

Pillar 3 Report

31 December 2022

UBS Group and significant regulated subsidiaries
and sub-groups



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

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UBS Group

Section 1 Introduction and basis for preparation

Scope of Basel III Pillar 3 disclosures

The Basel Committee on Banking Supervision (the BCBS) Basel III capital adequacy framework consists of three complementary pillars. Pillar 1 provides a framework for measuring minimum capital requirements for the credit, market, operational and non-counterparty-related risks faced by banks. Pillar 2 addresses the principles of the supervisory review process, emphasizing the need for a qualitative approach to supervising banks. Pillar 3 requires banks to publish a range of disclosures, mainly covering risk, capital, leverage, liquidity and remuneration.

This report provides Pillar 3 disclosures for the 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 in the respective sections under "Significant regulated subsidiaries and sub-groups."

This Pillar 3 Report has been prepared in accordance with Swiss Financial Market Supervisory Authority (FINMA) Pillar 3 disclosure requirements (FINMA Circular 2016/1 "Disclosure – banks") as revised on 8 December 2021, the underlying BCBS guidance "Revised Pillar 3 disclosure requirements" issued in January 2015, the "Frequently asked questions on the revised Pillar 3 disclosure requirements" issued in August 2016, the "Pillar 3 disclosure requirements – consolidated and enhanced framework" issued in March 2017 and the subsequent "Technical Amendment – Pillar 3 disclosure requirements – regulatory treatment of accounting provisions" issued in August 2018.

As UBS is considered a systemically relevant bank (an SRB) under Swiss banking law, UBS Group AG and UBS AG are required to comply with regulations based on the Basel III framework as applicable to Swiss SRBs on a consolidated basis.

Local regulators may also require the publication of Pillar 3 information at a subsidiary or sub-group level. Where applicable, these local disclosures are provided under "Holding company and significant regulated subsidiaries and sub-groups" at ubs.com/investors.

- › Refer to the "Capital, liquidity and funding, and balance sheet" section of our Annual Report 2022, available under "Annual reporting" at ubs.com/investors, for more information about capital and other regulatory information as of 31 December 2022 for UBS Group AG consolidated, and to the "Capital, liquidity and funding, and balance sheet" section of the combined UBS Group AG and UBS AG Annual Report 2022, available under "Annual reporting" at ubs.com/investors, for more information about capital and other regulatory information for UBS AG consolidated

Significant regulatory developments, disclosure requirements and other changes

FINMA's annual assessment of recovery and resolution plans and revisions to the Swiss Banking Act and the Banking Ordinance

In March 2022, 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 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. Based on the improvements made in 2021, FINMA increased the resolvability discount on the gone concern capital requirements as of 1 July 2022.

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, aforementioned 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 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.

Revision of the Swiss liquidity requirements

In July 2022, the revision of the Swiss Liquidity Ordinance became effective, which increases the regulatory minimum liquidity requirements for systemically important banks (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.

Amendment of the Swiss Capital Adequacy Ordinance regarding the final implementation of Basel III

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.

Introduction of a Swiss public liquidity backstop

In conjunction with the revision of the Swiss Liquidity Ordinance, the Swiss Federal Council announced the key parameters for a public liquidity backstop in March 2022. The liquidity backstop would enable the Swiss government and the Swiss National Bank to support the liquidity of a Swiss 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.

US Inflation Reduction Act

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.

Other developments

Simplification of Pillar 3 disclosures

Starting with the 31 December 2022 Pillar 3 Report, we have replaced the "CR7: IRB – effect on RWA of credit derivatives used as CRM techniques" and "CCR3: Standardized approach – CCR exposures by regulatory portfolio and risk weights" tables with a qualitative statement, due to immateriality and in line with FINMA Circular 2016/1, general principles of disclosure.

Capital returns

The 2021 share repurchase program was concluded on 29 March 2022. A total of 240.3m UBS Group AG shares were acquired at an aggregate purchase price of CHF 3,810m (USD 4,137m).

On 31 March 2022, we commenced a new 2022 share repurchase program of up to USD 6bn. On 6 April 2022, the shareholders approved a dividend of USD 0.50 per share at the Annual General Meeting (the AGM). The dividend was paid on 14 April 2022 to shareholders of record on 13 April 2022.

In 2022, we repurchased 322m shares for a total acquisition cost of CHF 5,324m (USD 5,581m) under the 2021 and 2022 share repurchase programs. We expect to repurchase more than USD 5bn of our shares in 2023.

For 2022, the Board of Directors (the BoD) is proposing a dividend to UBS Group AG shareholders of USD 0.55 per share. Subject to approval at the AGM, scheduled for 5 April 2023, the dividend will be paid on 14 April 2023 to shareholders of record on 13 April 2023. The ex-dividend date will be 12 April 2023.

- › Refer to the "Share information and earnings per share" section of our Annual Report 2022, available under "Annual reporting" at ubs.com/investors, for more information

Sale of our shareholding in Mitsubishi Corp.-UBS Realty Inc.

In the second quarter of 2022, we completed the sale of our 49% shareholding in our Japanese real estate joint venture, Mitsubishi Corp.-UBS Realty Inc., to KKR & Co. Inc., as announced on 17 March 2022. The sale resulted in a pre-tax gain of USD 848m in Asset Management and increased our CET1 capital by USD 979m. Our asset management, wealth management and investment banking businesses operating in Japan were not affected by the sale.

Material model updates

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. The additional operational risk RWA were phased in over two quarters, with USD 2.1bn reflected in the first quarter and USD 2.0bn in the second quarter of 2022.

Since the beginning of the second quarter of 2021, we began to phase in an RWA increase related to a new model for structured margin loans and similar products in Global Wealth Management. This RWA increase was phased in over five quarters up to and including the second quarter of 2022. As a result, credit risk RWA increased by USD 0.7bn in the first quarter of 2022 and by USD 0.7bn in the second quarter of 2022 when the phase-in was completed.

In addition, we implemented a new model for structured margin loans in the Investment Bank in the first quarter of 2022, resulting in a credit and counterparty credit risk increase of USD 0.4bn. The first quarter of 2022 also included a credit risk RWA increase of USD 0.3bn due to a loss given default (LGD) model update related to leveraged finance clients in the Investment Bank.

Furthermore, we updated the model for margin period of risk for prime brokerage clients, which resulted in an increase in credit risk RWA of USD 1.1bn in the second quarter of 2022.

We also updated the LGD model for mortgages in Switzerland, which resulted in an increase in credit risk RWA of USD 1.0bn in the second quarter of 2022.

In the third quarter of 2022, we updated the probability-of-default (PD) and LGD models for certain Lombard clients, which resulted in a credit risk RWA increase of USD 0.6bn. Furthermore, we updated the PD model for owner-occupied residential properties, which resulted in an additional credit risk RWA increase of USD 0.6bn.

In the fourth quarter of 2022, we began to phase in an RWA increase for a change in relation to the LGD model for private equity and hedge fund financing trades. This RWA increase is being phased in over four quarters and will be fully implemented by the third quarter of 2023. Credit risk RWA increased by USD 0.7bn in the fourth quarter of 2022 due to the aforementioned change.

Furthermore, we began to phase in an update to the PD model for hedge funds. The associated credit risk RWA increase will be phased in over four quarters, and the RWA increase in the fourth quarter of 2022 was USD 0.1bn. Finally, the fourth quarter of 2022 reflected an RWA reduction of USD 0.3bn related to updates to the Lombard model.

Frequency and comparability of Pillar 3 disclosures

The table below summarizes the reporting frequency for each disclosure as per the current FINMA requirements applicable to UBS.

We provide quantitative comparative information as of 30 September 2022 for disclosures required on a quarterly basis and as of 30 June 2022 for disclosures required on a semi-annual basis. Where specifically required by FINMA and / or the BCBS, we disclose comparative information for additional reporting dates.

Where required, movement commentary is aligned with the corresponding disclosure frequency required by FINMA and always refers to the latest comparative period. Throughout this report, signposts are displayed at the beginning of a section, table or chart – **Annual** | **Semi-annual** | **Quarterly** | – indicating whether the disclosure is provided annually, semi-annually or quarterly. A triangle symbol – **▲ ▲ ▲** – indicates the end of the signpost.

- › Refer to our **31 March 2022, 30 June 2022 and 30 September 2022 Pillar 3 Reports**, available under “Pillar 3 disclosures” at ubs.com/investors, for more information about previously published quarterly movement commentary
- › Refer to our **30 June 2022 Pillar 3 Report**, available under “Pillar 3 disclosures” at ubs.com/investors, for more information about previously published semi-annual movement commentary

The following table outlines the annual, semi-annual and quarterly disclosure requirements that are satisfied in this report for UBS Group and significant regulated subsidiaries and sub-groups as applicable. For specific disclosures, this report may refer to our Annual Report 2022.

FINMA reference ¹	Disclosure title in this report	Section of this report	Page number in this report
Annual disclosure requirements			
OVA	Bank risk management approach	Introduction and basis for preparation	11–12
LI1	Differences between accounting and regulatory scopes of consolidation and mapping of financial statements with regulatory risk categories	Section 4 Linkage between financial statements and regulatory exposures	19–20
LI2	Main sources of differences between regulatory exposure amounts and carrying values in financial statements (under the regulatory scope of consolidation)	Section 4 Linkage between financial statements and regulatory exposures	21
LIA	Explanations of differences between accounting and regulatory exposure amounts	Section 4 Linkage between financial statements and regulatory exposures	19
PV1	Prudent valuation adjustments (PVA)	Section 12 Going and gone concern requirements and eligible capital	81
GSIB1	Disclosure of G-SIB indicators	Section 17 Requirements for global systemically important banks and related indicators	90
LIQA	Liquidity risk management	Section 15 Liquidity and funding	88
CRA	Credit risk management	Section 5 Credit risk	22
CRB	Additional disclosure related to the credit quality of assets: – Breakdown of exposures by industry – Breakdown of exposures by geographical area – Breakdown of exposures by residual maturity – Credit-impaired exposures by industry – Credit-impaired exposures by geographical area – Past due exposures – Breakdown of restructured exposures between credit-impaired and non-credit-impaired	Section 5 Credit risk	24 24 25 25 26 26 26
CRC	Credit risk mitigation	Section 5 Credit risk	27
CRD	Qualitative disclosures on banks' use of external credit ratings under the standardized approach for credit risk	Section 5 Credit risk	28
CRE	Qualitative disclosure related to IRB models	Section 5 Credit risk	31
CR9	IRB – backtesting of probability of default (PD) per portfolio	Section 5 Credit risk	42–49
CCRA	Counterparty credit risk management	Section 6 Counterparty credit risk	50
SECA	– Introduction – Objectives, roles and involvement	Section 7 Securitization	61 61–62
MRA	Market risk	Section 9 Market risk	64
MRB	Internal models approach	Section 9 Market risk	67
IRRBBA	Interest rate risk in the banking book	Section 11 Interest rate risk in the banking book	72
IRRBB1	Quantitative information about IRRBB	Section 11 Interest rate risk in the banking book	73
IRRBBA1	Quantitative disclosures relating to the position structure and interest rate reset of IRRBB risk	Section 11 Interest rate risk in the banking book	73–74
REMA REM1 REM2 REM3	Remuneration policy	Section 16 Remuneration	89
ORA	Operational risk	Section 10 Operational risk	72
–	VaR- and SVaR-based RWA	Section 9 Market risk	69
–	RniV-based RWA	Section 9 Market risk	70
–	IRC-based RWA	Section 9 Market risk	71
–	Comprehensive risk measure	Section 9 Market risk	71

