS Group AG and SIX, as of 31 December 2022, the following entities held more than 3% of the total share capital of UBS Group AG: BlackRock Inc., New York, which disclosed a holding of 5.23% on 29 June 2022; Dodge & Cox International Stock Fund, San Francisco, which disclosed a holding of 3.02% on 28 January 2022; Massachusetts Financial Services Company, Boston, which disclosed a holding of 3.01% on 25 June 2021; Artisan Partners Limited Partnership, Milwaukee, which disclosed a holding of 3.15% on 18 November 2020; and Norges Bank, Oslo, which disclosed a holding of 3.01% on 25 July 2019.

As registration in the UBS share register is optional, the aforementioned shareholders that crossed the indicated percentage thresholds and were required to notify their holding to UBS and SIX do not necessarily appear in the table above, as such table only discloses registered shareholders.

In accordance with the FMIA, the aforementioned holdings are calculated in relation to the total share capital of UBS Group AG reflected in the Articles of Association at the time of the respective disclosure notification.

› **Refer to *ser-ag.com/en/resources/notifications-market-participants/significant-shareholders.html* for information about disclosures under the FMIA**

Shareholders registered in the UBS Group AG share register with 3% or more of the share capital of UBS Group AG

As a supplement to the mandatory disclosure requirements according to the SIX Swiss Exchange Corporate Governance Directive, the shareholders (acting in their own name or in their capacity as nominees for other investors or beneficial owners) that were registered in the UBS share register with 3% or more of the total share capital of UBS Group AG as of 31 December 2022 or as of 31 December 2021 are listed in the table above.

Cross-shareholdings

UBS Group AG has no cross-shareholdings where reciprocal ownership would be in excess of 5% of capital or voting rights with any other company.

Note 25 Share ownership of the members of the Board of Directors, the Group Executive Board and other employees

Shares awarded

	For the year ended 31.12.22			For the year ended 31.12.21		
	Number of shares	Value of shares in USD m[1]	Value of shares in CHF m[1]	Number of shares	Value of shares in USD m[1]	Value of shares in CHF m[1]
Awarded to members of the BoD	281,112	6	5	361,853	5	5
Awarded to members of the GEB	3,602,659	65	60	5,194,307	76	69
Awarded to other UBS Group employees	58,601,111	1,052	973	63,527,242	928	846
Total	62,484,882	1,123	1,038	69,083,402	1,010	921

1 Shares awarded to members of the BoD during 2022 for the period from the 2021 AGM to the 2022 AGM were valued at CHF 19.194 and shares awarded during 2021 for the period from the 2020 AGM to the 2021 AGM were valued at CHF 13.81 (average closing price of UBS shares over the last 10 trading days leading up to and including the grant date). Shares (including notional shares) awarded to members of the GEB in office during disclosed periods and other UBS Group employees were valued at weighted average grant date fair value (USD 17.96 for the year ended 31 December 2022 and USD 14.61 for the year ended 31 December 2021). For illustrative purposes, the value of the shares was converted at the closing exchange rates as of 31 December 2022 (CHF / USD 1.08) and 31 December 2021 (CHF / USD 1.10), accordingly.

› **Refer to the "Compensation" section of this report for more information about the terms and conditions of the shares awarded to the members of the Board of Directors and the Group Executive Board**

Number of shares of BoD members[1]

Name, function	on 31 December	Number of shares held	Voting rights in %
Colm Kelleher, Chairman[2]	2022	339,084	0.022
	2021	-	
Lukas Gähwiler, Vice Chairman[2, 3]	2022	283,907	0.019
	2021	-	
Axel A. Weber, former Chairman[2]	2022	-	
	2021	1,148,369	0.071
Jeremy Anderson, Senior Independent Director	2022	119,660	0.008
	2021	97,518	0.006
Claudia Böckstiegel, member	2022	7,814	0.001
	2021	0	0.000
William C. Dudley, member	2022	66,646	0.004
	2021	49,714	0.003
Patrick Firmenich, member	2022	27,275	0.002
	2021	0	0.000
Reto Francioni, member[2]	2022	-	
	2021	139,609	0.009
Fred Hu, member	2022	97,543	0.006
	2021	74,481	0.005
Mark Hughes, member	2022	48,497	0.003
	2021	30,263	0.002
Nathalie Rachou, member	2022	31,126	0.002
	2021	18,102	0.001
Julie G. Richardson, member	2022	138,204	0.009
	2021	117,365	0.007
Dieter Wemmer, member	2022	132,320	0.009
	2021	114,086	0.007
Jeanette Wong, member	2022	93,440	0.006
	2021	68,452	0.004
Total	2022	1,385,516	0.090
	2021	1,857,959	0.116

1 Includes blocked and unblocked shares held by BoD members, including those held by related parties. No options were granted in 2022 and 2021. 2 At the 2022 AGM, Lukas Gähwiler and Colm Kelleher were newly elected and Reto Francioni and Axel A. Weber did not stand for re-election. 3 Includes 203,246 unvested shares granted under variable compensation plans with forfeiture provisions as part of Lukas Gähwiler's compensation for his executive roles previously held at UBS.

Note 25 Share ownership of the members of the Board of Directors, the Group Executive Board and other employees (continued)

Share ownership / entitlements of GEB members[1]

Name, function	on 31 December	Number of unvested shares / at risk[2]	Number of vested shares	Total number of shares	Potentially conferred voting rights in %
Ralph A.J.G. Hamers, Group Chief Executive Officer	2022	349,441	5,238	354,679	0.023
	2021	122,453	2,673	125,126	0.008
Christian Bluhm, Group Chief Risk Officer	2022	707,979	0	707,979	0.046
	2021	654,579	226	654,805	0.041
Mike Dargan, Group Chief Digital and Information Officer	2022	386,141	17,955	404,096	0.026
	2021	240,343	82,743	323,086	0.020
Kirt Gardner, former Group Chief Financial Officer	2022	-	-	-	-
	2021	780,640	236,421	1,017,061	0.063
Suni Harford, President Asset Management	2022	1,028,210	44,202	1,072,412	0.070
	2021	636,122	22,199	658,321	0.041
Naureen Hassan, President UBS Americas	2022	0	0	0	0.000
	2021	-	-	-	-
Robert Karofsky, President Investment Bank	2022	1,037,028	364,914	1,401,942	0.092
	2021	851,520	357,064	1,208,584	0.075
Sabine Keller-Busse, President Personal & Corporate Banking and President UBS Switzerland	2022	973,150	566,106	1,539,256	0.101
	2021	798,457	421,491	1,219,948	0.076
Iqbal Khan, President Global Wealth Management and President EMEA	2022	960,301	0	960,301	0.063
	2021	898,111	113,715	1,011,826	0.063
Edmund Koh, President Asia Pacific	2022	724,865	579,937	1,304,802	0.085
	2021	501,322	493,977	995,299	0.062
Barbara Levi, Group General Counsel	2022	407,195	45,818	453,013	0.030
	2021	430,732	0	430,732	0.027
Tom Naratil, former Co-President Global Wealth Management and President UBS Americas	2022	-	-	-	-
	2021	1,374,044	950,682	2,324,726	0.145
Markus Ronner, Group Chief Compliance and Governance Officer	2022	586,283	0	586,283	0.038
	2021	418,452	57,856	476,308	0.030
Sarah Youngwood, Group Chief Financial Officer	2022	299,729	0	299,729	0.020
	2021	-	-	-	-
Total	2022	7,460,322	1,624,170	9,084,492	0.593
	2021	7,706,776	2,739,047	10,445,823	0.650

1 Includes all vested and unvested shares of GEB members, including those held by related parties. No options were held in 2022 and 2021 by any GEB member or any of its related parties. Refer to "Note 27 Employee benefits: variable compensation" in the "Consolidated financial statements" section of our Annual Report 2022 for more information. 2 Includes shares granted under variable compensation plans with forfeiture provisions. For the 2019/20 LTIP award, the values reflect the final value. For all other LTIP awards, the values reflect the fair value awarded at grant. The actual number of shares vesting in the future will be calculated under the terms of the plans. Refer to the "Group compensation" section of this report for more information about the plans.

Note 26 Related parties

Related parties are defined under the Swiss Code of Obligations as direct and indirect participants with voting rights of 20% or more, management bodies (BoD and GEB), external auditors, and direct and indirect investments in subsidiaries. Payables due to members of the GEB and the external auditors are provided in the table below. Amounts due from and due to subsidiaries are provided on the face of the balance sheet.

	USD m		CHF m	
	31.12.22	31.12.21	31.12.22	31.12.21
Payables due to the members of the GEB	110	129	102	118
of which: Deferred Contingent Capital Plan	*44*	*57*	*40*	*52*
of which: other deferred compensation plans	*66*	*72*	*61*	*66*
Payables due to external auditors	0	0	0	0

Ernst & Young Ltd
Aeschengraben 27
P.O. Box
CH-4002 Basel

Phone: +41 58 286 86 86
www.ey.com/ch

To the General Meeting of
UBS Group AG, Zurich

Basel, 3 March 2023

Report of the statutory auditor

Report on the audit of the financial statements

Opinion

We have audited the financial statements of UBS Group AG (the Company), which comprise the Balance Sheet as at 31 December 2022, the Income Statement for the year then ended, and the notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the financial statements comply with Swiss law and the Company's articles of incorporation.

Basis for opinion

We conducted our audit in accordance with Swiss law and Swiss Standards on Auditing (SA-CH). Our responsibilities under those provisions and standards are further described in the "Auditor's responsibilities for the audit of the financial statements" section of our report. We are independent of the Company in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined that there are no key audit matters to communicate in our report.

Other information

The Board of Directors is responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated financial statements, stand-alone financial statements and our auditor's reports thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements, or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Board of Directors' responsibilities for the financial statements
The Board of Directors is responsible for the preparation of the financial statements in accordance with the provisions of Swiss law and the Company's articles of incorporation, and for such internal control as the Board of Directors determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern, and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with Swiss law and SA-CH will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on EXPERTsuisse's website at: https://www.expertsuisse.ch/en/audit-report. This description forms an integral part of our report.

Report on other legal and regulatory requirements

In accordance with Art. 728a para. 1 item 3 CO and PS-CH 890, we confirm that an internal control system exists, which has been designed for the preparation of the financial statements according to the instructions of the Board of Directors.

Furthermore, we confirm that the proposed appropriation of available earnings complies with Swiss law and the Company's articles of incorporation. We recommend that the financial statements submitted to you be approved.

Ernst & Young Ltd

Maurice McCormick Licensed audit expert (Auditor in charge)	Eveline Hunziker Licensed audit expert

Significant regulated subsidiary and sub-group information

Financial and regulatory key figures for our significant regulated subsidiaries and sub-groups

	UBS AG (standalone)		UBS Switzerland AG (standalone)		UBS Europe SE (consolidated)		UBS Americas Holding LLC (consolidated)	
All values in million, except where indicated	*USD*		*CHF*		*EUR*		*USD*	
Financial and regulatory requirements	Swiss GAAP Swiss SRB rules		Swiss GAAP Swiss SRB rules		IFRS EU regulatory rules		US GAAP US Basel III rules	
As of or for the year ended	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Financial information[1]								
Income statement								
Total operating income[2]	15,759	16,293	8,760	8,490	1,158	1,123	13,575	14,490
Total operating expenses	8,505	9,712	5,458	5,472	794	800	12,351	11,925
Operating profit / (loss) before tax	7,253	6,581	3,302	3,018	364	323	1,224	2,565
Net profit / (loss)	7,157	6,548	2,707	2,452	262	227	511	1,812
Balance sheet								
Total assets	504,767	509,851	315,657	320,656	47,978	46,411	201,777	209,718
Total liabilities	447,406	455,446	300,164	305,919	44,360	42,664	176,309	182,633
Total equity	57,361	54,405	15,493	14,736	3,617	3,747	25,468	27,085
Capital[3]								
Common equity tier 1 capital	53,995	52,818	12,586	12,609	2,441	2,764	11,367	13,002
Additional tier 1 capital	11,841	13,840	5,393	5,387	600	290	5,082	4,049
Total going concern capital / Tier 1 capital	65,836	66,658	17,978	17,996	3,041	3,054	16,449	17,051
Tier 2 capital	2,949	3,129					131	125
Total capital					3,041	3,054	16,580	17,176
Total gone concern loss-absorbing capacity	46,982	44,250	11,267	10,853	2,130[4]	2,414[4]	7,400[5]	7,000[5]
Total loss-absorbing capacity	112,818	110,908	29,245	28,849	5,171	5,468	23,849	24,051
Risk-weighted assets and leverage ratio denominator[3]								
Risk-weighted assets	332,864	317,913	107,208	106,399	10,726	12,328	70,739	72,979
Leverage ratio denominator	575,461	593,868	332,280	339,788	41,818	46,660	194,003	188,130[6]
Supplementary leverage ratio denominator							214,709	212,167
Capital and leverage ratios (%)[3]								
Common equity tier 1 capital ratio	16.2	16.6	11.7	11.9	22.8	22.4	16.1	17.8
Going concern capital ratio / Tier 1 capital ratio	19.8	21.0	16.8	16.9	28.3	24.8	23.3	23.4
Total capital ratio					28.3	24.8	23.4	23.5
Total loss-absorbing capacity ratio			27.3	27.1	48.2	44.4	33.7	33.0
Tier 1 leverage ratio					7.3	6.5	8.5	9.1
Supplementary tier 1 leverage ratio							7.7	8.0
Going concern leverage ratio	11.4	11.2	5.4	5.3				
Total loss-absorbing capacity leverage ratio			8.8	8.5	12.4	11.7	12.3	12.8
Gone concern capital coverage ratio	117.1	112.0						
Liquidity coverage ratio[3]								
High-quality liquid assets (bn)	101.6	89.5	88.9	91.3	20.6	17.1	26.3	32.4
Net cash outflows (bn)	53.6	52.2	62.4	64.1	13.1	10.1	18.3	22.0
Liquidity coverage ratio (%)	191.2[7]	173.2	142.4[8]	142.6	158.7	170.3	143.5	147.2
Net stable funding ratio[3,9]								
Total available stable funding (bn)	254.4	258.0	221.7	225.2	13.9	15.4		
Total required stable funding (bn)	280.2	289.2	162.3	158.1	7.9	9.0		
Net stable funding ratio (%)	90.8[10]	89.2	136.6[10]	142.5	174.6	171.3		
Other								
Joint and several liability between UBS AG and UBS Switzerland AG (bn)[11]			4	5				

1 The financial information disclosed does not represent financial statements under the respective GAAP / IFRS. 2 The total operating income includes credit loss expense / (release). 3 Refer to the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" at ubs.com/investors, for more information. 4 Consists of positions that meet the conditions laid down in Art. 72a–b of the Capital Requirements Regulation (CRR) II with regard to contractual, structural or legal subordination. 5 Consists of eligible long-term debt that meets the conditions specified in 12 CFR 252.162 of the final TLAC rules. Total loss-absorbing capacity is the sum of tier 1 capital (excluding minority interest) and eligible long-term debt. 6 The leverage ratio denominator as of 31 December 2021 has been aligned with UBS Americas Holding LLC's reported figure in the FR-Y9C report, which was filed with the Board of Governors of the Federal Reserve. 7 In the fourth quarter of 2022, the liquidity coverage ratio (the LCR) of UBS AG was 191.2%, remaining above the prudential requirements communicated by FINMA. 8 In the fourth quarter of 2022, the LCR of UBS Switzerland AG, which is a Swiss SRB, was 142.4%, remaining above the prudential requirement communicated by FINMA in connection with the Swiss Emergency Plan. 9 For UBS Americas Holding LLC consolidated, the NSFR requirement became effective as of 1 July 2021 and related disclosures will come into effect in the second quarter of 2023. 10 In accordance with Art. 17h para. 3 and 4 of the Liquidity Ordinance, UBS AG standalone is required to maintain a minimum NSFR of at least 80% without taking into account excess funding of UBS Switzerland AG and 100% after taking into account such excess funding. 11 Refer to the "Capital, liquidity and funding, and balance sheet" section of this report for more information about the joint and several liability. Under certain circumstances, the Swiss Banking Act and FINMA's Banking Insolvency Ordinance authorize FINMA to modify, extinguish or convert to common equity liabilities of a bank in connection with a resolution or insolvency of such bank.

UBS Group AG is a holding company and conducts substantially all of its operations through UBS AG and subsidiaries thereof. UBS Group AG and UBS AG have contributed a significant portion of their respective capital to, and provide substantial liquidity to, such subsidiaries. Many of these subsidiaries are subject to regulations requiring compliance with minimum capital, liquidity and similar requirements. The table in this section summarizes the regulatory capital components and capital ratios of our significant regulated subsidiaries and sub-groups determined under the regulatory framework of each subsidiary's or sub-group's home jurisdiction.

› **Refer to "Capital and capital ratios of our significant regulated subsidiaries" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information**

› **Refer to "Note 22 Restricted and transferred financial assets" in the "Consolidated financial statements" section of this report for more information**

Supervisory authorities generally have discretion to impose higher requirements or to otherwise limit the activities of subsidiaries. Supervisory authorities also may require entities to measure capital and leverage ratios on a stressed basis and may limit the ability of an entity to engage in new activities or take capital actions based on the results of those tests.

Following the completion of the annual Dodd–Frank Act Stress Test (DFAST) and the Comprehensive Capital Analysis and Review (CCAR), UBS Americas Holding LLC was assigned a stress capital buffer (an SCB) of 4.8% (previously 7.1%) under the SCB rule as of 1 October 2022, resulting in a total common equity tier 1 capital requirement of 9.3%.

Standalone regulatory information for UBS AG and UBS Switzerland AG, as well as consolidated regulatory information for UBS Europe SE and UBS Americas Holding LLC, is provided in the 31 December 2022 Pillar 3 Report, available under "Pillar 3 disclosures" *at ubs.com/investors*.

Standalone financial statements for UBS Group AG, as well as standalone financial statements and regulatory information for UBS AG and UBS Switzerland AG, are available under "Holding company and significant regulated subsidiaries and sub-groups" at *ubs.com/investors.*

Additional regulatory information

Table of contents

UBS Group AG consolidated supplemental disclosures required under SEC regulations

A – Introduction

The following pages contain supplemental UBS Group AG disclosures that are required under SEC regulations. UBS Group AG's consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (the IASB) and are denominated in US dollars (USD), which is also the functional currency of: UBS Group AG; UBS AG's Head Office; UBS AG London Branch; and UBS's US-based operations.

B – Selected financial data

Selected information

	As of or for the year ended		
	31.12.22	31.12.21	31.12.20
Personnel (full-time equivalents)	72,597	71,385	71,551
Americas	21,819	21,317	21,394
of which: USA	*21,032*	*20,537*	*20,528*
Asia Pacific	16,489	15,618	15,353
Europe, Middle East and Africa (excluding Switzerland)	14,342	14,091	13,899
of which: UK	*6,234*	*6,051*	*6,069*
of which: rest of Europe (excluding Switzerland)	*7,823*	*7,826*	*7,652*
of which: Middle East and Africa	*285*	*215*	*178*
Switzerland	19,947	20,359	20,904
Registered ordinary shares (number)[1]	3,524,635,722	3,702,422,995	3,859,055,395
Treasury shares (number)[1]	416,909,010	302,815,328	307,477,002
Ordinary cash dividends declared per share (CHF)[2,3]		0.47	0.34
Ordinary cash dividends declared per share (USD)[2,3]	0.55	0.50	0.37

1 Refer to "UBS shares" in the "Capital, liquidity and funding, and balance sheet" section of this report for more information. 2 Dividends and / or distributions out of the capital contribution reserve are normally approved and paid in the year subsequent to the reporting period. Beginning in 2020, dividends have been declared in US dollars. The Swiss franc equivalent amount for the 2022 dividend will be determined after the Annual General Meeting using the exchange rate applicable on that date and is therefore not provided in this table. 3 Refer to "Statement of proposed appropriation of total profit and dividend distribution out of total profit and capital contribution reserve" in the "Standalone financial statements" section of this report for more information.

Dividends received from investments in subsidiaries

In 2022, UBS Group AG received dividends of USD 4,373m (2021: USD 4,672m; 2020: USD 3,853m) from its subsidiaries. Dividends disclosed have been translated to US dollars from the functional currency of the entity paying the dividend, using the closing exchange rate of the month the dividend was received.

Balance sheet data

USD m	31.12.22	31.12.21	31.12.20
Assets			
Cash and balances at central banks	169,445	192,817	158,231
Loans and advances to banks	14,792	15,480	15,444
Receivables from securities financing transactions at amortized cost	67,814	75,012	74,210
Cash collateral receivables on derivative instruments	35,032	30,514	32,737
Loans and advances to customers	387,220	397,761	379,528
Other financial assets measured at amortized cost	53,264	26,209	27,194
Total financial assets measured at amortized cost	727,568	737,794	687,345
Financial assets at fair value held for trading	107,866	130,821	125,397
of which: assets pledged as collateral that may be sold or repledged by counterparties	*36,742*	*43,397*	*47,098*
Derivative financial instruments	150,108	118,142	159,617
Brokerage receivables	17,576	21,839	24,659
Financial assets at fair value not held for trading	59,796	60,080	80,364
Total financial assets measured at fair value through profit or loss	335,347	330,882	390,037
Financial assets measured at fair value through other comprehensive income	2,239	8,844	8,258
Investments in associates	1,101	1,243	1,557
Property, equipment and software	12,288	12,888	13,109
Goodwill and intangible assets	6,267	6,378	6,480
Deferred tax assets	9,389	8,876	9,212
Other non-financial assets	10,166	10,277	9,768
Total assets	1,104,364	1,117,182	1,125,765
Liabilities			
Amounts due to banks	11,596	13,101	11,050
Payables from securities financing transactions at amortized cost	4,202	5,533	6,321
Cash collateral payables on derivative instruments	36,436	31,798	37,312
Customer deposits	525,051	542,007	524,605
Debt issued measured at amortized cost	114,621	139,155	139,232
Other financial liabilities measured at amortized cost	9,575	9,001	9,729
Total financial liabilities measured at amortized cost	701,481	740,595	728,250
Financial liabilities at fair value held for trading	29,515	31,688	33,595
Derivative financial instruments	154,906	121,309	161,102
Brokerage payables designated at fair value	45,085	44,045	38,742
Debt issued designated at fair value	73,638	73,799	61,243
Other financial liabilities designated at fair value	30,237	30,074	30,387
Total financial liabilities measured at fair value through profit or loss	333,381	300,916	325,069
Provisions	3,243	3,518	2,828
Other non-financial liabilities	9,040	11,151	9,854
Total liabilities	1,047,146	1,056,180	1,066,000
Equity attributable to shareholders	56,876	60,662	59,445
Equity attributable to non-controlling interests	342	340	319
Total equity	57,218	61,002	59,765
Total liabilities and equity	1,104,364	1,117,182	1,125,765

C – Information about the company

Property, plant and equipment

As of 31 December 2022, UBS operated in about 677 business and banking locations worldwide, of which approximately 33% were in Switzerland, 48% in the Americas, 9% in the rest of Europe, the Middle East and Africa, and 10% in Asia Pacific. Of the business and banking locations in Switzerland, 23% were owned directly by UBS, with the remainder, along with most of UBS's offices outside Switzerland, being held under commercial leases. These premises are subject to continuous maintenance and upgrading and are considered suitable and adequate for current and anticipated operations.