FINMA reference ¹	Disclosure title in this report	Section of this report	Page number in this report
Semi-annual disclosure requirements			
CR1	Credit quality of assets	Section 5 Credit risk	23
CR2	Changes in stock of defaulted loans, debt securities and off-balance sheet exposures	Section 5 Credit risk	23
CR3	Credit risk mitigation techniques – overview	Section 5 Credit risk	28
CR4	Standardized approach – credit risk exposure and credit risk mitigation (CRM) effects	Section 5 Credit risk	29
CR5	Standardized approach – exposures by asset classes and risk weights	Section 5 Credit risk	30
CR6	IRB – credit risk exposures by portfolio and PD range	Section 5 Credit risk	33–40
CR7	Qualitative statement about the impact of credit derivatives used as CRM techniques on IRB credit risk RWA	Section 5 Credit risk	41
CR10	IRB (equities under the simple risk-weight method)	Section 5 Credit risk	50
CCR1	Analysis of counterparty credit risk (CCR) exposure by approach	Section 6 Counterparty credit risk	51
CCR2	Credit valuation adjustment (CVA) capital charge	Section 6 Counterparty credit risk	51
CCR3	Qualitative statement about the materiality of counterparty credit risk exposures subject to standardized risk weights	Section 6 Counterparty credit risk	51
CCR4	IRB – CCR exposures by portfolio and PD scale	Section 6 Counterparty credit risk	52–54
CCR5	Composition of collateral for CCR exposure	Section 6 Counterparty credit risk	55
CCR6	Credit derivatives exposures	Section 6 Counterparty credit risk	55
CCR8	Exposures to central counterparties	Section 6 Counterparty credit risk	56
SEC1 SEC2 SEC3 SEC4	Tailored table “Securitization exposures in the banking and trading book and associated regulatory capital requirements”	Section 8 Securitizations	63
MR1	The data is reflected in the “Securitization exposures in the banking and trading book and associated regulatory capital requirements” table	Section 8 Securitizations	63
MR3	IMA values for trading portfolios	Section 9 Market risk	68
MR4	Comparison of VaR estimates with gains / losses	Section 9 Market risk	69-70
CC1	Composition of regulatory capital	Section 12 Going and gone concern requirements and eligible capital	79–80
CC2	Reconciliation of accounting balance sheet to balance sheet under the regulatory scope of consolidation	Section 12 Going and gone concern requirements and eligible capital	77–78
CCA	Main features of regulatory capital instruments and other total loss-absorbing capacity (TLAC)-eligible instruments	n/a – The CCA table is published on our website. Refer to the document titled “Capital and total loss-absorbing capacity instruments of UBS Group AG consolidated and UBS AG consolidated and standalone – key features” under “Bondholder information” at ubs.com/investors , for more information.	n/a
CCyB1	Geographical distribution of credit exposures used in the countercyclical capital buffer	Section 12 Going and gone concern requirements and eligible capital	76
TLAC1	TLAC composition for G-SIBs (at resolution group level)	Section 13 Total loss-absorbing capacity	82
TLAC2	Material sub-group entity – creditor ranking at legal entity level	<u>Significant regulated subsidiaries and sub-groups:</u> Section 5 UBS Americas Holding LLC consolidated	104
TLAC3	Creditor ranking at legal entity level for the resolution entity, UBS Group AG	Section 13 Total loss-absorbing capacity	83
LIQ2	Net Stable Funding Ratio (NSFR)	Section 15 Liquidity and funding	89

FINMA reference ¹	Disclosure title in this report	Section of this report	Page number in this report
Quarterly disclosure requirements			
KM1	Key metrics	<u>UBS Group:</u> Section 2 Key metrics	16
		<u>Significant regulated subsidiaries and sub-groups:</u> Section 2 UBS AG standalone	92
		Section 3 UBS Switzerland AG standalone	96
		Section 4 UBS Europe SE consolidated	102
		Section 5 UBS Americas Holding LLC consolidated	103
KM2	Key metrics – TLAC requirements (at resolution group level)	Section 2 Key metrics	17
OV1	Overview of RWA	Section 3 Overview of risk-weighted assets	18
CR8	RWA flow statements of credit risk exposures under IRB	Section 5 Credit risk	41
CCR7	RWA flow statements of CCR exposures under IMM and VaR	Section 6 Counterparty credit risk	56
MR2	RWA flow statements of market risk exposures under an internal models approach	Section 9 Market risk	66
LR1	BCBS Basel III leverage ratio summary comparison	Section 14 Leverage ratio	85
LR2	BCBS Basel III leverage ratio common disclosure	Section 14 Leverage ratio	85
LIQ1	Liquidity coverage ratio	Section 15 Liquidity and funding	87
–	High-quality liquid assets	Section 15 Liquidity and funding	86
–	Swiss SRB going and gone concern requirements and information	<u>UBS Group:</u> Section 12 Going and gone concern requirements and eligible capital	75
		<u>Significant regulated subsidiaries and sub-groups:</u> Section 2 UBS AG standalone	92–94
		Section 3 UBS Switzerland AG standalone	97–98
–	Reconciliation of IFRS total assets to BCBS Basel III total on-balance sheet exposures excluding derivatives and securities financing transactions	Section 14 Leverage ratio	84
–	Swiss SRB leverage ratio denominator	<u>Significant regulated subsidiaries and sub-groups:</u> Section 2 UBS AG standalone	94
		Section 3 UBS Switzerland AG standalone	98

¹ Disclosure requirement per FINMA Circular 2016/1 "Disclosure – banks."

Format of Pillar 3 disclosures

As defined by FINMA, certain Pillar 3 disclosures follow a fixed format, whereas other disclosures are flexible and may be modified to a certain degree to present the most relevant information. Pillar 3 requirements are presented under the relevant FINMA table / template reference (e.g., OVA, OV1, LI1, etc.). Pillar 3 disclosures may also include row labeling (1, 2, 3, etc.) as prescribed by FINMA. Naming conventions used in our Pillar 3 disclosures are based on FINMA guidance and may not reflect UBS naming conventions.

The FINMA-defined asset classes used within this Pillar 3 Report are as follows:

- Central governments and central banks, consisting of exposures relating to governments at the level of the nation state and their central banks. The European Union is also treated as a central government.
- Banks and securities dealers, consisting of exposures to legal entities holding banking licenses and securities firms subject to adequate supervisory and regulatory arrangements, including risk-based capital requirements. Securities firms can only be assigned to this asset class if they are subject to a supervision equivalent to that of banks.
- Public-sector entities and multi-lateral development banks, consisting of exposures to institutions established on the basis of public law in different forms, such as administrative entities or public companies and regional governments, the Bank for International Settlements, the International Monetary Fund, and eligible multi-lateral development banks recognized by FINMA.
- Corporates: specialized lending, consisting of exposures relating to income-producing real estate and high-volatility commercial real estate, commodities finance, project finance, and object finance.
- Corporates: other lending, consisting of all exposures to corporates that are not specialized lending. This asset class includes private commercial entities, such as corporations, partnerships or proprietorships, insurance companies and funds (including managed funds).
- Retail: residential mortgages, consisting of residential mortgages, regardless of exposure size, if the owner occupies or rents out the mortgaged property.
- Retail: qualifying revolving retail exposures, consisting of unsecured and revolving credits to individuals that exhibit appropriate loss characteristics relating to credit card relationships at UBS.

- Retail: other, consisting primarily of Lombard lending that represents loans made against the pledge of eligible marketable securities or cash, as well as exposures to small businesses, private clients and other retail customers without mortgage financing.
- Equity, consisting of instruments that have no stated or predetermined maturity and represent a residual interest in the net assets of an entity.
- Other assets, consisting of the remainder of exposures that UBS is exposed to, mainly non-counterparty-related assets.

Governance over Pillar 3 disclosures

The BoD and senior management are responsible for establishing and maintaining an effective internal control structure over the disclosure of financial information, including Pillar 3 disclosures. In line with BCBS and FINMA requirements, we have a BoD-approved Pillar 3 disclosure governance policy in place, which includes information about the key internal controls and procedures designed to govern the preparation, review and sign-off of Pillar 3 disclosures. This Pillar 3 Report has been verified and approved in line with that policy.

Risk management framework

Our Group-wide risk management framework is applied across all risk types. The table below presents an overview of risk management disclosures that are provided separately in our Annual Report 2022, available under “Annual reporting” at ubs.com/investors.

Annual I

OVA: Bank risk management approach

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Business model and risk profile	Our strategy, business model and environment	<ul style="list-style-type: none"> – Market climate, Industry trends – Risk factors 	<ul style="list-style-type: none"> 28–32 56–66
	Risk, capital, liquidity and funding, and balance sheet	<ul style="list-style-type: none"> – Overview of risks arising from our business activities – Risk categories – Top and emerging risks – Risk management and control principles – Risk appetite framework – Risk measurement – Credit risk – Main sources of credit risk, Overview of measurement, monitoring and management techniques, Credit risk profile of the Group – Market risk – Main sources of market risk, Overview of measurement, monitoring and management techniques – Interest rate risk in the banking book – Other market risk exposures – Country risk framework, Country risk exposure – Non-financial risk framework 	<ul style="list-style-type: none"> 84 85–86 86–87 90 89–91 93–95 96–97 111–112 115–118 118–119 119–121 131–132
Risk governance	Risk, capital, liquidity and funding, and balance sheet	<ul style="list-style-type: none"> – Risk categories – Risk governance – Interest rate risk in the banking book – Risk management and governance – Capital management – Capital management objectives, Capital planning and activities – Liquidity and funding management – Strategy, objectives and governance 	<ul style="list-style-type: none"> 85–86 87–89 116 135 147
Communication and enforcement of risk culture within the bank	Risk, capital, liquidity and funding, and balance sheet	<ul style="list-style-type: none"> – Risk governance – Risk appetite framework – Internal risk reporting – Non-financial risk framework 	<ul style="list-style-type: none"> 87–89 89–91 92 131–132
Scope and main features of risk measurement systems	Risk, capital, liquidity and funding, and balance sheet	<ul style="list-style-type: none"> – Risk measurement – Credit risk – Overview of measurement, monitoring and management techniques – Market risk – Overview of measurement, monitoring and management techniques – Country risk exposure measure – Advanced measurement approach model 	<ul style="list-style-type: none"> 93–95 96–97 111–112 120 132
Risk information reporting	Risk, capital, liquidity and funding, and balance sheet	<ul style="list-style-type: none"> – Risk governance – Risk management and control principles – Internal risk reporting 	<ul style="list-style-type: none"> 87–89 90 92

OVA: Bank risk management approach (continued)

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		– Credit risk models – Stress loss	107
		– Market risk stress loss	112
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		– Liquidity and funding management – Liquidity and funding stress testing	147–148
Strategies and processes applied to manage, hedge and mitigate risks	Risk, capital, liquidity and funding, and balance sheet	– Credit risk – Overview of measurement, monitoring and management techniques	96–97
		– Credit risk mitigation	102–104
		– Market risk – Overview of measurement, monitoring and management techniques	111–112
		– Value-at-risk	112–115
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		– Note 21 Offsetting financial assets and financial liabilities	330–331



Our approach to measuring risk exposure and risk-weighted assets

Depending on the intended purpose, the measurement of risk exposure that we apply may differ. Exposures may be measured for financial accounting purposes under IFRS for deriving our regulatory capital requirement or for internal risk management and control purposes. Our Pillar 3 disclosures are generally based on measures of risk exposure used to derive the regulatory capital required under Pillar 1. Our RWA are calculated according to the BCBS Basel III framework, as implemented by the Swiss Capital Adequacy Ordinance issued by the Swiss Federal Council and by the associated circulars issued by FINMA.