D – Information required by Subpart 1400 of Regulation S-K

Selected statistical information

The tables below set forth selected statistical information regarding the Group's banking operations extracted from its financial statements. Unless otherwise indicated, average balances for the years ended 31 December 2022, 31 December 2021 and 31 December 2020 are calculated from monthly data. Unless otherwise indicated, the distinction between domestic (Swiss) and foreign (non-Swiss) is generally based on the booking location.

Average balances and interest rates

The tables below set forth average interest-earning assets and average interest-bearing liabilities, along with the average yield, for 2022, 2021 and 2020. Refer to "Note 3 Net interest income and other net income from financial instruments measured at fair value through profit or loss" in the "Consolidated financial statements" section of this report for more information about interest income and interest expense.

For the year ended	31.12.22			31.12.21			31.12.20		
USD m, except where indicated	Average balance	Interest income	Average yield (%)	Average balance	Interest income	Average yield (%)	Average balance	Interest income	Average yield (%)
Assets									
Balances at central banks									
Domestic	99,777	92	0.1	98,804	(105)	(0.1)	90,234	(112)	(0.1)
Foreign	88,267	595	0.7	71,529	(31)	0.0	51,611	7	0.0
Loans and advances to banks									
Domestic	2,966	50	1.7	3,158	40	1.3	2,930	43	1.5
Foreign	12,345	8	0.1	13,074	12	0.1	12,089	31	0.3
Receivables from securities financing transactions measured at amortized cost[1]									
Domestic	6,431	30	0.5	9,435	(28)	(0.3)	4,746	8	0.2
Foreign	70,942	1,105	1.6	79,297	234	0.3	92,098	551	0.6
Loans and advances to customers									
Domestic	223,970	3,187	1.4	228,070	3,211	1.4	210,971	3,014	1.4
Foreign	160,509	4,829	3.0	160,902	2,700	1.7	138,515	3,139	2.3
Financial assets at fair value[1,2]									
Domestic	5,892	50	0.8	10,006	11	0.1	12,455	40	0.3
Foreign	151,504	2,113	1.4	169,267	1,203	0.7	192,251	1,826	0.9
Other interest-earning assets									
Domestic	8,226	125	1.5	7,477	121	1.6	8,064	136	1.7
Foreign	63,107	858	1.4	47,040	298	0.6	45,442	386	0.8
Total interest-earning assets[3]	893,936	13,043	1.5	898,059	7,666	0.9	861,406	9,068	1.1
Net interest income on swaps		1,804			1,552			1,134	
Interest income on off-balance sheet securities and other		677			472			386	
Interest income and average interest-earning assets	893,936	15,525[4]	1.7	898,059	9,689[4]	1.1	861,406	10,588[4]	1.2
Non-interest-earning assets[5]	299,488			298,224			310,129		
Total average assets	1,193,424			1,196,284			1,171,535		

1 Reverse repurchase agreements are presented on a gross basis and therefore, for the purpose of this disclosure, do not reflect the effect of netting permitted under IFRS. 2 Includes financial assets at fair value held for trading, financial assets at fair value not held for trading, financial assets at fair value through other comprehensive income and brokerage receivables. 3 Non-taxable positions and amounts were not material for the years presented. 4 For the purpose of this disclosure, negative interest income on assets is presented as a reduction to interest income, while in the consolidated income statement negative interest income on assets is presented as interest expense. Refer to Note 3 Net interest income and other net income from financial instruments measured at fair value through profit or loss in the "Consolidated financial statements" section of this report for more information. 5 Mainly includes derivative financial instruments, equity instruments at fair value held for trading and financial assets for unit-linked investment contracts.

Average balances and interest rates (continued)

For the year ended	31.12.22			31.12.21			31.12.20		
USD m, except where indicated	Average balance	Interest expense	Average interest rate (%)	Average balance	Interest expense	Average interest rate (%)	Average balance	Interest expense	Average interest rate (%)
Liabilities and equity									
Amount due to banks									
Domestic	10,733	3	0.0	10,369	(32)	(0.3)	8,097	(9)	(0.1)
Foreign	3,255	43	1.3	2,897	18	0.6	3,169	26	0.8
Payables from securities financing transactions measured at amortized cost[1]									
Domestic	3,357	40	1.2	4,786	1	0.0	3,888	6	0.2
Foreign	13,351	289	2.2	14,161	209	1.5	18,793	174	0.9
Customer deposits									
Domestic	272,926	(82)	0.0	289,096	(290)	(0.1)	263,619	(173)	(0.1)
of which: demand deposits	*147,903*	*(149)*	*(0.1)*	*160,019*	*(273)*	*(0.2)*	*137,599*	*(166)*	*(0.1)*
of which: savings and sweep deposits	*119,685*	*6*	*0.0*	*126,290*	*4*	*0.0*	*121,793*	*3*	*0.0*
of which: time deposits	*5,337*	*60*	*1.1*	*2,786*	*(20)*	*(0.7)*	*4,227*	*(9)*	*(0.2)*
Foreign	246,072	1,819	0.7	232,165	107	0.0	214,785	552	0.3
of which: demand deposits	*66,987*	*120*	*0.2*	*82,226*	*(31)*	*0.0*	*64,957*	*(6)*	*0.0*
of which: savings and sweep deposits	*111,130*	*578*	*0.5*	*99,847*	*81*	*0.1*	*71,341*	*194*	*0.3*
of which: time deposits	*67,955*	*1,121*	*1.7*	*50,092*	*58*	*0.1*	*78,488*	*363*	*0.5*
Commercial paper									
Domestic	1	0	0.0	292	0	0.0	130	0	(0.3)
Foreign	20,452	256	1.3	24,461	33	0.1	17,098	120	0.7
Other short-term debt issued measured at amortized cost									
Domestic	366	4	1.2	13	0	(0.1)	10	0	0.0
Foreign	11,927	124	1.0	18,473	37	0.2	16,989	147	0.9
Long-term debt issued measured at amortized cost									
Domestic	67,462	1,946	2.9	67,916	1,789	2.6	64,899	1,988	3.1
Foreign	22,929	439	1.9	27,820	491	1.8	27,100	581	2.1
Financial liabilities at fair value (excluding debt issued designated at fair value)[1,2]									
Domestic	291	11	3.7	421	3	0.8	700	2	0.3
Foreign	139,657	1,392	1.0	137,268	13	0.0	145,398	324	0.2
Debt issued designated at fair value									
Domestic	9,278	127	1.4	9,905	48	0.5	4,376	35	0.8
Foreign	63,470	1,283	2.0	60,388	429	0.7	56,442	801	1.4
Other interest-bearing liabilities									
Domestic	2,883	14	0.5	2,884	(7)	(0.2)	3,333	(6)	(0.2)
Foreign	38,938	432	1.1	34,943	105	0.3	38,606	191	0.5
Total interest-bearing liabilities	927,347	8,142	0.9	938,259	2,954	0.3	887,433	4,759	0.5
Swap interest on hedged debt issued and other swaps		40			(765)			(608)	
Interest expense on off-balance sheet securities and other		723			795			576	
Interest expense and average interest-bearing liabilities	927,347	8,904[3]	1.0	938,259	2,985[3]	0.3	887,433	4,726[3]	0.5
Non-interest-bearing liabilities[4]	208,049			198,130			226,388		
Total liabilities	1,135,396			1,136,389			1,113,820		
Total equity	58,028			59,895			57,715		
Total average liabilities and equity	1,193,424			1,196,284			1,171,535		
Net interest income		6,621			6,705			5,862	
Net yield on interest-earning assets			0.7			0.7			0.7

1 Repurchase agreements are presented on a gross basis and therefore, for the purpose of this disclosure, do not reflect the effect of netting permitted under IFRS. 2 Includes financial liabilities at fair value held for trading, other financial liabilities designated at fair value and brokerage payables designated at fair value. 3 For the purpose of this disclosure, negative interest expense on liabilities is presented as a reduction to interest expense, while in the consolidated income statement negative interest income on liabilities is presented as interest income. Refer to Note 3 Net interest income and other net income from financial instruments measured at fair value through profit or loss in the "Consolidated financial statements" section of this report for more information. 4 Mainly includes derivative financial instruments, equity instruments at fair value held for trading and financial liabilities related to unit-linked investment contracts.

The percentage of total average interest-earning assets attributable to foreign activities was 61% for 2022 (2021: 60%; 2020: 62%). The percentage of total average interest-bearing liabilities attributable to foreign activities was 60% for 2022 (2021: 59%; 2020: 61%). All assets and liabilities are translated into US dollars at uniform month-end rates. Interest income and expense are translated at monthly average rates.

Average rates earned and paid on assets and liabilities can change from period to period, based on the changes in interest rates in general, but are also affected by changes in the currency mix included in the assets and liabilities. Tax-exempt income is not recorded on a tax-equivalent basis. For all three years presented, tax-exempt income is considered to be insignificant and the effect from such income is therefore negligible.

Analysis of changes in interest income and expense

The tables below provide information, by categories of interest-earning assets and interest-bearing liabilities, about the changes in interest income and expense due to changes in volume and interest rates for the year ended 31 December 2022 compared with the year ended 31 December 2021, and for the year ended 31 December 2021 compared with the year ended 31 December 2020. The change in average volume represents the change in the current average balance compared to the average balance from the prior year with respect to the average rate of the prior year. The change in average rate represents the difference between the net change in interest income and expense and the change in average volume.

	2022 compared with 2021			2021 compared with 2020		
	Increase / (decrease) due to changes in			Increase / (decrease) due to changes in		
USD m	Average volume	Average interest rate	Net change	Average volume	Average interest rate	Net change
Interest income from interest-earning assets						
Balances at central banks						
Domestic	(1)	198	197	(9)	16	7
Foreign	0	626	626	0	(38)	(38)
Loans and advances to banks						
Domestic	(2)	12	10	3	(6)	(3)
Foreign	(1)	(3)	(4)	3	(23)	(20)
Receivables from securities financing transactions measured at amortized cost						
Domestic	9	49	58	9	(44)	(35)
Foreign	(25)	896	871	(77)	(240)	(317)
Loans and advances to customers						
Domestic	(57)	34	(23)	239	(42)	197
Foreign	(7)	2,135	2,128	515	(954)	(439)
Financial assets at fair value						
Domestic	(4)	43	39	(7)	(22)	(29)
Foreign	(124)	1,034	910	(207)	(416)	(623)
Other interest-earning assets						
Domestic	12	(8)	4	(10)	(5)	(15)
Foreign	102	458	560	13	(101)	(88)
Interest income						
Domestic	(43)	328	285	225	(103)	122
Foreign	(55)	5,147	5,092	247	(1,771)	(1,524)
Total interest income from interest-earning assets	(98)	5,475	5,377	472	(1,874)	(1,402)
Net interest income on swaps			253			418
Interest income on off-balance sheet securities and other			205			86
Total interest income			5,836			(899)

Analysis of changes in interest income and expense (continued)