The table below provides a summary of the approaches we use for the main risk categories to determine the regulatory risk exposure and RWA.

Category	Definition of risk	Regulatory risk exposure	Risk-weighted assets (RWA)
I. Credit risk			
Credit risk	Credit risk is the risk of a loss resulting from the failure of a counterparty to meet its contractual obligations toward UBS arising from transactions such as loans, debt securities held in our banking book and undrawn credit facilities. Refer to section 5, Credit risk.	Exposure at default (EAD) is the amount we expect a counterparty to owe us at the time of a possible default. For banking products, the EAD generally equals the IFRS carrying amount as of the reporting date. The EAD is expected to remain constant over the 12-month period. For loan commitments, a credit conversion factor is applied to model expected future drawdowns over the 12-month period.	We apply two approaches to measure credit risk RWA: – <i>Advanced internal ratings-based (A-IRB) approach</i> , applied for the majority of our businesses. Counterparty risk weights are determined by reference to internal probability of default and LGD estimates. – <i>Standardized approach (SA)</i> , generally based on external ratings for a sub-set of our credit portfolio where internal measures are not available.
Non-counterparty-related risk	Non-counterparty-related risk (NCPA) denotes the risk of a loss arising from changes in value or from liquidation of assets not linked to any counterparty, for example, premises, equipment and software, and deferred tax assets on temporary differences. Refer to section 3, Overview of RWA.	The IFRS carrying amount is the basis for measuring NCPA exposure.	We measure non-counterparty-related risk RWA by applying prescribed regulatory risk weights to the NCPA exposure.

Category	Definition of risk	Regulatory risk exposure	Risk-weighted assets (RWA)
Equity positions in the banking book	<p>Risk from equity positions in the banking book refers to the investment risk arising from equity positions and other relevant investments or instruments held in our banking book.</p> <p>Refer to section 5, Credit risk.</p>	<p>The IFRS carrying amount is the basis for measuring risk exposure for equity securities held in our banking book, but reflecting a net position.</p>	<p>We measure the RWA from equity positions in the banking book by applying prescribed regulatory risk weights to our listed and unlisted equity exposures.</p>
II. Counterparty credit risk			
Counterparty credit risk (CCR)	<p>CCR is the risk that a counterparty for over-the-counter (OTC) derivatives, exchange-traded derivatives (ETDs) or securities financing transactions (SFTs) will default before the final settlement of a transaction and cause a loss to the firm if the transaction has a positive economic value at the time of default.</p> <p>Refer to section 6, Counterparty credit risk.</p>	<p>We primarily use internal models to measure CCR exposures to third parties. All internal models are approved by FINMA.</p> <ul style="list-style-type: none"> – <i>For OTC derivatives and ETDs</i>, we apply the effective expected positive exposure (EEPE) and stressed expected positive exposure (SEPE) as defined in the Basel III framework. – <i>For SFTs</i>, we apply the close-out period approach. <p>In certain instances where risk models are not available:</p> <ul style="list-style-type: none"> – <i>Exposure on OTC derivatives and ETDs</i> is calculated considering the net positive replacement values and potential future exposure. – <i>Exposure for SFTs</i> is based on the IFRS carrying amount, net of collateral mitigation. 	<p>We apply two approaches to measure CCR RWA:</p> <ul style="list-style-type: none"> – <i>Advanced internal ratings-based (A-IRB) approach</i>, applied for the majority of our businesses. Counterparty risk weights are determined by reference to internal counterparty ratings and LGD estimates. – <i>Standardized approach (SA)</i>, generally based on external ratings for a sub-set of our credit portfolio, where internal measures are not available. <p>We apply an additional credit valuation adjustment (CVA) capital charge to hold capital against the risk of mark-to-market losses associated with the deterioration of counterparty credit quality.</p>
Settlement risk	<p>Settlement risk is 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 countervalue.</p> <p>Refer to section 3, Overview of risk-weighted assets.</p>	<p>The IFRS carrying amount is the basis for measuring settlement risk exposure.</p>	<p>We measure settlement risk RWA through the application of prescribed regulatory risk weights to the settlement risk exposure.</p>

Category	Definition of risk	Regulatory risk exposure	Risk-weighted assets (RWA)
III. Securitization exposures in the banking book			
Securitization exposures in the banking book	<p>Exposures arising from traditional and synthetic securitizations held in our banking book.</p> <p>Refer to section 8, Securitizations.</p>	<p>The IFRS carrying amount after eligible regulatory credit risk mitigation and credit conversion factor is the basis for measuring securitization exposure. For synthetic securitization transactions, the exposure is equal to the fair value of the net long or short securitization position.</p>	<p>Consistent with the BCBS, we apply the FINMA-defined hierarchy of approaches for banking book securitizations to measure RWA:</p> <ul style="list-style-type: none"> – <i>Internal ratings-based approach (SEC-IRBA)</i>, considering the advanced IRB risk weights, if the securitized pool largely consists of IRB positions and internal ratings are available. – <i>External ratings-based approach (SEC-ERBA)</i>, if the IRB approach cannot be applied, risk weights are applied based on external ratings, provided that we are able to demonstrate our expertise in critically reviewing and challenging the external ratings. – <i>Standardized approach (SEC-SA) or 1,250% risk weight factor</i>, if none of the aforementioned approaches can be applied, we would apply the standardized approach where the delinquency status of a significant portion of the underlying exposure can be determined or a risk weight of 1,250%. <p>For re-securitization exposures we apply either the standardized approach or a risk weight factor of 1,250%.</p>
IV. Market risk			
Value-at-risk (VaR)	<p>VaR is a statistical measure of market risk, representing the market risk losses that could potentially be realized over a set time horizon (holding period) at an established level of confidence. For regulatory VaR, the holding period is 10 days and the confidence level is 99%. For our risk management measure, Management VaR, we apply a holding period of 1 day and a confidence level of 95%. For further differences between the regulatory and Management VaR, refer to the "Risk management and control" section of our Annual Report 2022.</p> <p>Refer to section 9, Market risk.</p>		<p>The VaR component of market risk RWA is calculated by taking the maximum of the period-end VaR and the product of the average VaR for the 60 trading days immediately preceding the period end and a VaR multiplier. The quantity is then multiplied by a risk weight factor of 1,250% to determine RWA. The VaR multiplier is dependent on the number of VaR backtesting exceptions within the most recent 250-trading-day window.</p>
Stressed VaR (SVaR)	<p>SVaR is a 10-day 99% VaR measure estimated with model parameters that are calibrated to historical data covering a one-year period of significant financial stress relevant to the firm's current portfolio.</p> <p>Refer to section 9, Market risk.</p>		<p>The derivation of SVaR RWA is similar to the one explained above for VaR. Unlike VaR, SVaR is computed weekly, and as a result the average SVaR is computed over the most recent 12 observations.</p>
Add-on for risks not in VaR (RniV)	<p>Potential risks that are not fully captured by our VaR model are referred to as RniV. We have a framework to identify and quantify these potential risks and underpin them with capital.</p> <p>Refer to section 9, Market risk.</p>		<p>Our RniV framework is used to derive the RniV-based component of the market risk RWA, which is approved by FINMA. Since the second quarter of 2018, RniV and RWA resulting from RniV are recalibrated on a monthly basis.</p> <p>As the RWA from RniV are add-ons, they do not reflect any diversification benefits across risks capitalized through VaR and SVaR.</p>
Incremental risk charge (the IRC)	<p>The IRC represents an estimate of the default and rating migration risk of all trading book positions with issuer risk, except for equity products and securitization exposures, measured over a one-year time horizon at a 99.9% confidence level.</p> <p>Refer to section 9, Market risk.</p>		<p>The IRC is calculated weekly, and the results are used to derive the IRC-based component of the market risk RWA. The derivation is similar to that for VaR- and SVaR-based RWA, but without a VaR multiplier.</p>

Category	Definition of risk	Regulatory risk exposure	Risk-weighted assets (RWA)
Comprehensive risk measure (the CRM)	The CRM is an estimate of the default and complex price risk, including the convexity and cross-convexity of the CRM portfolio across credit spread, correlation and recovery, measured over a one-year time horizon at a 99.9% confidence level. Refer to section 9, Market risk.		Since the second quarter of 2019, we have not held eligible correlation trading positions. Prior to then, the CRM was calculated weekly and used to derive the CRM-based component of the market risk RWA, with the calculation subject to a floor equal to 8% of the equivalent capital charge under the specific risk measure (the SRM) for the correlation trading portfolio.
Securitization / re-securitization in the trading book	Risk arising from traditional and synthetic securitizations held in our trading book. Refer to section 8, Securitizations and section 9, Market risk.	The exposure is equal to the fair value of the net long or short securitization position.	We measure trading book securitization RWA using the <i>Ratings-based approach</i> , i.e., applying risk weights based on external ratings.
V. Operational risk			
Operational risk	Operational risk is the risk of loss resulting from inadequate or failed internal processes, people or systems, or from external causes (deliberate, accidental or natural), including cybersecurity and information security risk. Operational risk includes, among others, legal risk, conduct risk and compliance risk. Refer to section 10, Operational risk.		We use the advanced measurement approach to measure operational risk RWA in accordance with FINMA requirements.

Section 2 Key metrics

Key metrics of the fourth quarter of 2022

Quarterly | The KM1 and KM2 tables below are based on Basel Committee on Banking Supervision (BCBS) Basel III rules. The KM2 table includes a reference to the total loss-absorbing capacity (TLAC) term sheet, published by the Financial Stability Board (the FSB). The FSB provides this term sheet at [fsb.org/2015/11/total-loss-absorbing-capacity-tlac-principles-and-term-sheet](https://www.fsb.org/2015/11/total-loss-absorbing-capacity-tlac-principles-and-term-sheet).