	2022 compared with 2021			2021 compared with 2020		
	Increase / (decrease) due to changes in			Increase / (decrease) due to changes in		
USD m	Average volume	Average interest rate	Net change	Average volume	Average interest rate	Net change
Interest expense on interest-bearing liabilities						
Amount due to banks						
Domestic	(1)	36	35	(2)	(21)	(23)
Foreign	2	23	25	(2)	(6)	(8)
Payables from securities financing transactions measured at amortized cost						
Domestic	0	39	39	2	(7)	(5)
Foreign	(12)	92	80	(42)	76	34
Customer deposits						
Domestic	2	206	208	(19)	(98)	(117)
of which: demand deposits	*21*	*104*	*125*	*(22)*	*(86)*	*(108)*
of which: savings and sweep deposits	*0*	*2*	*2*	*0*	*1*	*1*
of which: time deposits	*(19)*	*99*	*80*	*3*	*(14)*	*(11)*
Foreign	6	1,707	1,713	52	(497)	(445)
of which: demand deposits	*6*	*145*	*151*	*(2)*	*(24)*	*(26)*
of which: savings and sweep deposits	*9*	*488*	*497*	*78*	*(192)*	*(114)*
of which: time deposits	*(9)*	*1,073*	*1,064*	*(24)*	*(281)*	*(305)*
Commercial paper						
Domestic	0	0	0	0	0	0
Foreign	(5)	228	223	52	(138)	(86)
Other short-term debt issued measured at amortized cost						
Domestic	0	5	5	0	0	0
Foreign	(13)	100	87	13	(123)	(110)
Long-term debt issued measured at amortized cost						
Domestic	(12)	170	158	94	(293)	(199)
Foreign	(86)	34	(52)	15	(105)	(90)
Financial liabilities at fair value (excluding debt issued designated at fair value)						
Domestic	(1)	8	7	(1)	2	1
Foreign	0	1,379	1,379	(16)	(295)	(311)
Debt issued designated at fair value						
Domestic	(3)	82	79	44	(31)	13
Foreign	22	832	854	55	(427)	(372)
Other interest-bearing liabilities						
Domestic	0	21	21	1	(2)	(1)
Foreign	12	316	328	(18)	(68)	(86)
Interest expense						
Domestic	(15)	567	552	119	(450)	(331)
Foreign	(74)	4,710	4,636	109	(1,583)	(1,474)
Total interest expense on interest-bearing liabilities	(89)	5,277	5,188	228	(2,033)	(1,805)
Swap interest on hedged debt issued and other swaps			805			(157)
Interest expense on off-balance sheet securities and other			(73)			220
Total interest expense			5,920			(1,742)

Deposits

The table below analyzes average deposits and average rates on each deposit category for the years ended 31 December 2022, 2021 and 2020. For the purpose of this disclosure, foreign deposits represent deposits from depositors who are based outside of Switzerland. Deposits by foreign depositors in domestic offices were USD 59,744m as of 31 December 2022 (31 December 2021: USD 77,011m; 31 December 2020: USD 76,167m).

	31.12.22		31.12.21		31.12.20	
USD m, except where indicated	Average deposits	Average rate (%)	Average deposits	Average rate (%)	Average deposits	Average rate (%)
Due to banks						
Domestic						
Demand deposits	908	(0.3)	927	(0.5)	1,037	(0.4)
Time deposits	2,793	0.5	3,026	0.0	1,775	0.4
Total domestic	3,700	0.3	3,953	(0.1)	2,812	0.1
Foreign[1]						
Interest-bearing deposits	10,288	0.3	9,313	(0.1)	8,454	0.1
Total due to banks	13,988	0.3	13,266	(0.1)	11,266	0.1
Customer deposits						
Domestic						
Demand deposits	95,866	(0.1)	101,338	(0.2)	90,070	(0.1)
Savings and sweep deposits	109,039	0.0	114,792	0.0	110,328	0.0
Time deposits	8,825	0.2	8,371	(0.4)	17,610	(0.1)
Total domestic	213,730	0.0	224,502	(0.1)	218,008	(0.1)
Foreign[1]						
Demand deposits	119,024	0.1	140,906	(0.1)	112,486	0.0
Savings and sweep deposits	121,776	0.5	111,345	0.1	82,806	0.2
Time deposits	64,468	1.8	44,507	0.1	65,104	0.5
Total foreign	305,267	0.6	296,758	0.0	260,397	0.2
Total customer deposits	518,997	0.3	521,260	0.0	478,404	0.1

1 For the purpose of this table, the distinction between foreign and domestic deposits is based on the domicile of the depositor, while foreign and domestic deposits disclosed in previous tables are based on the booking location.

Uninsured deposits

From the combined total of Due to banks and Customer deposits as of 31 December 2022, total estimated uninsured deposits were USD 362bn (31 December 2021: USD 392bn; 31 December 2020: USD 380bn). Uninsured deposits are deposits that are in excess of local deposit insurance or protection scheme limits in the key locations in which UBS operates, calculated based on the respective local regulations, as well as deposits in uninsured accounts. The main deposit insurance schemes applicable to UBS deposits are the Swiss depositor protection scheme in Switzerland (which protects applicable deposits up to a maximum of CHF 100,000 per client and per bank or securities firm), the Compensation Scheme of German Banks, in combination with the Deposit Protection Fund of the Association of German Banks in Germany (which protects applicable deposits up to a maximum of EUR 456m per client) and the Federal Deposit Insurance Corporation (the FDIC) scheme in the Americas (which protects applicable deposits up to a maximum of USD 250,000 per depositor, per insured bank, for each account ownership category).

The table below presents the maturity of estimated uninsured time deposits as of 31 December 2022. Where a depositor holds multiple accounts, which in aggregate are in excess of a deposit insurance or protection limit, the insured amount is first allocated to the account with the shortest time to maturity.

USD m	Uninsured time deposits[1]
Within 3 months	93,030
3 to 6 months	10,962
6 to 12 months	7,563
Over 12 months	790
Total uninsured time deposits as of 31 December 2022	112,345

1 Amounts are estimated based on the methodologies defined in each local jurisdiction. As of 31 December 2022, there were no US time deposits subject to the FDIC scheme that were in excess of the FDIC insurance limit.

Investments in debt instruments

The table below presents the carrying amount and weighted average yield of debt instruments presented within Financial assets measured at fair value through other comprehensive income and Other financial assets measured at amortized cost on the balance sheet, by contractual maturity bucket. The yield for each range of maturities is calculated by dividing the annualized interest income by the average balance of the investment per contractual maturity bucket. The maturity information presented does not consider any early redemption features, and debt instruments without fixed maturities are not included.

	Within 1 year		1 to 5 years		5 to 10 years		Over 10 years		
USD m, except where indicated	Carrying amount	Yield (%)	Carrying amount	Yield (%)	Carrying amount	Yield (%)	Carrying amount	Yield (%)	Total carrying amount
Debt instruments measured at fair value through other comprehensive income									
Government bills / bonds	26	0.73							26
Corporate and other	2,093	2.64	119	2.48					2,213
Subtotal as of 31 December 2022	2,120		119						2,239
Debt securities measured at amortized cost									
Asset-backed securities			117	1.97	1,588	2.33	6,735	2.37	8,440
Government bills / bonds	8,584	1.27	6,236	1.97	4,403	1.67	1,837	2.46	21,060
Corporate and other	2,005	0.53	9,662	1.24	3,410	1.33	16	1.95	15,094
Subtotal as of 31 December 2022	10,589		16,015		9,402		8,588		44,594
Total as of 31 December 2022	12,708		16,135		9,402		8,588		46,833

Loan portfolio

The table below provides the maturity profile of UBS's core loan portfolio as of 31 December 2022. The contractual maturity is based on carrying amounts and includes the effect of callable features. For loans due after one year, a breakdown between fixed and adjustable or floating interest rates is also provided.

USD m	31.12.22						
	Within 1 year	1 to 5 years	5 to 15 years	Over 15 years	Total	*of which: over 1 year*	
						Fixed rate	*Adjustable or floating rate*
Private clients with mortgages	15,056	83,223	31,854	26,797	156,930	*76,707*	*65,166*
Real estate financing	19,130	19,146	8,153	40	46,470	*17,435*	*9,904*
Large corporate clients	4,423	6,876	926	1	12,226	*2,791*	*5,012*
SME clients	6,647	4,644	2,612	0	13,903	*3,393*	*3,863*
Lombard	124,695	7,178	414	0	132,287	*6,975*	*617*
Credit cards	1,834	0	0	0	1,834	*0*	*0*
Commodity trade finance	3,158	110	4	0	3,272	*4*	*110*
Other loans and advances to customers	9,000	9,193	2,088	19	20,300	*1,533*	*9,766*
Loans to financial advisors	134	975	1,278	223	2,611	*2,476*	*0*
Total	184,078	131,345	47,328	27,080	389,831	*111,315*	*94,438*

Allowance for credit losses

For the years ended 31 December 2022, 2021 and 2020, the ratio of net charge-offs (i.e., write-offs of expected credit loss allowances to gross carrying amount of the average loans outstanding) during the period was not material for UBS's core loan portfolio, both on an overall basis and on an individual loan category basis. Total write-offs for 31 December 2022 were USD 95m (31 December 2021: USD 137m; 31 December 2020: USD 356m). Refer to the coverage ratio tables in "Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement" in the "Consolidated financial statements" section of this report for the ratio of expected credit loss allowances to total loans outstanding at each period end.

UBS AG consolidated supplemental disclosures required under SEC regulations

A – Introduction

The following pages contain supplemental UBS AG disclosures that are required under SEC regulations. UBS AG's consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (the IASB) and are denominated in US dollars (USD), which is also the functional currency of: UBS AG's Head Office; UBS AG London Branch; and UBS AG's US-based operations.

B – Selected financial data

Selected information

	As of or for the year ended		
	31.12.22	31.12.21	31.12.20
Personnel (full-time equivalents)	47,628	47,067	47,546
Americas	21,819	21,317	21,394
of which: USA	*21,032*	*20,537*	*20,528*
Asia Pacific	8,319	7,993	8,049
Europe, Middle East and Africa (excluding Switzerland)	5,792	5,748	5,797
of which: UK	*2,714*	*2,611*	*2,596*
of which: rest of Europe (excluding Switzerland)	*2,831*	*2,949*	*3,024*
of which: Middle East and Africa	*246*	*189*	*177*
Switzerland	11,698	12,009	12,307
Registered ordinary shares (number)	3,858,408,466	3,858,408,466	3,858,408,466
Treasury shares (number)	0	0	0

Dividends received from investments in subsidiaries and associates

In 2022, UBS AG received dividends of USD 6,465m (2021: USD 6,401m; 2020: USD 3,214m) from its subsidiaries and associates. Dividends disclosed have been translated to US dollars from the functional currency of the entity paying the dividend, using the closing exchange rate of the month the dividend was received.

Balance sheet data

USD m	31.12.22	31.12.21	31.12.20
Assets			
Cash and balances at central banks	169,445	192,817	158,231
Loans and advances to banks	14,671	15,360	15,344
Receivables from securities financing transactions at amortized cost	67,814	75,012	74,210
Cash collateral receivables on derivative instruments	35,033	30,514	32,737
Loans and advances to customers	390,027	398,693	380,977
Other financial assets measured at amortized cost	53,389	26,236	27,219
Total financial assets measured at amortized cost	730,379	738,632	688,717
Financial assets at fair value held for trading	108,034	131,033	125,492
of which: assets pledged as collateral that may be sold or repledged by counterparties	*36,742*	*43,397*	*47,098*
Derivative financial instruments	150,109	118,145	159,618
Brokerage receivables	17,576	21,839	24,659
Financial assets at fair value not held for trading	59,408	59,642	80,038
Total financial assets measured at fair value through profit or loss	335,127	330,659	389,808
Financial assets measured at fair value through other comprehensive income	2,239	8,844	8,258
Investments in associates	1,101	1,243	1,557
Property, equipment and software	11,316	11,712	11,958
Goodwill and intangible assets	6,267	6,378	6,480
Deferred tax assets	9,354	8,839	9,174
Other non-financial assets	9,652	9,836	9,374
Total assets	1,105,436	1,116,145	1,125,327
Liabilities			
Amounts due to banks	11,596	13,101	11,050
Payables from securities financing transactions at amortized cost	4,202	5,533	6,321
Cash collateral payables on derivative instruments	36,436	31,801	37,313
Customer deposits	527,171	544,834	527,929
Funding from UBS Group AG measured at amortized cost	56,147	57,295	53,979
Debt issued measured at amortized cost	59,499	82,432	85,351
Other financial liabilities measured at amortized cost	10,391	9,765	10,421
Total financial liabilities measured at amortized cost	705,442	744,762	732,364
Financial liabilities at fair value held for trading	29,515	31,688	33,595
Derivative financial instruments	154,906	121,309	161,102
Brokerage payables designated at fair value	45,085	44,045	38,742
Debt issued designated at fair value	71,842	71,460	59,868
Other financial liabilities designated at fair value	32,033	32,414	31,773
Total financial liabilities measured at fair value through profit or loss	333,382	300,916	325,080
Provisions	3,183	3,452	2,791
Other non-financial liabilities	6,489	8,572	7,018
Total liabilities	1,048,496	1,057,702	1,067,254
Equity attributable to shareholders	56,598	58,102	57,754
Equity attributable to non-controlling interests	342	340	319
Total equity	56,940	58,442	58,073
Total liabilities and equity	1,105,436	1,116,145	1,125,327

C – Information about the company

Property, plant and equipment

As of 31 December 2022, UBS AG operated in about 663 business and banking locations worldwide, of which approximately 33% were in Switzerland, 49% in the Americas, 9% in the rest of Europe, the Middle East and Africa, and 9% in Asia Pacific. Of the business and banking locations in Switzerland, 22% were owned directly by UBS AG, with the remainder, along with most of UBS AG's offices outside Switzerland, being held under commercial leases. These premises are subject to continuous maintenance and upgrading and are considered suitable and adequate for current and anticipated operations.