Our capital and leverage ratios decreased, primarily reflecting increases in risk-weighted assets (RWA) and in the leverage ratio denominator. Our common equity tier 1 (CET1) capital increased by USD 0.8bn to USD 45.5bn, mainly reflecting operating profit before tax of USD 1.9bn, with associated current tax expenses of USD 0.3bn, and positive effects from foreign currency translation of USD 1.0bn, partly offset by share repurchases of USD 1.3bn and dividend accruals of USD 0.4bn.

Our tier 1 capital decreased by USD 1.0bn to USD 58.3bn, reflecting a decrease in our additional tier 1 (AT1) capital of USD 1.8bn, partly offset by the aforementioned increase in our CET1 capital. The decrease in AT1 capital was 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.

The TLAC available as of 31 December 2022 included CET1 capital, AT1 and tier 2 capital instruments eligible under the TLAC framework, and non-regulatory capital elements of TLAC. Under the Swiss systemically relevant bank (SRB) framework, including transitional arrangements, TLAC excludes 45% of the gross unrealized gains on debt instruments measured at fair value through other comprehensive income for accounting purposes, which for regulatory capital purposes are measured at the lower of cost or market value. This amount was negligible as of 31 December 2022 but is included as available TLAC in the KM2 table in this section.

Our available TLAC increased by USD 0.6bn to USD 105.3bn, mainly reflecting a USD 1.6bn increase in TLAC-eligible senior unsecured debt, partly offset by the aforementioned decrease in our tier 1 capital. The increase of USD 1.6bn in TLAC-eligible senior unsecured debt was mainly due to interest rate risk hedge, foreign currency translation and other effects.

RWA increased by USD 9.0bn to USD 319.6bn, mainly driven by increases of USD 9.3bn in credit risk, USD 0.9bn in market risk and USD 0.5bn in operational risk RWA, partly offset by decreases of USD 2.6bn in counterparty credit risk. The overall increase of USD 9.0bn included an increase of USD 8.1bn related to currency effects.

Leverage ratio exposure increased by USD 38.7bn to USD 1,028.5bn, including currency effects of USD 38.5bn, mainly driven by higher trading portfolio and lending assets, as well as purchases of high-quality liquid asset (HQLA) securities, partly offset by lower derivative exposures and securities financing transactions.

In the fourth quarter of 2022, the quarterly average liquidity coverage ratio (the LCR) of UBS Group increased 1.0 percentage point to 163.7%, remaining above the prudential requirement communicated by the Swiss Financial Market Supervisory Authority (FINMA). The movement in the average LCR was driven by a reduction in the average net cash outflows of USD 1.8bn to USD 146.0bn, mainly due to lower outflows from customer deposits, partially offset by lower inflows from loans. The effect of the reduction in the average net cash outflows was largely offset by a decrease in the average HQLA of USD 1.8bn to USD 238.6bn, mainly driven by lower average cash balances due to higher funding consumption from the business divisions.

As of 31 December 2022, the net stable funding ratio (the NSFR) of UBS Group decreased 0.6 percentage points to 119.8%, remaining above the prudential requirement communicated by FINMA. The movement in the NSFR was driven by USD 25.0bn higher required stable funding, mainly due to an increase in trading assets and loans to customers, partially offset by lower derivative balances. Available stable funding increased by USD 27.5bn, predominantly due to increased customer deposits and debt securities issued.

KM1: Key metrics

USD m, except where indicated

	31.12.22	30.9.22	30.6.22	31.3.22	31.12.21
Available capital (amounts)					
1 Common Equity Tier 1 (CET1) ¹	45,457	44,664	44,798	44,593	45,281
1a Fully loaded ECL accounting model CET1	45,457	44,664	44,794	44,587	45,267
2 Tier 1 ¹	58,321	59,359	59,907	60,053	60,488
2a Fully loaded ECL accounting model Tier 1	58,321	59,359	59,902	60,047	60,475
3 Total capital ¹	58,806	59,845	60,401	61,056	61,928
3a Fully loaded ECL accounting model total capital	58,806	59,845	60,396	61,051	61,914
Risk-weighted assets (amounts)					
4 Total risk-weighted assets (RWA)	319,585	310,615	315,685	312,037	302,209
4a Minimum capital requirement ²	25,567	24,849	25,255	24,963	24,177
4b Total risk-weighted assets (pre-floor)	319,585	310,615	315,685	312,037	302,209
Risk-based capital ratios as a percentage of RWA					
5 CET1 ratio (%) ¹	14.22	14.38	14.19	14.29	14.98
5a Fully loaded ECL accounting model CET1 ratio (%)	14.22	14.38	14.19	14.29	14.98
6 Tier 1 ratio (%) ¹	18.25	19.11	18.98	19.25	20.02
6a Fully loaded ECL accounting model Tier 1 ratio (%)	18.25	19.11	18.98	19.24	20.01
7 Total capital ratio (%) ¹	18.40	19.27	19.13	19.57	20.49
7a Fully loaded ECL accounting model total capital ratio (%)	18.40	19.27	19.13	19.57	20.49
Additional CET1 buffer requirements as a percentage of RWA					
8 Capital conservation buffer requirement (%)	2.50	2.50	2.50	2.50	2.50
9 Countercyclical buffer requirement (%)	0.07	0.02	0.02	0.02	0.02
9a Additional countercyclical buffer for Swiss mortgage loans (%)	0.27	0.26			
10 Bank G-SIB and / or D-SIB additional requirements (%)	1.00	1.00	1.00	1.00	1.00
11 Total of bank CET1 specific buffer requirements (%) ³	3.57	3.52	3.52	3.52	3.52
12 CET1 available after meeting the bank's minimum capital requirements (%)	9.72	9.88	9.69	9.79	10.48
Basel III leverage ratio					
13 Total Basel III leverage ratio exposure measure	1,028,461	989,787	1,025,422	1,072,953	1,068,862
14 Basel III leverage ratio (%) ¹	5.67	6.00	5.84	5.60	5.66
14a Fully loaded ECL accounting model Basel III leverage ratio (%)	5.67	6.00	5.84	5.60	5.66
Liquidity coverage ratio (LCR)⁴					
15 Total high-quality liquid assets (HQLA)	238,585	240,420	249,364	252,836	227,891
16 Total net cash outflow	145,972	147,832	155,082	158,448	146,820
16a of which: cash outflows	262,123	263,699	268,641	280,217	275,373
16b of which: cash inflows	116,151	115,866	113,559	121,769	128,554
17 LCR (%)	163.72	162.68	160.85	159.64	155.47
Net stable funding ratio (NSFR)					
18 Total available stable funding	561,431	533,866	551,877	569,405	578,379
19 Total required stable funding	468,496	443,487	456,328	467,826	488,067
20 NSFR (%)	119.84	120.38	120.94	121.71	118.50

¹ As of 1 July 2022, our capital amounts exclude the transitional relief of recognizing ECL allowances and provisions in CET1 capital in accordance with FINMA Circular 2013/1 "Eligible capital – banks." ² Calculated as 8% of total RWA, based on total capital minimum requirements, excluding CET1 buffer requirements. ³ Excludes non-BCBS capital buffer requirements for risk-weighted positions that are directly or indirectly backed by residential properties in Switzerland. ⁴ Calculated based on an average of 63 data points in the fourth quarter of 2022 and 66 data points in the third quarter of 2022. For the prior-quarter data points, refer to the respective Pillar 3 Report, available under "Pillar 3 disclosures" at ubs.com/investors, for more information.

KM2: Key metrics – TLAC requirements (at resolution group level)¹

USD m, except where indicated

		31.12.22	30.9.22	30.6.22	31.3.22	31.12.21
1	Total loss-absorbing capacity (TLAC) available ²	105,312	104,745	106,249	106,573	104,783
1a	Fully loaded ECL accounting model TLAC available	105,312	104,745	106,244	106,568	104,769
2	Total RWA at the level of the resolution group	319,585	310,615	315,685	312,037	302,209
3	TLAC as a percentage of RWA (%)	32.95	33.72	33.66	34.15	34.67
3a	Fully loaded ECL accounting model TLAC as a percentage of fully loaded ECL accounting model RWA (%)	32.95	33.72	33.65	34.15	34.67
4	Leverage ratio exposure measure at the level of the resolution group	1,028,461	989,787	1,025,422	1,072,953	1,068,862
5	TLAC as a percentage of leverage ratio exposure measure (%)	10.24	10.58	10.36	9.93	9.80
5a	Fully loaded ECL accounting model TLAC as a percentage of fully loaded ECL accounting model leverage exposure measure (%)	10.24	10.58	10.36	9.93	9.80
6a	Does the subordination exemption in the antepenultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?			No		
6b	Does the subordination exemption in the penultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?			No		
6c	If the capped subordination exemption applies, the amount of funding issued that ranks pari passu with excluded liabilities and that is recognized as external TLAC, divided by funding issued that ranks pari passu with excluded liabilities and that would be recognized as external TLAC if no cap was applied (%)			N/A – Refer to our response to 6b.		

¹ Resolution group level is defined as the UBS Group AG consolidated level. ² As of 1 July 2022, our capital amounts exclude the transitional relief of recognizing ECL allowances and provisions in CET1 capital in accordance with FINMA Circular 2013/1 "Eligible capital – banks."



Section 3 Overview of risk-weighted assets

Overview of RWA and capital requirements

Quarterly | The OV1 table below provides an overview of our risk-weighted assets (RWA) and the related minimum capital requirements by risk type. The table presented is based on the respective Swiss Financial Market Supervisory Authority (FINMA) template and empty rows indicate current non-applicability to UBS.

During the fourth quarter of 2022, our RWA increased by USD 9.0bn to USD 319.6bn, mainly driven by increases of USD 9.3bn in credit risk, USD 0.9bn in market risk, and USD 0.5bn in operational risk RWA, partly offset by decreases of USD 2.6bn in counterparty credit risk.

Credit risk RWA increased by USD 9.3bn, driven by increases of USD 5.9bn related to currency effects, USD 3.0bn related to asset size and other movements, and, to a lesser extent, by USD 0.4bn related to model updates. Asset size and other movements increased by USD 3.0bn, mainly due to loan balances attracting high risk weights under the standardized approach in Global Wealth Management. Model updates resulted in an RWA increase of USD 0.4bn, primarily driven by a USD 0.7bn quarterly phase-in impact related to updates to the loss-given-default model for hedge funds, partly offset by a decrease of USD 0.3bn related to updates to the Lombard model.

Market risk RWA increased by USD 0.9bn, driven by an increase of USD 0.9bn in regulatory add-ons, reflecting updates from the monthly risks-not-in-VaR assessment. An RWA decrease of USD 1.3bn, driven by a value-at-risk (VaR) model change that went live in the fourth quarter of 2022, was offset by an RWA increase of USD 1.2bn, arising from the introduction of a FINMA-agreed temporary measure to offset the aforementioned decrease in VaR-model-change-related RWA.