D – Information required by Subpart 1400 of Regulation S-K

Selected statistical information

The tables below set forth selected statistical information regarding UBS AG's banking operations extracted from its financial statements. Unless otherwise indicated, average balances for the years ended 31 December 2022, 31 December 2021 and 31 December 2020 are calculated from monthly data. Unless otherwise indicated, the distinction between domestic (Swiss) and foreign (non-Swiss) is generally based on the booking location.

Average balances and interest rates

The tables below set forth average interest-earning assets and average interest-bearing liabilities, along with the average yield, for 2022, 2021 and 2020. Refer to "Note 3 Net interest income and other net income from financial instruments measured at fair value through profit or loss" in the "Consolidated financial statements" section of this report for more information about interest income and interest expense.

For the year ended	31.12.22			31.12.21			31.12.20		
USD m, except where indicated	Average balance	Interest income	Average yield (%)	Average balance	Interest income	Average yield (%)	Average balance	Interest income	Average yield (%)
Assets									
Balances at central banks									
Domestic	99,777	92	0.1	98,804	(105)	(0.1)	90,234	(112)	(0.1)
Foreign	88,267	595	0.7	71,529	(31)	0.0	51,611	7	0.0
Loans and advances to banks									
Domestic	2,966	50	1.7	3,158	40	1.3	2,930	43	1.5
Foreign	12,205	8	0.1	12,961	12	0.1	12,001	31	0.3
Receivables from securities financing transactions measured at amortized cost[1]									
Domestic	6,431	30	0.5	9,435	(28)	(0.3)	4,746	8	0.2
Foreign	70,942	1,105	1.6	79,297	234	0.3	92,098	551	0.6
Loans and advances to customers									
Domestic	225,540	3,212	1.4	229,794	3,214	1.4	212,383	3,020	1.4
Foreign	160,496	4,824	3.0	160,869	2,698	1.7	138,485	3,136	2.3
Financial assets at fair value[1,2]									
Domestic	5,922	50	0.8	10,023	11	0.1	12,459	40	0.3
Foreign	151,672	2,113	1.4	169,368	1,203	0.7	192,381	1,826	0.9
Other interest-earning assets									
Domestic	8,226	125	1.5	7,477	121	1.6	8,064	136	1.7
Foreign	63,108	858	1.4	47,042	298	0.6	45,443	386	0.8
Total interest-earning assets[3]	895,553	13,064	1.5	899,757	7,666	0.9	862,835	9,071	1.1
Net interest income on swaps		1,812			1,558			1,140	
Interest income on off-balance sheet securities and other		677			472			386	
Interest income and average interest-earning assets	895,553	15,553[4]	1.7	899,757	9,695[4]	1.1	862,835	10,597[4]	1.2
Non-interest-earning assets[5]	297,691			296,300			308,528		
Total average assets	1,193,244			1,196,057			1,171,363		

1 Reverse repurchase agreements are presented on a gross basis and therefore, for the purpose of this disclosure, do not reflect the effect of netting permitted under IFRS. 2 Includes financial assets at fair value held for trading, financial assets at fair value not held for trading, financial assets at fair value through other comprehensive income and brokerage receivables. 3 Non-taxable positions and amounts were not material for the years presented. 4 For the purpose of this disclosure, negative interest income on assets is presented as a reduction to interest income, while in the consolidated income statement negative interest income on assets is presented as interest expense. Refer to Note 3 Net interest income and other net income from financial instruments measured at fair value through profit or loss in the "Consolidated financial statements" section of this report for more information. 5 Mainly includes derivative financial instruments, equity instruments at fair value held for trading and financial assets for unit-linked investment contracts.

Average balances and interest rates (continued)

For the year ended	31.12.22			31.12.21			31.12.20		
USD m, except where indicated	Average balance	Interest expense	Average interest rate (%)	Average balance	Interest expense	Average interest rate (%)	Average balance	Interest expense	Average interest rate (%)
Liabilities and equity									
Amount due to banks									
Domestic	10,733	3	0.0	10,369	(32)	(0.3)	8,097	(9)	(0.1)
Foreign	3,255	44	1.3	2,897	18	0.6	3,169	26	0.8
Payables from securities financing transactions measured at amortized cost[1]									
Domestic	3,357	40	1.2	4,786	1	0.0	3,888	6	0.2
Foreign	13,351	289	2.2	14,161	209	1.5	18,793	174	0.9
Customer deposits									
Domestic	275,270	(61)	0.0	293,028	(281)	(0.1)	266,614	(160)	(0.1)
of which: demand deposits	*149,357*	*(141)*	*(0.1)*	*162,016*	*(273)*	*(0.2)*	*138,949*	*(164)*	*(0.1)*
of which: savings and sweep deposits	*119,685*	*6*	*0.0*	*126,290*	*4*	*0.0*	*121,793*	*3*	*0.0*
of which: time deposits	*6,227*	*74*	*1.2*	*4,721*	*(12)*	*(0.3)*	*5,873*	*1*	*0.0*
Foreign	246,072	1,820	0.7	232,165	107	0.0	214,783	551	0.3
of which: demand deposits	*66,987*	*120*	*0.2*	*82,226*	*(31)*	*0.0*	*64,955*	*(6)*	*0.0*
of which: savings and sweep deposits	*111,130*	*578*	*0.5*	*99,847*	*81*	*0.1*	*71,341*	*194*	*0.3*
of which: time deposits	*67,956*	*1,121*	*1.7*	*50,092*	*58*	*0.1*	*78,488*	*363*	*0.5*
Funding from UBS Group AG									
Domestic	56,884	1,875	3.3	56,008	1,699	3.0	51,005	1,740	3.4
Commercial paper									
Domestic	1	0	0.0	292	0	0.0	130	0	0.0
Foreign	20,452	256	1.3	24,461	33	0.1	17,098	120	0.7
Other short-term debt issued measured at amortized cost									
Domestic	366	4	1.2	13	0	(0.1)	10	0	0.0
Foreign	11,927	124	1.0	18,473	37	0.2	16,989	147	0.9
Long-term debt issued measured at amortized cost									
Domestic	11,538	184	1.6	12,352	192	1.6	14,054	323	2.3
Foreign	22,929	439	1.9	27,820	491	1.8	27,100	581	2.1
Financial liabilities at fair value (excluding debt issued designated at fair value)[1,2]									
Domestic	289	11	3.7	421	3	0.8	701	2	0.3
Foreign	141,526	1,476	1.0	139,374	81	0.1	146,306	354	0.2
Debt issued designated at fair value									
Domestic	7,400	43	0.6	7,806	(20)	(0.3)	3,469	6	0.2
Foreign	63,470	1,283	2.0	60,388	429	0.7	56,442	801	1.4
Other interest-bearing liabilities									
Domestic	2,872	14	0.5	2,884	(7)	(0.2)	3,333	(6)	(0.2)
Foreign	38,838	429	1.1	34,833	101	0.3	38,516	187	0.5
Total interest-bearing liabilities	930,531	8,273	0.9	942,531	3,060	0.3	890,498	4,841	0.5
Swap interest on hedged debt instruments and other swaps		40			(765)			(608)	
Interest expense on off-balance sheet securities and other		723			797			576	
Interest expense and average interest-bearing liabilities	930,531	9,035[3]	1.0	942,531	3,091[3]	0.3	890,498	4,809[3]	0.5
Non-interest-bearing liabilities[4]	206,337			196,273			224,468		
Total liabilities	1,136,868			1,138,804			1,114,966		
Total equity	56,376			57,254			56,397		
Total average liabilities and equity	1,193,244			1,196,057			1,171,363		
Net interest income		6,517			6,604			5,788	
Net yield on interest-earning assets			0.7			0.7			0.7

1 Repurchase agreements are presented on a gross basis and therefore, for the purpose of this disclosure, do not reflect the effect of netting permitted under IFRS. 2 Includes financial liabilities at fair value held for trading, other financial liabilities designated at fair value and brokerage payables designated at fair value. 3 For the purpose of this disclosure, negative interest expense on liabilities is presented as a reduction to interest expense, while in the consolidated income statement negative interest income on liabilities is presented as interest income. Refer to Note 3 Net interest income and other net income from financial instruments measured at fair value through profit or loss in the "Consolidated financial statements" section of this report for more information. 4 Mainly includes derivative financial instruments, equity instruments at fair value held for trading and financial liabilities related to unit-linked investment contracts.

The percentage of total average interest-earning assets attributable to foreign activities was 61% for 2022 (2021: 60%; 2020: 62%). The percentage of total average interest-bearing liabilities attributable to foreign activities was 60% for 2022 (2021: 59%; 2020: 61%). All assets and liabilities are translated into US dollars at uniform month-end rates. Interest income and expense are translated at monthly average rates.

Average rates earned and paid on assets and liabilities can change from period to period based on the changes in interest rates in general, but are also affected by changes in the currency mix included in the assets and liabilities. Tax-exempt income is not recorded on a tax-equivalent basis. For all three years presented, tax-exempt income is considered to be insignificant and the effect from such income is therefore negligible.

Analysis of changes in interest income and expense

The tables below provide information by categories of interest-earning assets and interest-bearing liabilities, about the changes in interest income and expense due to changes in volume and interest rates for the year ended 31 December 2022 compared with the year ended 31 December 2021, and for the year ended 31 December 2021 compared with the year ended 31 December 2020. The change in average volume represents the change in the current average balance compared to the average balance from the prior year with respect to the average rate of the prior year. The change in average rate represents the difference between the net change in interest income and expense and the change in average volume.