Operational risk RWA increased by USD 0.5bn, driven by the annual recalibration of the advanced measurement approach model.

Counterparty credit risk RWA decreased by USD 2.6bn, mainly due to lower RWA on derivatives.

The flow tables for credit risk, counterparty credit risk and market risk RWA in the respective sections of this report provide further details regarding the movements in RWA in the fourth quarter of 2022.

- › Refer to the "Introduction and basis for preparation" section of this report for more information about the applied regulatory standards
- › Refer to the "Capital, liquidity and funding, and balance sheet" section of our Annual Report 2022, available under "Annual reporting" at ubs.com/investors, for more information about capital management and RWA, including details regarding movements in RWA during 2022

OV1: Overview of RWA

USD m	RWA					Section or table reference	Minimum capital requirements ¹
	31.12.22	30.9.22	30.6.22	31.3.22	31.12.21		
	31,12.22	30,9.22	30,6.22	31,3.22	31,12.21		31,12.22
1	Credit risk (excluding counterparty credit risk)	162,889	153,540	155,760	154,193	151,926	13,031
2	of which: standardized approach (SA)	41,930	37,382	36,149	35,583	35,473	3,354
2a	of which: non-counterparty-related risk	12,855	12,325	12,372	12,741	12,916	1,028
3	of which: foundation internal ratings-based (F-IRB) approach						
4	of which: supervisory slotting approach						
5	of which: advanced internal ratings-based (A-IRB) approach	120,958	116,158	119,611	118,609	116,453	9,677
6	Counterparty credit risk²	36,630	39,236	39,428	39,685	37,980	2,930
7	of which: SA for counterparty credit risk (SA-CCR)	6,785	8,138	7,864	7,172	6,378	543
8	of which: internal model method (IMM)	16,438	18,574	17,786	18,480	17,506	1,315
8a	of which: value-at-risk (VaR)	9,421	9,389	10,263	9,625	8,854	754
9	of which: other CCR	3,987	3,135	3,515	4,408	5,242	319
10	Credit valuation adjustment (CVA)	4,310	4,229	3,871	3,829	3,611	345
11	Equity positions under the simple risk-weight approach	3,768	3,594	3,634	3,487	3,396	301
12	Equity investments in funds – look-through approach	638	470	535	611	774	51
13	Equity investments in funds – mandate-based approach	1,250	1,068	1,058	1,314	1,160	100
14	Equity investments in funds – fallback approach	236	226	215	269	106	19
15	Settlement risk	408	788	744	1,327	393	33
16	Securitization exposures in banking book	271	247	209	284	375	22
17	of which: securitization internal ratings-based approach (SEC-IRBA)						
18	of which: securitization external ratings-based approach (SEC-ERBA), including internal assessment approach (IAA)	28	28	30	144	257	2
19	of which: securitization standardized approach (SEC-SA)	243	220	179	140	118	19
20	Market Risk	13,478	12,566	15,512	13,860	11,080	1,078
21	of which: standardized approach (SA)	463	505	615	516	652	37
22	of which: internal models approach (IMA)	13,015	12,061	14,896	13,345	10,428	1,041
23	Capital charge for switch between trading book and banking book³						
24	Operational risk	81,379	80,856	80,856	78,843	76,743	6,510
25	Amounts below thresholds for deduction (250% risk weight)⁴	14,328	13,792	13,863	14,336	14,665	1,146
25a	of which: deferred tax assets	11,381	11,028	10,933	11,169	11,367	911
26	Floor adjustment⁵						
27	Total	319,585	310,615	315,685	312,037	302,209	25,567

¹ Calculated based on 8% of RWA. ² Excludes settlement risk, which is separately reported in line 15 "Settlement risk." Includes RWA with central counterparties. The split between the sub-components of counterparty credit risk refers to the calculation of the exposure measure. ³ Not applicable until the implementation of the final rules on the minimum capital requirements for market risk (the Fundamental Review of the Trading Book). ⁴ Includes items subject to threshold deduction treatment that do not exceed their respective threshold and are risk-weighted at 250%. Items subject to threshold deduction treatment include significant investments in common shares of non-consolidated financial institutions (banks, insurance and other financial entities) and deferred tax assets arising from temporary differences. ⁵ No floor effect, as 80% of our Basel I RWA, including the RWA equivalent of the Basel I capital deductions, does not exceed our Basel III RWA, including the RWA equivalent of the Basel III capital deductions.

Section 4 Linkage between financial statements and regulatory exposures

Annual | This section provides information about the differences between our regulatory exposures and carrying amounts presented in our financial statements prepared in accordance with International Financial Reporting Standards (IFRS). Assets and liabilities presented in our IFRS financial statements may be subject to more than one risk framework, as explained further below.

LIA: Explanation of the differences between the IFRS and regulatory scopes of consolidation

The scope of consolidation for the purpose of calculating Group regulatory capital is generally the same as the consolidation scope under IFRS and includes subsidiaries that are directly or indirectly controlled by UBS Group AG and are active in banking and finance. However, subsidiaries consolidated under IFRS whose business is outside the banking and finance sector are excluded from the regulatory scope of consolidation. Subject to the regulatory auditor's consent, a subsidiary fully consolidated under IFRS may be proportionately consolidated under the regulatory scope of consolidation on an exceptional basis provided that (i) the bank's obligation to support the company subject to consolidation is limited to the bank's own holding quota and (ii) the remaining shareholders or partners are required to provide support in proportion to their holding quota and are legally and financially able to fulfill their obligations. The key difference between the IFRS and regulatory scopes of consolidation as of 31 December 2022 relates to investments in insurance, real estate and commercial companies, as well as investment vehicles, that are consolidated under IFRS but are either proportionately consolidated or not consolidated for regulatory capital purposes where they are subject to risk-weighting.

As of 31 December 2022, UBS Asset Management Life Ltd (total assets on a standalone basis as of 31 December 2022: USD 13,255m; total equity on a standalone basis as of 31 December 2022: USD 27m) represented the most significant entity that was included in the IFRS scope of consolidation but not in the regulatory scope of consolidation. This life insurance entity accounts for most of the difference between the “Balance sheet in accordance with IFRS scope of consolidation” and the “Balance sheet in accordance with regulatory scope of consolidation” columns in the CC2 table. The difference is mainly related to financial assets at fair value not held for trading and other financial liabilities designated at fair value. As of 31 December 2022, entities consolidated under either IFRS or the regulatory scope of consolidation did not report any significant capital deficiencies.

In the banking book, certain equity investments are not consolidated under either the IFRS or under the regulatory scope. As of 31 December 2022, these investments mainly consisted of infrastructure holdings and joint operations (e.g., settlement and clearing institutions, and stock and financial futures exchanges) and included our participation in SIX Group. These investments are risk-weighted based on applicable threshold rules.

More information about the legal structure of UBS Group and the IFRS scope of consolidation is provided in the “Our evolution” section and “Note 1 Summary of material accounting policies”, respectively, of our Annual Report 2022, available under “Annual reporting” at ubs.com/investors. ▲

Fair value measurement

Annual | The table below refers to additional information about fair value measurement that is provided in our Annual Report 2022, available under “Annual reporting” at ubs.com/investors.

LIA: Explanations of differences between accounting and regulatory exposure amounts

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Valuation methodologies applied, including mark-to-market and mark-to-model methodologies in use	Consolidated financial statements	<ul style="list-style-type: none"> – Note 20a Valuation principles – Note 20c Fair value hierarchy – Note 20e Level 3 instruments: valuation techniques and inputs 	316 317–321 324–326
Description of the independent price verification process	Consolidated financial statements	– Note 20b Valuation governance	316–317
Procedures for valuation adjustments or reserves for valuing trading positions by type of instrument	Consolidated financial statements	– Note 20d Valuation adjustments and other items	321–323

Annual | The LI1 table below provides a breakdown of the IFRS balance sheet into the risk types used to calculate our regulatory capital requirements. Cash collateral receivables and payables on derivative instruments, derivative financial instruments and financial assets at fair value not held for trading are subject to capital requirements under both market risk and counterparty credit risk frameworks. In addition, other financial assets measured at amortized cost, financial assets measured at fair value through profit or loss and financial assets measured at fair value through other comprehensive income include securities that have been pledged as collateral. These securities are also considered in the counterparty credit risk framework, as collateral pledged is subject to counterparty credit risk. Foreign exchange risk in the banking book is captured by the market risk framework. Banking book positions with foreign exchange risk are not included in the column regarding market risk. ▲

L11: Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories

31.12.22	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Carrying values of items:				Not subject to capital requirements or subject to deduction from capital
			Subject to credit risk framework ¹	Subject to counterparty credit risk framework ²	Subject to securitization framework ³	Subject to market risk framework	
<i>USD m</i>							
Assets							
Cash and balances at central banks	169,445	169,445	169,445				
Loans and advances to banks	14,792	14,703	13,575	1,128 ⁴			
Receivables from securities financing transactions	67,814	67,789		67,789			
Cash collateral receivables on derivative instruments	35,032	35,032		35,032		2,225	
Loans and advances to customers	387,220	387,264	382,960	2,961 ⁴	1,342		
Other financial assets measured at amortized cost	53,264	53,164	52,781	3,067 ⁶			
Total financial assets measured at amortized cost	727,568	727,397	618,761	109,977	1,342	2,225	
Financial assets at fair value held for trading	107,866	107,879	1,452 ⁵	36,742 ⁶	83	106,343	
<i>of which: assets pledged as collateral that may be sold or repledged by counterparties</i>	<i>36,742</i>	<i>36,742</i>		<i>36,742</i>		<i>36,742</i>	
Derivative financial instruments	150,108	150,126		150,126		150,126	
Brokerage receivables	17,576	17,576	5,705	11,871			
Financial assets at fair value not held for trading ⁷	59,796	46,720	35,178	8,916 ^{6,8}		11,995	
Total financial assets measured at fair value through profit or loss	335,347	322,301	42,334	207,656	83	268,465	
Financial assets measured at fair value through other comprehensive income							
Investments in associates	2,239	2,199	2,199				20
Property, equipment and software	12,288	12,242	12,242				
Goodwill and intangible assets	6,267	6,200					6,200
Deferred tax assets	9,389	9,375 ⁹	5,328				4,047
Other non-financial assets	10,166	10,159	5,335			4,471	353
Total assets	1,104,364	1,091,022	687,328	317,634	1,425	275,161	10,621
Liabilities							
Amounts due to banks	11,596	11,596					11,596
Payables from securities financing transactions	4,202	4,202		4,202			
Cash collateral payables on derivative instruments	36,436	36,436		36,436		10,367	
Customer deposits	525,051	525,075					525,075
Debt issued measured at amortized cost	114,621	114,621					114,621
Other financial liabilities measured at amortized cost	9,575	9,568					9,568
Total financial liabilities measured at amortized cost	701,481	701,497		40,638		10,367	660,859
Financial liabilities at fair value held for trading	29,515	29,515				29,515	
Derivative financial instruments	154,906	154,918		154,878		154,878	40 ¹⁰
Brokerage payables designated at fair value	45,085	45,085		29,740			15,345
Debt issued designated at fair value	73,638	73,650				71,500	2,150
Other financial liabilities designated at fair value	30,237	17,017		16,036		16,992	21
Total financial liabilities measured at fair value through profit or loss	333,381	320,185		200,654		272,886	17,557
Provisions	3,243	3,241					3,241
Other non-financial liabilities	9,040	9,014					9,014
Total liabilities	1,047,146	1,033,937		241,292		283,253	690,671

¹ Includes non-counterparty-related risk, equity investments in funds subject to a look-through approach, a mandate-based approach, a fallback approach and equity positions in the banking book subject to the simple risk-weight method of USD 21,633m, which are excluded from the credit risk tables CR1, CR2, CR3 and CRB in section 4 of this report, resulting in IFRS carrying values reflected in the credit risk section of USD 665,695m. However, credit risk tables CR4 and CR5 include non-counterparty-related risk, and credit risk table CR10 includes equity positions in the banking book subject to the simple risk-weight method. ² Includes settlement risk, which is not included in section 5 of this report. ³ This column only consists of securitization positions in the banking book. Trading book securitizations are included in the "Subject to market risk framework" column. ⁴ Consists of default fund contributions and margin loans, which are both subject to counterparty credit risk. ⁵ Includes trading portfolio assets in the banking book and traded loans. ⁶ Includes assets pledged as collateral, since collateral posted is subject to counterparty credit risk. ⁷ Funded collar trades without rehypothecation rights are treated as non-credit-bearing exposures and are excluded from the "Subject to credit risk framework" column. ⁸ Includes securities financing transactions, as well as other exposures subject to the counterparty credit risk framework. ⁹ Net of deferred tax liabilities, which are offset against prudential filters (e.g., goodwill and intangibles, as well as cash flow hedges) in the regulatory capital calculation. ¹⁰ Relates to the carrying values of derivative loan commitments and forward starting SFTs that are measured at fair value. The replacement values are not representative for our capital calculations.

Regulatory exposures

Annual I The LI2 table below illustrates the key differences between regulatory exposure amounts and accounting carrying amounts under the regulatory scope of consolidation. In addition to the accounting carrying amounts, the regulatory exposure amounts include:

- netting of financial instruments and cash collateral where an enforceable master netting agreement is in place (row 2);
- off-balance sheet amounts not related to derivatives and securities financing transactions (SFTs) (row 4);
- potential future exposure (PFE) for derivatives, offset by eligible financial collateral deductions (row 6);
- effects from the model calculation of effective expected positive exposure (EEPE) applied to derivatives (row 6);
- any collateral mitigation through the application of the close-out period approach or the comprehensive measurement approach (row 7); and
- effects of collateral mitigation in the banking book (row 8).

The regulatory exposure amount excludes prudential filters (row 5), consisting of items subject to deduction from capital, which are not risk-weighted. In addition, exposures that are only subject to market risk do not create any regulatory exposure, as their risk is reflected as part of our market risk risk-weighted asset (RWA) calculation (row 8).

LI2: Main sources of differences between regulatory exposure amounts and carrying values in financial statements (under the regulatory scope of consolidation)

31.12.22		Total	Items subject to:			
			Credit risk framework	Counterparty credit risk framework	Securitization framework	Market risk framework
<i>USD m</i>						
1	Asset carrying value amount under scope of regulatory consolidation (as per template LI1)	1,091,022	687,328 ¹	317,634	1,425	275,161
2	Liabilities carrying value amount under scope of regulatory consolidation ²	(160,028)		(160,028)		
3	Total net amount under regulatory scope of consolidation	930,993	687,328	157,606	1,425	275,161
4	Off-balance sheet amounts (post-CCF; e.g., guarantees, commitments) ³	103,404	100,975	2,429		
5	Differences due to prudential filters	(10,621)				
6	Derivatives: PFE and collateral mitigation (including off-balance sheet exposures)	70,630		70,630		
7	SFTs: Collateral mitigation (including off-balance sheet exposures)	(67,459)		(67,459)		
8	Other differences including collateral mitigation in the banking book	(76,207)	(2,521)			(274,833) ⁴
9	Exposure amounts considered for regulatory purposes	950,741	785,782	163,205	1,425	328

¹ Includes non-counterparty-related risk, equity investments in funds subject to a look-through approach, a mandate-based approach, a fallback approach and equity positions in the banking book subject to the simple risk-weight method of USD 21,633m, which are excluded from the credit risk tables CR1, CR2, CR3 and CRB in section 4 of this report, resulting in IFRS carrying values reflected in the credit risk section of USD 665,695m. However, credit risk tables CR4 and CR5 include non-counterparty-related risk, and credit risk table CR10 includes equity positions in the banking book subject to the simple risk-weight method.

² Includes the amounts of financial instruments and cash collateral considered for netting per the relevant netting agreement in order to not exceed the net amount of financial assets presented on the balance sheet (included in row 1); i.e., over-collateralization, where it exists, is not reflected in the table. ³ Includes off-balance sheet exposures where a credit conversion factor is applied. ⁴ Exposure at default is only calculated for securitization exposures in the trading book, resulting in a difference between carrying amounts and exposure amounts considered for regulatory purposes. The effect on the total exposure is higher, since certain exposures are subject to regulatory capital charges in both the market risk and the counterparty credit risk categories.

Section 5 Credit risk

Introduction

Semi-annual I The parameters applied under the advanced internal ratings-based (A-IRB) approach are generally based on the same methodologies, data and systems we use for internal credit risk quantification, except where certain treatments are specified by regulatory requirements. These include, for example, the application of regulatory prescribed floors and multipliers, and differences with respect to eligibility criteria and exposure definitions. The exposure information presented in this section may thus differ from our internal management view disclosed in the “Risk management and control” sections of our quarterly and annual reports. Similarly, the regulatory capital prescribed measure of credit risk exposure also differs from how it is defined under International Financial Reporting Standards (IFRS).

Credit risk exposure categories

The definitions of the Pillar 3 credit risk exposure categories “Loans” and “Debt securities” below as specified by the Swiss Financial Market Supervisory Authority (FINMA), which are referred to in the “CR1: Credit quality of assets” and “CR3: Credit risk mitigation techniques – overview” tables in this section, provide a link to the IFRS balance sheet structure.

The Pillar 3 category “Loans” consists of financial instruments held with the intent to collect the contractual payments and includes the following IFRS balances to the extent that they are subject to the credit risk framework:

- Balances at central banks;
- Loans and advances to banks;
- Loans and advances to customers;
- Other financial assets measured at amortized cost, excluding money market instruments, checks and bills, and other debt instruments;
- traded loans in the banking book that are included within *Financial assets at fair value held for trading*;
- Brokerage receivables;
- loans including structured loans that are included within *Financial assets at fair value not held for trading*; and
- Other non-financial assets.

The Pillar 3 category “Debt securities” includes the following IFRS balances to the extent that they are subject to the credit risk framework:

- money market instruments, checks and bills, and other debt instruments that are included within *Other financial assets measured at amortized cost*;
- *Financial assets at fair value held for trading*, excluding traded loans;
- *Financial assets at fair value not held for trading*, excluding loans; and
- *Financial assets measured at fair value through other comprehensive income*. ▲

General information about credit risk

Annual I The table below presents an overview of Pillar 3 disclosures that are provided separately in our Annual Report 2022, available under “Annual reporting” at ubs.com/investors.

CRA: Credit risk management

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Translation of the business model into the components of the bank's credit risk profile	Risk management and control	<ul style="list-style-type: none"> – Key risks by business division and Group Functions – Risk categories – Main sources of credit risk – Credit risk profile of the Group 	84 85–86 96 97
	Consolidated financial statements	– Note 19d Maximum exposure to credit risk	311
Criteria and approach used for defining credit risk management policy and for setting credit risk limits	Risk management and control	<ul style="list-style-type: none"> – Risk governance – Risk appetite framework – Risk measurement – Credit risk – Overview of measurement, monitoring and management techniques 	87–89 89–91 93–95 96–97
Structure and organization of the credit risk management and control function	Risk management and control	– Risk governance	87–89
Interaction between the credit risk management, risk control, compliance and internal audit functions	Risk management and control	<ul style="list-style-type: none"> – Risk governance – Risk appetite framework 	87–89 89–91
Scope and content of the reporting on credit risk exposure to executive management and to the Board of Directors (the BoD)	Risk management and control	<ul style="list-style-type: none"> – Risk governance – Risk appetite framework – Internal risk reporting – Credit risk profile of the Group 	87–89 89–91 92 97



Semi-annual I The CR1 table below provides a breakdown of defaulted and non-defaulted loans, debt securities and off-balance sheet exposures. The table includes a split of expected credit loss (ECL) accounting provisions based on the standardized approach and the internal ratings-based approach.

Decreases in net carrying values of Loans and increases in net carrying values of Debt securities, when compared with 30 June 2022, are explained in the CR3 table in this report. The net carrying value of Off-balance sheet exposures decreased by USD 0.2bn to USD 59.4bn, primarily related to guarantees in Personal & Corporate Banking.