	2022 compared with 2021			2021 compared with 2020		
	Increase / (decrease) due to changes in			Increase / (decrease) due to changes in		
USD m	Average volume	Average interest rate	Net change	Average volume	Average interest rate	Net change
Interest income from interest-earning assets						
Balances at central banks						
Domestic	(1)	198	197	(9)	16	7
Foreign	(7)	633	626	0	(38)	(38)
Loans and advances to banks						
Domestic	(2)	12	10	3	(6)	(3)
Foreign	(1)	(3)	(4)	3	(23)	(20)
Receivables from securities financing transactions measured at amortized cost						
Domestic	9	49	58	9	(44)	(35)
Foreign	(25)	896	871	(77)	(240)	(317)
Loans and advances to customers						
Domestic	(59)	58	(1)	244	(50)	194
Foreign	(6)	2,133	2,127	515	(954)	(439)
Financial assets at fair value						
Domestic	(5)	44	39	(7)	(22)	(29)
Foreign	(126)	1,036	910	(207)	(416)	(623)
Other interest-earning assets						
Domestic	12	(8)	4	(10)	(5)	(15)
Foreign	102	458	560	13	(101)	(88)
Interest income						
Domestic	(46)	354	308	230	(111)	119
Foreign	(63)	5,154	5,091	247	(1,772)	(1,525)
Total interest income from interest-earning assets	(109)	5,507	5,398	477	(1,883)	(1,406)
Net interest income on swaps			254			418
Interest income on off-balance sheet securities and other			205			86
Total interest income			5,858			(902)

Analysis of changes in interest income and expense (continued)

	2022 compared with 2021			2021 compared with 2020		
	Increase / (decrease) due to changes in			Increase / (decrease) due to changes in		
USD m	Average volume	Average interest rate	Net change	Average volume	Average interest rate	Net change
Interest expense on interest-bearing liabilities						
Amount due to banks						
Domestic	(1)	36	35	(2)	(21)	(23)
Foreign	2	23	25	(2)	(5)	(7)
Payables from securities financing transactions measured at amortized cost						
Domestic	0	39	39	2	(7)	(5)
Foreign	(12)	92	80	(42)	76	34
Customer deposits						
Domestic	17	203	220	(23)	(98)	(121)
of which: demand deposits	*21*	*111*	*132*	*(23)*	*(86)*	*(109)*
of which: savings and sweep deposits	*0*	*2*	*2*	*0*	*1*	*1*
of which: time deposits	*(4)*	*90*	*86*	*0*	*(13)*	*(13)*
Foreign	6	1,707	1,713	52	(497)	(445)
of which: demand deposits	*6*	*145*	*151*	*0*	*(26)*	*(26)*
of which: savings and sweep deposits	*9*	*488*	*497*	*86*	*(200)*	*(114)*
of which: time deposits	*21*	*1,043*	*1,064*	*(142)*	*(163)*	*(305)*
Funding from UBS Group AG						
Domestic	27	149	176	170	(211)	(41)
Commercial paper						
Domestic	0	0	0	0	0	0
Foreign	(5)	228	223	52	(138)	(86)
Other short-term debt issued measured at amortized cost						
Domestic	0	5	5	0	0	0
Foreign	(13)	100	87	13	(123)	(110)
Long-term debt issued measured at amortized cost						
Domestic	(13)	5	(8)	(39)	(92)	(131)
Foreign	(86)	34	(52)	15	(105)	(90)
Financial liabilities at fair value (excluding debt issued designated at fair value)						
Domestic	(1)	8	7	(1)	2	1
Foreign	1	1,395	1,396	(14)	(259)	(273)
Debt issued designated at fair value						
Domestic	1	61	62	9	(34)	(25)
Foreign	22	832	854	55	(426)	(371)
Other interest-bearing liabilities						
Domestic	0	21	21	1	(2)	(1)
Foreign	12	316	328	(18)	(68)	(86)
Interest expense						
Domestic	30	529	559	117	(463)	(346)
Foreign	(73)	4,727	4,654	111	(1,546)	(1,435)
Total interest expense on interest-bearing liabilities	(43)	5,256	5,213	228	(2,010)	(1,782)
Swap interest on hedged debt instruments and other swaps			805			(157)
Interest expense on off-balance sheet securities and other			(74)			221
Total interest expense			5,944			(1,718)

Deposits

The table below analyzes average deposits and average rates on each deposit category for the years ended 31 December 2022, 2021 and 2020. For the purpose of this disclosure, foreign deposits represent deposits from depositors who are based outside of Switzerland. Deposits by foreign depositors in domestic offices were USD 59,897m as of 31 December 2022 (31 December 2021: USD 77,070m; 31 December 2020: USD 76,200m).

	31.12.22		31.12.21		31.12.20	
USD m, except where indicated	Average deposits	Average rate (%)	Average deposits	Average rate (%)	Average deposits	Average rate (%)
Due to banks						
Domestic						
Demand deposits	908	(0.3)	927	(0.5)	1,037	(0.4)
Time deposits	2,793	0.5	3,026	0.0	1,775	0.4
Total domestic	3,700	0.3	3,953	(0.1)	2,812	0.1
Foreign[1]						
Interest-bearing deposits	10,288	0.3	9,313	(0.1)	8,454	0.1
Total due to banks	13,988	0.3	13,266	(0.1)	11,266	0.1
Customer deposits						
Domestic						
Demand deposits	97,217	(0.1)	103,267	(0.2)	91,404	(0.1)
Savings and sweep deposits	109,039	0.0	114,792	0.0	110,328	0.0
Time deposits	9,715	0.4	10,306	(0.2)	19,256	0.0
Total domestic	215,971	0.0	228,366	(0.1)	220,988	0.0
Foreign[1]						
Demand deposits	119,127	0.1	140,975	(0.1)	112,499	0.0
Savings and sweep deposits	121,776	0.5	111,345	0.1	82,806	0.2
Time deposits	64,468	1.8	44,507	0.1	65,104	0.5
Total foreign	305,370	0.6	296,826	0.0	260,410	0.2
Total customer deposits	521,342	0.3	525,192	0.0	481,398	0.1

1 For the purpose of this table, the distinction between foreign and domestic deposits is based on the domicile of the depositor, while foreign and domestic deposits disclosed in previous tables are based on the booking location.

Uninsured deposits

From the combined total of Due to banks and Customer deposits as of 31 December 2022, total estimated uninsured deposits were USD 365bn (31 December 2021: USD 395bn; 31 December 2020: USD 383bn). Uninsured deposits are deposits that are in excess of local deposit insurance or protection scheme limits in the key locations in which UBS AG operates, calculated based on the respective local regulations, as well as deposits in uninsured accounts. The main deposit insurance schemes applicable to UBS AG deposits are the Swiss depositor protection scheme in Switzerland (which protects applicable deposits up to a maximum of CHF 100,000 per client and per bank or securities firm), the Compensation Scheme of German Banks, in combination with the Deposit Protection Fund of the Association of German Banks in Germany (which protects applicable deposits up to a maximum of EUR 456m per client) and the Federal Deposit Insurance Corporation (the FDIC) scheme in the Americas (which protects applicable deposits up to a maximum of USD 250,000 per depositor, per insured bank, for each account ownership category).

The table below presents the maturity of estimated uninsured time deposits as of 31 December 2022. Where a depositor holds multiple accounts, which in aggregate are in excess of a deposit insurance or protection limit, the insured amount is first allocated to the account with the shortest time to maturity.

USD m	Uninsured time deposits[1]
Within 3 months	93,308
3 to 6 months	10,963
6 to 12 months	7,564
Over 12 months	1,148
Total uninsured time deposits as of 31 December 2022	112,983

1 Amounts are estimated based on the methodologies defined in each local jurisdiction. As of 31 December 2022, there were no US time deposits subject to the FDIC scheme that were in excess of the FDIC insurance limit.

Investments in debt instruments

The table below presents the carrying amount and weighted average yield of debt instruments presented within Financial assets measured at fair value through other comprehensive income and Other financial assets measured at amortized cost on the balance sheet by contractual maturity bucket. The yield for each range of maturities is calculated by dividing the annualized interest income by the average balance of the investment per contractual maturity bucket. The maturity information presented does not consider any early redemption features and debt instruments without fixed maturities are not included.

	Within 1 year		1 to 5 years		5 to 10 years		Over 10 years		
USD m, except where indicated	Carrying amount	Yield (%)	Carrying amount	Yield (%)	Carrying amount	Yield (%)	Carrying amount	Yield (%)	Total carrying amount
Debt instruments measured at fair value through other comprehensive income									
Government bills / bonds	26	0.73							26
Corporate and other	2,093	2.64	119	2.48					2,213
Subtotal as of 31 December 2022	2,120		119						2,239
Debt securities measured at amortized cost									
Asset-backed securities			117	1.97	1,588	2.33	6,735	2.37	8,440
Government bills / bonds	8,584	1.27	6,236	1.97	4,403	1.67	1,837	2.46	21,060
Corporate and other	2,005	0.53	9,662	1.24	3,410	1.33	16	1.95	15,094
Subtotal as of 31 December 2022	10,589		16,015		9,402		8,588		44,594
Total as of 31 December 2022	12,708		16,135		9,402		8,588		46,833

Loan portfolio

The table below provides the maturity profile of UBS AG's core loan portfolio as of 31 December 2022. The contractual maturity is based on carrying amounts and includes the effect of callable features. For loans due after one year, a breakdown between fixed and adjustable or floating interest rates is also provided.

USD m	31.12.22						
	Within 1 year	1 to 5 years	5 to 15 years	Over 15 years	Total	*of which: over 1 year*	
						Fixed rate	*Adjustable or floating rate*
Private clients with mortgages	15,056	83,223	31,854	26,797	156,930	*76,707*	*65,166*
Real estate financing	19,130	19,146	8,153	40	46,470	*17,435*	*9,904*
Large corporate clients	4,423	6,876	926	1	12,226	*2,791*	*5,012*
SME clients	6,647	4,644	2,612	0	13,903	*3,393*	*3,863*
Lombard	124,695	7,178	414	0	132,287	*6,975*	*617*
Credit cards	1,834	0	0	0	1,834	*0*	*0*
Commodity trade finance	3,158	110	4	0	3,272	*4*	*110*
Other loans and advances to customers	11,570	9,382	2,135	19	23,107	*1,609*	*9,927*
Loans to financial advisors	134	975	1,278	223	2,611	*2,476*	*0*
Total	186,648	131,535	47,376	27,080	392,638	*111,391*	*94,600*

Allowance for credit losses

For the years ended 31 December 2022, 2021 and 2020, the ratio of net charge-offs (i.e., write-offs of expected credit loss allowances to gross carrying amount of the average loans outstanding) during the period was not material for UBS AG's core loan portfolio, both on an overall basis and on an individual loan category basis. Total write-offs for 31 December 2022 were USD 95m (31 December 2021: USD 137m, 31 December 2020: USD 356m). Refer to the coverage ratio tables in "Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement" in the "Consolidated financial statements" section of this report for the ratio of expected credit loss allowances to total loans outstanding at each period end.

Appendix

Alternative performance measures

Alternative performance measures

An alternative performance measure (an APM) is a financial measure of historical or future financial performance, financial position or cash flows other than a financial measure defined or specified in the applicable recognized accounting standards or in other applicable regulations. We report a number of APMs in the discussion of the financial and operating performance of the Group, our business divisions and our Group Functions. We use APMs to provide a more complete picture of our operating performance and to reflect management's view of the fundamental drivers of our business results. A definition of each APM, the method used to calculate it and the information content are presented in alphabetical order in the table below. Our APMs may qualify as non-GAAP measures as defined by US Securities and Exchange Commission (SEC) regulations.

APM label	Calculation	Information content
Active Digital Banking clients in Corporate & Institutional Clients (%) – Personal & Corporate Banking	Calculated as the average number of active clients for each month in the relevant period divided by the average number of total clients. "Clients" refers to the number of unique business relationships or legal entities operated by Corporate & Institutional Clients, excluding clients that do not have an account, mono-product clients and clients that have defaulted on loans or credit facilities. At the end of each month, any client that has logged on at least once in that month is determined to be "active" (a log-in time stamp is allocated to all business relationship numbers or per legal entity in a digital banking contract).	This measure provides information about the proportion of active Digital Banking clients in the total number of UBS clients (within the aforementioned meaning) which are serviced by Corporate & Institutional Clients.
Active Digital Banking clients in Personal Banking (%) – Personal & Corporate Banking	Calculated as the average number of active clients for each month in the relevant period divided by the average number of total clients. "Clients" refers to the number of unique business relationships operated by Personal Banking, excluding persons under the age of 15, clients who do not have a private account, clients domiciled outside Switzerland and clients who have defaulted on loans or credit facilities. At the end of each month, any client that has logged on at least once in that month is determined to be "active" (a log-in time stamp is allocated to all business relationship numbers in a digital banking contract).	This measure provides information about the proportion of active Digital Banking clients in the total number of UBS clients (within the aforementioned meaning) who are serviced by Personal Banking.
Active Mobile Banking clients in Personal Banking (%) – Personal & Corporate Banking	Calculated as the average number of active clients for each month in the relevant period divided by the average number of total clients. "Clients" refers to the number of unique business relationships operated by Personal Banking, excluding persons under the age of 15, clients who do not have a private account, clients domiciled outside Switzerland and clients who have defaulted on loans or credit facilities. At the end of each month, any client that has logged on via the mobile app at least once in that month is determined to be "active" (a log-in time stamp is allocated to all business relationship numbers in a digital banking contract).	This measure provides information about the proportion of active Mobile Banking clients in the total number of UBS clients (within the aforementioned meaning) who are serviced by Personal Banking.
Cost / income ratio (%)	Calculated as operating expenses divided by total revenues.	This measure provides information about the efficiency of the business by comparing operating expenses with gross income.
Fee and trading income for Corporate & Institutional Clients (USD and CHF) – Personal & Corporate Banking	Calculated as the total of recurring net fee and transaction-based income for Corporate & Institutional Clients.	This measure provides information about the amount of fee and trading income for Corporate & Institutional Clients.

APM label	Calculation	Information content
Fee-generating assets (USD) – Global Wealth Management	Calculated as the sum of discretionary and nondiscretionary wealth management portfolios (mandate volume) and assets where generated revenues are predominantly of a recurring nature, i.e., mainly investment, mutual, hedge and private-market funds where we have a distribution agreement, including client commitments into closed-ended private-market funds from the date that recurring fees are charged. Assets related to our Global Financial Intermediaries business are excluded, as are assets of sanctioned clients.	This measure provides information about the volume of invested assets that create a revenue stream, whether as a result of the nature of the contractual relationship with clients or through the fee structure of the asset. An increase in the level of fee-generating assets results in an increase in the associated revenue stream. Assets of sanctioned clients are excluded from fee-generating assets.
Fee-generating asset margin (bps) – Global Wealth Management	Calculated as revenues from fee-generating assets (a portion of which is included in recurring fee income and a portion of which is included in transaction-based income, annualized as applicable) divided by average fee-generating assets for the relevant mandate fee billing period. For the US, fees have been billed on daily balances since the fourth quarter of 2020 and average fee-generating assets are calculated as the average of the monthly average balances. Prior to the fourth quarter of 2020, billing was based on prior quarter-end balances, and the average fee-generating assets were thus the prior quarter-end balance. For balances outside of the US, billing is based on prior month-end balances and average fee-generating assets are thus the average of the prior month-end balances.	This measure provides information about the revenues from fee-generating assets in relation to their average volume during the relevant mandate fee billing period.
Gross margin on invested assets (bps) – Asset Management	Calculated as total revenues (annualized as applicable) divided by average invested assets.	This measure provides information about the total revenues of the business in relation to invested assets.
Impaired loan portfolio as a percentage of total loan portfolio, gross (%) – Global Wealth Management, Personal & Corporate Banking	Calculated as impaired loan portfolio divided by total gross loan portfolio.	This measure provides information about the proportion of impaired loan portfolio in the total gross loan portfolio.
Invested assets (USD and CHF) – Global Wealth Management, Personal & Corporate Banking, Asset Management	Calculated as the sum of managed fund assets, managed institutional assets, discretionary and advisory wealth management portfolios, fiduciary deposits, time deposits, savings accounts, and wealth management securities or brokerage accounts.	This measure provides information about the volume of client assets managed by or deposited with UBS for investment purposes.
Investment products for Personal Banking (USD and CHF) – Personal & Corporate Banking	Calculated as the sum of investment funds (including UBS Vitainvest third-pillar pension funds), mandates and third-party life insurance operated in Personal Banking.	This measure provides information about the volume of investment funds (including UBS Vitainvest third-pillar pension funds), mandates and third-party life insurance operated in Personal Banking.
Net interest margin (bps) – Personal & Corporate Banking	Calculated as net interest income (annualized as applicable) divided by average loans.	This measure provides information about the profitability of the business by calculating the difference between the price charged for lending and the cost of funding, relative to loan value.
Net new fee-generating assets (USD) – Global Wealth Management	Calculated as the sum of the net amount of fee-generating asset inflows and outflows, including dividend and interest inflows into mandates and outflows from mandate fees paid by clients during a specific period. Excluded from the calculation are the effects on fee-generating assets of strategic decisions by UBS to exit markets or services.	This measure provides information about the development of fee-generating assets during a specific period as a result of net flows, excluding movements due to market performance and foreign exchange translation, as well as the effects on fee-generating assets of strategic decisions by UBS to exit markets or services.
Net new fee-generating asset growth rate (%) – Global Wealth Management	Calculated as the sum of the net amount of fee-generating asset inflows and outflows recorded during a specific period (annualized as applicable) divided by total fee-generating assets at the beginning of the period.	This measure provides information about the growth of fee-generating assets during a specific period as a result of net new fee-generating asset flows.
Net new investment products for Personal Banking (USD and CHF) – Personal & Corporate Banking	Calculated as the sum of the net amount of inflows and outflows of investment products during a specific period.	This measure provides information about the development of investment products during a specific period as a result of net new investment product flows.

APM label	Calculation	Information content
Net new money (USD) – Global Wealth Management, Asset Management	Calculated as the sum of the net amount of inflows and outflows of invested assets (as defined in UBS policy) recorded during a specific period. Excluded from the calculation are the effects on invested assets of strategic decisions by UBS to exit markets or services. Net new money for Global Wealth Management is disclosed on an annual basis. Net new money is not measured for Personal & Corporate Banking.	This measure provides information about the development of invested assets during a specific period as a result of net new money flows and excludes movements due to market performance, foreign exchange translation, dividends, interest and fees, as well as the effects on invested assets of strategic decisions by UBS to exit markets or services.
Net profit growth (%)	Calculated as the change in net profit attributable to shareholders from continuing operations between current and comparison periods divided by net profit attributable to shareholders from continuing operations of the comparison period.	This measure provides information about profit growth since the comparison period.
Pre-tax profit growth (%)	Calculated as the change in net profit before tax attributable to shareholders from continuing operations between current and comparison periods divided by net profit before tax attributable to shareholders from continuing operations of the comparison period.	This measure provides information about pre-tax profit growth since the comparison period.
Recurring net fee income (USD and CHF) – Global Wealth Management, Personal & Corporate Banking	Calculated as the total of fees for services provided on an ongoing basis, such as portfolio management fees, asset-based investment fund fees and custody fees, which are generated on client assets, and administrative fees for accounts.	This measure provides information about the amount of recurring net fee income.
Return on attributed equity (%)	Calculated as annualized business division operating profit before tax divided by average attributed equity.	This measure provides information about the profitability of the business divisions in relation to attributed equity.
Return on common equity tier 1 capital (%)	Calculated as annualized net profit attributable to shareholders divided by average common equity tier 1 capital.	This measure provides information about the profitability of the business in relation to common equity tier 1 capital.
Return on equity (%)	Calculated as annualized net profit attributable to shareholders divided by average equity attributable to shareholders.	This measure provides information about the profitability of the business in relation to equity.
Return on leverage ratio denominator, gross (%)	Calculated as annualized total revenues divided by average leverage ratio denominator.	This measure provides information about the revenues of the business in relation to the leverage ratio denominator.
Return on tangible equity (%)	Calculated as annualized net profit attributable to shareholders divided by average equity attributable to shareholders less average goodwill and intangible assets.	This measure provides information about the profitability of the business in relation to tangible equity.
Tangible book value per share (USD)	Calculated as equity attributable to shareholders less goodwill and intangible assets divided by the number of shares outstanding.	This measure provides information about tangible net assets on a per-share basis.
Total book value per share (USD)	Calculated as equity attributable to shareholders divided by the number of shares outstanding.	This measure provides information about net assets on a per-share basis.
Transaction-based income (USD and CHF) – Global Wealth Management, Personal & Corporate Banking	Calculated as the total of the non-recurring portion of net fee and commission income, mainly composed of brokerage and transaction-based investment fund fees, and credit card fees, as well as fees for payment and foreign exchange transactions, together with other net income from financial instruments measured at fair value through profit or loss.	This measure provides information about the amount of the non-recurring portion of net fee and commission income, together with other net income from financial instruments measured at fair value through profit or loss.

Abbreviations frequently used in our financial reports

A

ABS	asset-backed securities
AG	Aktiengesellschaft
AGM	Annual General Meeting of shareholders
A-IRB	advanced internal ratings-based
AIV	alternative investment vehicle
ALCO	Asset and Liability Committee
AMA	advanced measurement approach
AML	anti-money laundering
AoA	Articles of Association
APM	alternative performance measure
ARR	alternative reference rate
ARS	auction rate securities
ASF	available stable funding
AT1	additional tier 1
AuM	assets under management

B

BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
BoD	Board of Directors

C

CAO	Capital Adequacy Ordinance
CCAR	Comprehensive Capital Analysis and Review
CCF	credit conversion factor
CCP	central counterparty
CCR	counterparty credit risk
CCRC	Corporate Culture and Responsibility Committee
CDS	credit default swap
CEA	Commodity Exchange Act
CEO	Chief Executive Officer
CET1	common equity tier 1
CFO	Chief Financial Officer
CGU	cash-generating unit
CHF	Swiss franc
CIO	Chief Investment Office
C&ORC	Compliance & Operational Risk Control
CRM	credit risk mitigation (credit risk) or comprehensive risk measure (market risk)
CST	combined stress test
CUSIP	Committee on Uniform Security Identification Procedures
CVA	credit valuation adjustment

D

DBO	defined benefit obligation
DCCP	Deferred Contingent Capital Plan
DE&I	diversity, equity and inclusion
DFAST	Dodd–Frank act stress test
DM	discount margin
DOJ	US Department of Justice
DTA	deferred tax asset
DVA	debit valuation adjustment

E

EAD	exposure at default
EB	Executive Board
EC	European Commission
ECB	European Central Bank
ECL	expected credit loss
EGM	Extraordinary General Meeting of shareholders
EIR	effective interest rate
EL	expected loss
EMEA	Europe, Middle East and Africa
EOP	Equity Ownership Plan
EPS	earnings per share
ESG	environmental, social and governance
ESR	environmental and social risk
ETD	exchange-traded derivatives
ETF	exchange-traded fund
EU	European Union
EUR	euro
EURIBOR	Euro Interbank Offered Rate
EVE	economic value of equity
EY	Ernst & Young Ltd

F

FA	financial advisor
FCA	UK Financial Conduct Authority
FDIC	Federal Deposit Insurance Corporation
FINMA	Swiss Financial Market Supervisory Authority
FMIA	Swiss Financial Market Infrastructure Act
FSB	Financial Stability Board
FTA	Swiss Federal Tax Administration
FVA	funding valuation adjustment
FVOCI	fair value through other comprehensive income
FVTPL	fair value through profit or loss
FX	foreign exchange

G

GAAP	generally accepted accounting principles
GBP	pound sterling
GCRG	Group Compliance, Regulatory & Governance
GDP	gross domestic product
GEB	Group Executive Board
GHG	greenhouse gas
GIA	Group Internal Audit
GRI	Global Reporting Initiative
G-SIB	global systemically important bank

H

HQLA	high-quality liquid assets

I

IAS	International Accounting Standards
IASB	International Accounting Standards Board
IBOR	interbank offered rate
IFRIC	International Financial Reporting Interpretations Committee
IFRS	International Financial Reporting Standards
IRB	internal ratings-based
IRRBB	interest rate risk in the banking book
ISDA	International Swaps and Derivatives Association
ISIN	International Securities Identification Number

Abbreviations frequently used in our financial reports (continued)