- › Refer to the “CR3: Credit risk mitigation techniques – overview” table in this section for more information about the net value movements related to Loans and Debt securities shown in the table below
- › Refer to “Credit risk” in the “Risk management and control” section of our Annual Report 2022, which is available under “Annual reporting” at ubs.com/investors, for more information about the definitions of default and credit impairment and to “Credit risk exposure categories” in this section for more information about the classification of loans and debt securities

CR1: Credit quality of assets

USD m	Gross carrying amounts of:			Of which: ECL accounting provisions for credit losses on SA exposures			Net values
	Defaulted exposures ¹	Non-defaulted exposures	Allowances / impairments	Allocated in regulatory category of Specific (stage 3 credit-impaired)	Allocated in regulatory category of General (stages 1 & 2)	Of which: ECL accounting provisions for credit losses on A-IRB exposures (stages 1, 2 & 3)	
31.12.22							
1 Loans ²	2,222	584,393	(881) ⁴	(72)	(44)	(764)	585,734
2 Debt securities		79,964	(3)		(3)		79,961
3 Off-balance sheet exposures ³	233	59,339	(159) ⁴	(1)	(3)	(155)	59,413
4 Total	2,455	723,695	(1,043)⁴	(73)	(50)	(919)	725,107
30.6.22							
1 Loans ²	2,421	602,104	(908) ⁴	(88)	(54)	(765)	603,618
2 Debt securities		61,152	(2)		(2)		61,150
3 Off-balance sheet exposures ³	183	59,546	(153) ⁴	(2)	(2)	(150)	59,576
4 Total	2,605	722,802	(1,063)⁴	(90)	(58)	(915)	724,343
31.12.21							
1 Loans ²	2,414	619,072	(962) ⁴	(96)	(58)	(808)	620,524
2 Debt securities		55,724	(2)		(2)		55,722
3 Off-balance sheet exposures ³	196	64,203	(156) ⁴	(1)	(1)	(153)	64,243
4 Total	2,610	738,999	(1,120)⁴	(97)	(62)	(961)	740,489

¹ Defaulted exposures are in line with credit-impaired exposures (stage 3) under IFRS 9. Refer to "Note 19 Expected credit loss measurement" in the "Consolidated financial statements" section of our Annual Report 2022 for more information about IFRS 9. ² Loan exposure is reported in line with the Pillar 3 definition. Refer to "Credit risk exposure categories" in this section for more information about the classification of Loans and Debt securities. ³ Off-balance sheet exposures include unutilized credit facilities, guarantees provided and forward starting loan commitments but exclude prolongations of loans that do not increase the initially committed loan amount. Unutilized credit facilities exclude unconditionally revocable as well as uncommitted credit facilities, even if they attract RWA. ⁴ Expected credit loss allowances and provisions amount to USD 1,091m as of 31 December 2022, as disclosed in "Note 7 General and administrative expenses" in the "Consolidated financial statements" section of our Annual Report 2022. This Pillar 3 table excludes ECL on revocable off-balance sheet exposures (31 December 2022: USD 40m; 30 June 2022: USD 37m; 31 December 2021: USD 38m), ECL on exposures subject to counterparty credit risk (31 December 2022: USD 6m; 30 June 2022: USD 5m; 31 December 2021: USD 4m) and ECL on irrevocable committed prolongation of loans that do not give rise to additional credit exposures (31 December 2022: USD 2m; 30 June 2022: USD 2m; 31 December 2021: USD 3m).

Semi-annual I The CR2 table below presents changes in stock of defaulted loans, debt securities and off-balance sheet exposures for the second half of 2022. The total amount of defaulted loans and debt securities was USD 2.5bn as of 31 December 2022, a decrease of USD 0.1bn compared to 30 June 2022.

CR2: Changes in stock of defaulted loans, debt securities and off-balance sheet exposures

USD m	For the half year ended 31.12.22 ¹	For the half year ended 30.6.22 ¹
1 Defaulted loans, debt securities and off-balance sheet exposures as of the beginning of the half year	2,605	2,610
2 Loans and debt securities that have defaulted since the last reporting period	485	551
3 Returned to non-defaulted status	(351)	(170)
4 Amounts written off	(46)	(50)
5 Other changes ²	(238)	(337)
6 Defaulted loans, debt securities and off-balance sheet exposures as of the end of the half year	2,455	2,605

¹ Off-balance sheet exposures include unutilized credit facilities, guarantees provided and forward starting loan commitments, but exclude prolongations of loans that do not increase the initially committed loan amount. Unutilized credit facilities exclude unconditionally revocable and uncommitted credit facilities, even if they attract RWA. ² Includes primarily partial or full repayments, as well as currency effects.

Annual I Amounts shown in the tables below relate to on-balance sheet IFRS carrying amounts, as well as off-balance sheet items according to the regulatory scope of consolidation that give rise to credit risk exposure under the Basel III framework.

CRB: Breakdown of exposures by industry¹

	Central banks	Banks	Construction	Electricity, gas, water supply	Financial services	Hotels and restaurants	Manufacturing ⁴	Mining	Private households	Public authorities	Real estate and rentals	Retail and wholesale ⁵	Services	Other ⁶	Total carrying amount of assets
<i>USD m</i>															
Loans ²	168,913	15,200	3,176	1,427	72,709	2,368	4,295	698	242,061	4,226	24,472	9,357	31,508	5,323	585,734
Debt securities	18,402	16,476		659	15,001		1			26,045			3,376		79,961
Off-balance sheet exposures ³	0	4,373	1,526	1,388	15,092	231	9,533	922	4,163	2,371	1,804	7,747	8,560	1,702	59,413
Total	187,315	36,049	4,702	3,474	102,802	2,599	13,830	1,620	246,225	32,642	26,276	17,104	43,443	7,026	725,107

31.12.21															
Loans ²	192,121	16,405	3,112	1,400	78,399	2,185	4,076	653	246,268	2,618	22,889	11,462	32,812	6,123	620,524
Debt securities	1,968	12,626		452	11,723				1	26,453			2,457	42	55,722
Off-balance sheet exposures ³		4,450	1,733	829	11,320	1,118	9,893	1,270	5,624	1,684	1,866	8,319	13,271	2,866	64,243
Total	194,089	33,481	4,846	2,682	101,442	3,303	13,969	1,923	251,892	30,755	24,756	19,781	48,540	9,031	740,489

¹ The classification of each industry is based on the Global Industry Classification (GIC) standard. ² Loan exposure is reported in line with the Pillar 3 definition. Refer to "Credit risk exposure categories" in this section for more information about the classification of Loans and Debt securities. ³ Off-balance sheet exposures include unutilized credit facilities, guarantees provided and forward starting loan commitments, but exclude prolongations of loans that do not increase the initially committed loan amount. Unutilized credit facilities exclude unconditionally revocable and uncommitted credit facilities, even if they attract RWA.

⁴ Includes the chemicals industry. ⁵ Includes the food and beverages industry. ⁶ Consists of transport, storage, communications and other.

Annual I The table below provides a breakdown of our credit risk exposures by geographical area. The geographical distribution is based on the legal domicile of the counterparty or issuer.

CRB: Breakdown of exposures by geographical area

	Asia Pacific	Latin America	Middle East and Africa	North America	Switzerland	Rest of Europe	Total carrying amount of assets
<i>USD m</i>							
Loans ¹	40,767	6,060	10,490	179,750	292,134	56,534	585,734
Debt securities	11,002	286	965	33,833	18,021	15,854	79,961
Off-balance sheet exposures ²	3,002	473	1,403	21,027	22,808	10,700	59,413
Total	54,771	6,818	12,858	234,609	332,964	83,089	725,107

31.12.21							
Loans ¹	47,007	6,524	10,239	184,479	295,622	76,653	620,524
Debt securities	8,219	651	632	27,008	3,761	15,450	55,722
Off-balance sheet exposures ²	4,009	407	2,752	22,045	23,776	11,253	64,243
Total	59,235	7,583	13,623	233,532	323,159	103,357	740,489

¹ Loan exposure is reported in line with the Pillar 3 definition. Refer to "Credit risk exposure categories" in this section for more information about the classification of Loans and Debt securities. ² Off-balance sheet exposures include unutilized credit facilities, guarantees provided and forward starting loan commitments, but exclude prolongations of loans that do not increase the initially committed loan amount. Unutilized credit facilities exclude unconditionally revocable and uncommitted credit facilities, even if they attract RWA.

Annual I The following table provides a breakdown of our credit risk exposure by residual contractual maturity as of the reporting date. The residual contractual maturity of assets includes the effect of callable features.

CRB: Breakdown of exposures by residual maturity

USD m	27,171			Total carrying amount of assets
	Due in 1 year or less	Due between 1 year and 5 years	Due over 5 years	
Loans ¹	417,390	93,715	74,629	585,734
Debt securities	32,783	27,071	20,106	79,961
Off-balance sheet exposures ²	25,059	30,630	3,723	59,413
Total	475,233	151,417	98,458	725,107
31.12.21				
Loans ¹	440,342	108,174	72,007	620,524
Debt securities	17,241	20,261	18,221	55,722
Off-balance sheet exposures ²	27,291	30,875	6,077	64,243
Total	484,874	159,310	96,305	740,489

¹ Loan exposure is reported in line with the Pillar 3 definition. Refer to "Credit risk exposure categories" in this section for more information about the classification of Loans and Debt securities. ² Off-balance sheet exposures include unutilized credit facilities, guarantees provided and forward starting loan commitments, but exclude prolongations of loans that do not increase the initially committed loan amount. Unutilized credit facilities exclude unconditionally revocable and uncommitted credit facilities, even if they attract RWA.

Annual I

CRB: Policies for past-due, non-performing and credit-impaired claims

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Policies for past-due, non-performing and credit-impaired claims	Risk management and control	– Credit risk: Non-performing	109
		– Credit risk: Default and credit-impaired	109

Annual I The following tables provide a breakdown of impaired exposures by geographical region and industry. The amounts shown are IFRS carrying amounts. The geographical distribution is based on the legal domicile of the counterparty or issuer.

CRB: Credit-impaired exposures by industry¹

USD m	Credit-impaired exposures, gross (Stage 3)	Allowances for credit-impaired exposures	Credit-impaired exposures net of allowances	Write-offs for the year ended
Central banks				
Banks				
Construction	174	(17)	157	(2)
Electricity, gas, water supply	4		4	
Financial services	378	(96)	282	(41)
Hotels and restaurants	56	(1)	55	(3)
Manufacturing ²	190	(107)	82	(3)
Mining	7	(3)	4	(1)
Private households	975	(104)	871	(11)
Public authorities	9	(4)	5	
Real estate and rentals	57	(17)	39	(1)
Retail and wholesale ³	302	(149)	152	(17)
Services	266	(33)	233	(5)
Transport, storage, communications and other	38	(30)	8	(12)
Total	2,455	(562)	1,892	(95)
31.12.21				
Central Banks				
Banks	1		1	
Construction	155	(14)	142	(1)
Electricity, gas, water supply	7	(1)	7	
Financial services	416	(132)	284	(7)
Hotels and restaurants	60	(4)	56	(10)
Manufacturing ²	196	(114)	82	(8)
Mining	7	(1)	6	(14)
Private households	956	(131)	825	(41)
Public authorities	12	(5)	7	
Real estate and rentals	103	(24)	79	(35)
Retail and wholesale ³	338	(169)	169	(5)
Services	257	(36)	220	(14)
Transport, storage, communications and other	102	(31)	71	(1)
Total	2,610	(660)	1,949	(137)

¹ The classification of each industry is based on the Global Industry Classification (GIC) standard. ² Includes the chemicals industry. ³ Includes the food and beverages industry.

Annual | The following table provides a breakdown of our credit risk exposures by geographical region. The geographical distribution is based on the legal domicile of the counterparty or issuer.

CRB: Credit-impaired exposures by geographical area

31.12.22

<i>USD m</i>	Credit-impaired exposures, gross (stage 3)	Allowances for credit-impaired exposures	Credit-impaired exposures net of allowances	Write-offs for the year ended
Asia Pacific	269	(53)	216	0
Latin America	21	(8)	13	0
Middle East and Africa	80	(57)	23	0
North America	433	(75)	358	(45)
Switzerland	1,336	(308)	1,028	(37)
Rest of Europe	316	(61)	255	(13)
Total	2,455	(562)	1,892	(95)
31.12.21				
Asia Pacific	217	(81)	135	(1)
Latin America	31	(11)	20	0
Middle East and Africa	83	(61)	23	0
North America	458	(110)	347	(59)
Switzerland	1,517	(326)	1,191	(34)
Rest of Europe	305	(72)	233	(43)
Total	2,610	(660)	1,949	(137)

Annual | The table below provides a breakdown of total loan balances where payments have been missed. The past-due amounts are broadly in line with the previous year. The amount of past-due mortgage loans was not significant compared with the overall size of the mortgage portfolio. Amounts in the table below are IFRS carrying amounts and include IFRS balance sheet lines *Loans and advances to customers* and *Loans and advances to banks*.