K

KRT	Key Risk Taker

L

LAS	liquidity-adjusted stress
LCR	liquidity coverage ratio
LGD	loss given default
LIBOR	London Interbank Offered Rate
LLC	limited liability company
LoD	lines of defense
LRD	leverage ratio denominator
LTIP	Long-Term Incentive Plan
LTV	loan-to-value

M

M&A	mergers and acquisitions
MRT	Material Risk Taker

N

NII	net interest income
NSFR	net stable funding ratio
NYSE	New York Stock Exchange

O

OCA	own credit adjustment
OCI	other comprehensive income
OECD	Organisation for Economic Co-operation and Development
OTC	over-the-counter

P

PD	probability of default
PIT	point in time
P&L	profit or loss
POCI	purchased or originated credit-impaired

Q

QCCP	Qualifying central counterparty

R

RBC	risk-based capital
RbM	risk-based monitoring
REIT	real estate investment trust
RMBS	residential mortgage-backed securities
RniV	risks not in VaR
RoCET1	return on CET1 capital
RoU	right-of-use
rTSR	relative total shareholder return
RWA	risk-weighted assets

S

SA	standardized approach or société anonyme
SA-CCR	standardized approach for counterparty credit risk
SAR	Special Administrative Region of the People’s Republic of China
SDG	Sustainable Development Goal
SEC	US Securities and Exchange Commission
SFT	securities financing transaction
SI	sustainable investing or sustainable investment
SIBOR	Singapore Interbank Offered Rate
SICR	significant increase in credit risk
SIX	SIX Swiss Exchange
SME	small and medium-sized entities
SMF	Senior Management Function
SNB	Swiss National Bank
SOR	Singapore Swap Offer Rate
SPPI	solely payments of principal and interest
SRB	systemically relevant bank
SRM	specific risk measure
SVaR	stressed value-at-risk

T

TBTF	too big to fail
TCFD	Task Force on Climate-related Financial Disclosures
TIBOR	Tokyo Interbank Offered Rate
TLAC	total loss-absorbing capacity
TTC	through the cycle

U

USD	US dollar

V

VaR	value-at-risk
VAT	value added tax

This is a general list of the abbreviations frequently used in our financial reporting. Not all of the listed abbreviations may appear in this particular report.

Information sources

Reporting publications

Annual publications

Annual Report: Published in English, this single-volume report provides descriptions of: our Group strategy and performance; the strategy and performance of the business divisions and Group Functions; risk, treasury and capital management; corporate governance, corporate responsibility and our compensation framework, including information about compensation for the Board of Directors and the Group Executive Board members; and financial information, including the financial statements.

"Auszug aus dem Geschäftsbericht": This publication provides a German translation of selected sections of our Annual Report.

Compensation Report: This report discusses our compensation framework and provides information about compensation for the Board of Directors and the Group Executive Board members. It is available in English and German (*"Vergütungsbericht"*) and represents a component of the Annual Report.

Sustainability Report: Published in English, our Sustainability Report provides disclosures on environmental, social and governance topics related to UBS Group.

Diversity, Equity and Inclusion Report: This report details our DE&I priority areas of focus, our strategic goals and our approach to achieving them at UBS.

Quarterly publications

Quarterly financial report: This report provides an update on our performance and strategy (where applicable) for the respective quarter. It is available in English.

The annual and quarterly publications are available in a fully digital and .pdf format at *ubs.com/investors*, under "Financial information." Starting with our Annual Report 2022, we no longer provide printed copies, in any language, of the aforementioned annual publications.

Other information

Website

The "Investor Relations" website at *ubs.com/investors* provides the following information about UBS: results-related news releases; financial information, including results-related filings with the US Securities and Exchange Commission (the SEC); information for shareholders, including UBS share price charts, as well as data and dividend information, and for bondholders; our corporate calendar; and presentations by management for investors and financial analysts. Information is available online in English, with some information also available in German.

Results presentations

Our quarterly results presentations are webcast live. Recordings of most presentations can be downloaded from *ubs.com/presentations*.

Messaging service

Email alerts to news about UBS can be subscribed for under "UBS News Alert" at *ubs.com/global/en/investor-relations/contact/investor-services.html*. Messages are sent in English, German, French or Italian, with an option to select theme preferences for such alerts.

Form 20-F and other submissions to the US Securities and Exchange Commission

We file periodic reports and submit other information about UBS to the SEC. Principal among these filings is the annual report on Form 20-F, filed pursuant to the US Securities Exchange Act of 1934. The filing of Form 20-F is structured as a wraparound document. Most sections of the filing can be satisfied by referring to the combined UBS Group AG and UBS AG Annual Report. However, there is a small amount of additional information in Form 20-F that is not presented elsewhere and is particularly targeted at readers in the US. Readers are encouraged to refer to this additional disclosure. Any document that we file with the SEC is available on the SEC's website: *sec.gov*. Refer to *ubs.com/investors* for more information.

Cautionary Statement Regarding Forward-Looking Statements | This report contains statements that constitute "forward-looking statements," including but not limited to management's outlook for UBS's financial performance, statements relating to the anticipated effect of transactions and strategic initiatives on UBS's business and future development and goals or intentions to achieve climate, sustainability and other social objectives. While these forward-looking statements represent UBS's judgments, expectations and objectives concerning the matters described, a number of risks, uncertainties and other important factors could cause actual developments and results to differ materially from UBS's expectations. The Russia–Ukraine war has led to heightened volatility across global markets, exacerbated global inflation, and slowed global growth. In addition, the war has caused significant population displacement, and if the conflict continues or escalates, the scale of disruption will increase and continue to cause shortages of vital commodities, including energy shortages and food insecurity, and may lead to recessions in OECD economies. The coordinated sanctions on Russia and Belarus, and Russian and Belarusian entities and nationals, and the uncertainty as to whether the war will widen and intensify, may have significant adverse effects on the market and macroeconomic conditions, including in ways that cannot be anticipated. This creates significantly greater uncertainty about forward-looking statements. Other factors that may affect our performance and ability to achieve our plans, outlook and other objectives also include, but are not limited to: (i) the degree to which UBS is successful in the ongoing execution of its strategic plans, including its cost reduction and efficiency initiatives and its ability to manage its levels of risk-weighted assets (RWA) and leverage ratio denominator (LRD), liquidity coverage ratio and other financial resources, including changes in RWA assets and liabilities arising from higher market volatility; (ii) the degree to which UBS is successful in implementing changes to its businesses to meet changing market, regulatory and other conditions; (iii) increased interest rate volatility in major markets; (iv) developments in the macroeconomic climate and in the markets in which UBS operates or to which it is exposed, including movements in securities prices or liquidity, credit spreads, currency exchange rates, the effects of economic conditions, including increasing inflationary pressures, market developments, increasing geopolitical tensions, and changes to national trade policies on the financial position or creditworthiness of UBS's clients and counterparties, as well as on client sentiment and levels of activity, including the COVID-19 pandemic and the measures taken to manage it, which have had and may also continue to have a significant adverse effect on global and regional economic activity, including disruptions to global supply chains and labor market displacements; (v) changes in the availability of capital and funding, including any changes in UBS's credit spreads and ratings, as well as availability and cost of funding to meet requirements for debt eligible for total loss-absorbing capacity (TLAC); (vi) changes in central bank policies or the implementation of financial legislation and regulation in Switzerland, the US, the UK, the European Union and other financial centers that have imposed, or resulted in, or may do so in the future, more stringent or entity-specific capital, TLAC, leverage ratio, net stable funding ratio, liquidity and funding requirements, heightened operational resilience requirements, incremental tax requirements, additional levies, limitations on permitted activities, constraints on remuneration, constraints on transfers of capital and liquidity and sharing of operational costs across the Group or other measures, and the effect these will or would have on UBS's business activities; (vii) UBS's ability to successfully implement resolvability and related regulatory requirements and the potential need to make further changes to the legal structure or booking model of UBS Group in response to legal and regulatory requirements, or other external developments; (viii) UBS's ability to maintain and improve its systems and controls for complying with sanctions in a timely manner and for the detection and prevention of money laundering to meet evolving regulatory requirements and expectations, in particular in current geopolitical turmoil; (ix) the uncertainty arising from domestic stresses in certain major economies; (x) changes in UBS's competitive position, including whether differences in regulatory capital and other requirements among the major financial centers adversely affect UBS's ability to compete in certain lines of business; (xi) changes in the standards of conduct applicable to our businesses that may result from new regulations or new enforcement of existing standards, including measures to impose new and enhanced duties when interacting with customers and in the execution and handling of customer transactions; (xii) the liability to which UBS may be exposed, or possible constraints or sanctions that regulatory authorities might impose on UBS, due to litigation, contractual claims and regulatory investigations, including the potential for disqualification from certain businesses, potentially large fines or monetary penalties, or the loss of licenses or privileges as a result of regulatory or other governmental sanctions, as well as the effect that litigation, regulatory and similar matters have on the operational risk component of our RWA, as well as the amount of capital available for return to shareholders; (xiii) the effects on UBS's business, in particular cross-border banking, of sanctions, tax or regulatory developments and of possible changes in UBS's policies and practices; (xiv) UBS's ability to retain and attract the employees necessary to generate revenues and to manage, support and control its businesses, which may be affected by competitive factors; (xv) changes in accounting or tax standards or policies, and determinations or interpretations affecting the recognition of gain or loss, the valuation of goodwill, the recognition of deferred tax assets and other matters; (xvi) UBS's ability to implement new technologies and business methods, including digital services and technologies, and ability to successfully compete with both existing and new financial service providers, some of which may not be regulated to the same extent; (xvii) limitations on the effectiveness of UBS's internal processes for risk management, risk control, measurement and modeling, and of financial models generally; (xviii) the occurrence of operational failures, such as fraud, misconduct, unauthorized trading, financial crime, cyberattacks, data leakage and systems failures, the risk of which is increased with cyberattack threats from nation states; (xix) restrictions on the ability of UBS Group AG to make payments or distributions, including due to restrictions on the ability of its subsidiaries to make loans or distributions, directly or indirectly, or, in the case of financial difficulties, due to the exercise by FINMA or the regulators of UBS's operations in other countries of their broad statutory powers in relation to protective measures, restructuring and liquidation proceedings; (xx) the degree to which changes in regulation, capital or legal structure, financial results or other factors may affect UBS's ability to maintain its stated capital return objective; (xxi) uncertainty over the scope of actions that may be required by UBS, governments and others for UBS to achieve goals relating to climate, environmental and social matters, as well as the evolving nature of underlying science and industry and the possibility of conflict between different governmental standards and regulatory regimes; and (xxii) the effect that these or other factors or unanticipated events may have on our reputation and the additional consequences that this may have on our business and performance. The sequence in which the factors above are presented is not indicative of their likelihood of occurrence or the potential magnitude of their consequences. Our business and financial performance could be affected by other factors identified in our past and future filings and reports, including those filed with the US Securities and Exchange Commission (the SEC). More detailed information about those factors is set forth in documents furnished by UBS and filings made by UBS with the SEC, including UBS's Annual Report on Form 20-F for the year ended 31 December 2022. UBS is not under any obligation to (and expressly disclaims any obligation to) update or alter its forward-looking statements, whether as a result of new information, future events, or otherwise.

Rounding | Numbers presented throughout this report may not add up precisely to the totals provided in the tables and text. Percentages and percent changes disclosed in text and tables are calculated on the basis of unrounded figures. Absolute changes between reporting periods disclosed in the text, which can be derived from numbers presented in related tables, are calculated on a rounded basis.

Tables | Within tables, blank fields generally indicate non-applicability or that presentation of any content would not be meaningful, or that information is not available as of the relevant date or for the relevant period. Zero values generally indicate that the respective figure is zero on an actual or rounded basis. Values that are zero on a rounded basis can be either negative or positive on an actual basis.

UBS Group AG
P.O. Box, CH-8098 Zurich

UBS AG
P.O. Box, CH-8098 Zurich
P.O. Box, CH-4002 Basel

ubs.com