CRB: Past due exposures

<i>USD m</i>	31.12.22	31.12.21
1–10 days	93	69
11–30 days	217	327
31–60 days	97	95
61–90 days	65	228
>90 days	1,225	995
<i>of which: mortgage loans</i>	322 ¹	347 ¹
Total	1,698	1,715

¹ Total mortgage loans as of 31 December 2022: USD 206bn (31 December 2021: 198bn).

Restructured exposures

Annual |

CRB: Restructured exposures

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Restructured exposures	Risk management and control	– Forbearance (credit restructuring)	110

Annual | The table below provides more information about restructured exposures as of 31 December 2022. The decrease is mainly related to Personal & Corporate Banking.

CRB: Breakdown of restructured exposures between credit-impaired and non-credit-impaired

<i>USD m</i>	Credit-impaired		Non-credit-impaired		Total	
	31.12.22	31.12.21	31.12.22	31.12.21	31.12.22	31.12.21
Restructured exposures	971	1,199	17	1	989	1,200

Credit risk mitigation

Annual I The table below presents an overview of Pillar 3 disclosures provided separately in our Annual Report 2022, available under “Annual reporting” at ubs.com/investors.

CRC: Credit risk mitigation

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Core features of policies and processes for, and an indication of the extent to which the bank makes use of, on- and off-balance sheet netting	Risk management and control	– Traded products	101–102
	Consolidated financial statements	– Note 10 Derivative instruments – Note 21 Offsetting financial assets and financial liabilities – Note 1a item 2i Offsetting	291–293 330–331 272
Core features of policies and processes for collateral evaluation and management	Risk management and control	– Credit risk mitigation	102–104
Information about market or credit risk concentrations under the credit risk mitigation instruments used	Risk management and control	– Risk concentrations – Credit risk mitigation	95 102–104
	Consolidated financial statements	– Note 10 Derivative instruments – Note 19d Maximum exposure to credit risk – Note 20h Maximum exposure to credit risk for financial instruments measured at fair value – Note 21 Offsetting financial assets and financial liabilities	291–293 311 328 330–331

Additional information about counterparty credit risk mitigation is provided in the “Counterparty credit risk” section of this report.

Semi-annual I The CR3 table below provides a breakdown of loans and debt securities into unsecured and partially or fully secured exposures, with additional information about the security type.

Compared with 30 June 2022, the carrying amount of unsecured loans decreased by USD 19.5bn to USD 207.7bn, mainly due to a decrease in cash and balances with central banks. Unsecured loans excluding cash and balances at central banks increased by USD 1.4bn, mainly due to currency effects in the Personal & Corporate Banking business. Unsecured debt securities increased by USD 18.8bn to USD 80.0bn, mainly due to an increase in high-quality liquid assets (HQLA).

The carrying amount of partially or fully secured exposures increased by USD 1.7bn to USD 378.0bn, mainly as a result of currency effects in our Personal & Corporate Banking business.

CR3: Credit risk mitigation techniques – overview¹

USD m	Exposures fully unsecured: carrying amount	Exposures partially or fully secured: carrying amount	Total: carrying amount	Secured portion of exposures partially or fully secured:		
				Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
31.12.22						
1	Loans ²	207,732	378,002	585,734	358,946	21
1a	of which: cash and balances at central banks	168,826	168,826			
2	Debt securities	79,961	79,961			
3	Total	287,693	378,002	665,695	358,946	21
4	of which: defaulted	180	1,506	1,686	1,034	93
30.6.22						
1	Loans ²	227,267	376,351	603,618	359,367	41
1a	of which: cash and balances at central banks	189,726	189,726			
2	Debt securities	61,150	61,150			
3	Total	288,416	376,351	664,767	359,367	41
4	of which: defaulted	231	1,616	1,847	1,066	116
31.12.21						
1	Loans ²	229,089	391,434	620,524	373,388	46
1a	of which: cash and balances at central banks	192,117	192,117			
2	Debt securities	55,722	55,722			
3	Total	284,811	391,434	676,246	373,388	46
4	of which: defaulted	171	1,597	1,768	1,122	154

¹ Exposures in this table represent carrying amounts in accordance with the regulatory scope of consolidation. ² Loan exposure is reported in line with the Pillar 3 definition. Refer to "Credit risk exposure categories" in this section for more information about the classification of loans and debt securities.

Credit risk under the standardized approach

Introduction

Annual I The standardized approach is generally applied where using the advanced internal ratings-based (A-IRB) approach is not possible. The standardized approach requires banks to, where possible, use risk assessments prepared by external credit assessment institutions (ECAIs) or export credit agencies to determine the risk weightings applied to rated counterparties. We use three FINMA-recognized ECAIs to determine the risk weights for certain counterparties according to the BCBS-defined asset classes: S&P, Moody's Investors Service and Fitch Ratings.

The mapping of external ratings to the standardized approach risk weights is determined by FINMA and published on its website. There were no changes in the ECAIs used compared with 31 December 2021.

Debt instruments are risk-weighted in accordance with the specific issue ratings available. If there is no specific issue rating published by an ECAI, the issuer rating is applied to the senior unsecured claims of that issuer subject to the conditions prescribed by FINMA. For the asset classes Retail, Equity and Other assets, we apply the regulatory prescribed risk weights independent of an external credit rating.

CRD: Qualitative disclosures on banks' use of external credit ratings under the standardized approach for credit risk

Asset classes	31.12.22		
	External ratings used		
	Moody's	S&P	Fitch
1 Central governments and central banks	●	●	●
2 Banks and securities dealers	●	●	●
3 Public-sector entities and multi-lateral development banks	●	●	●
4 Corporates	●	●	●

Credit risk exposure and CRM effects

Semi-annual I The CR4 table below illustrates the credit risk exposure and effect of credit risk mitigation (CRM) on the calculation of capital requirements under the standardized approach. Compared with 30 June 2022, on-balance sheet exposures in the Central governments and central banks asset class decreased by USD 1.3bn to USD 4.8bn, mainly reflecting lower cash balances held at central banks.

Exposures before credit conversion factors (CCF) and CRM in the Corporates asset class increased by USD 5.3bn to USD 33.6bn and Exposures post credit conversion factors (CCF) and CRM increased by USD 4.9bn to USD 23.8bn. RWA increased by USD 5.1bn to USD 17.8bn, mainly driven by an increase in loans and loan commitments in Global Wealth Management.

CR4: Standardized approach – credit risk exposure and credit risk mitigation (CRM) effects¹

	Exposures before CCF and CRM			Exposures post-CCF and post-CRM			RWA and RWA density	
	On-balance sheet amount	Off-balance sheet amount	Total	On-balance sheet amount	Off-balance sheet amount	Total	RWA	RWA density in %

USD m, except where indicated

31.12.22

Asset classes

1	Central governments and central banks	4,767		4,767	4,771	1	4,772	276	5.8
2	Banks and securities dealers	13,540	1,212	14,752	13,518	529	14,047	3,001	21.4
3	Public-sector entities and multi-lateral development banks	3,158	1,757	4,915	3,158	781	3,938	1,021	25.9
4	Corporates	20,844	12,755	33,599	20,848	2,996	23,844	17,798	74.6
5	Retail	10,452	3,146	13,598	10,343	206	10,548	6,979	66.2
6	Equity								
7	Other assets ²	13,229	245	13,474	13,229	245	13,474	12,855	95.4
8	Total	65,990	19,115	85,105	65,866	4,758	70,624	41,930	59.4

30.6.22

Asset classes

1	Central governments and central banks	6,075		6,075	6,082	6	6,087	560	9.2
2	Banks and securities dealers	11,983	1,284	13,267	11,983	539	12,522	2,632	21.0
3	Public-sector entities and multi-lateral development banks	3,263	1,325	4,588	3,259	564	3,824	907	23.7
4	Corporates	17,818	10,455	28,274	17,649	1,299	18,947	12,701	67.0
5	Retail	10,644	3,173	13,817	10,499	133	10,632	6,976	65.6
6	Equity								
7	Other assets ²	12,969	30	12,999	12,969	30	12,999	12,372	95.2
8	Total	62,752	16,268	79,021	62,440	2,572	65,011	36,149	55.6

31.12.21

Asset classes

1	Central governments and central banks	6,601		6,601	6,619	6	6,626	622	9.4
2	Banks and securities dealers	11,134	1,291	12,425	11,092	561	11,654	2,505	21.5
3	Public-sector entities and multi-lateral development banks	2,644	1,100	3,744	2,628	452	3,079	745	24.2
4	Corporates	15,349	10,220	25,569	15,312	1,079	16,392	11,551	70.5
5	Retail	11,207	3,814	15,021	10,990	502	11,492	7,135	62.1
6	Equity								
7	Other assets ²	13,571	191	13,762	13,571	45	13,615	12,916	94.9
8	Total	60,506	16,616	77,122	60,212	2,645	62,858	35,473	56.4

¹ Exposures in this table represent carrying amounts in accordance with the regulatory scope of consolidation. ² Includes Non-counterparty-related assets.

Exposures by asset class and risk weight

Semi-annual | The CR5 table below shows exposures by asset classes and risk weights applied.

CR5: Standardized approach – exposures by asset classes and risk weights

USD m

Risk weight	0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount (post-CCF and post-CRM)
31.12.22										
Asset classes										
1	Central governments and central banks	4,454		51		1		266		4,772
2	Banks and securities dealers			13,436		594		16		14,047
3	Public-sector entities and multi-lateral development banks	12		3,255		603		68		3,938
4	Corporates			7,267		245		16,246	4	23,844
5	Retail				5,129		1,061	4,300	58	10,548
6	Equity									
7	Other assets	619						12,855		13,474
8	Total	5,084		24,010	5,129	1,443	1,061	33,751	63	70,624
9	of which: secured by real estate ¹				5,129	81	99	3,690		8,998
10	of which: past due				211	1	65	68	54	399

30.6.22

Asset classes										
1	Central governments and central banks	5,499		9		42		538		6,087
2	Banks and securities dealers			12,064		458				12,522
3	Public-sector entities and multi-lateral development banks	4		3,449		306		64		3,824
4	Corporates			6,262		514		11,172	999 ²	18,947
5	Retail				5,283		1,034	4,230	84	10,632
6	Equity									
7	Other assets	627						12,372		12,999
8	Total	6,130		21,784	5,283	1,321	1,034	28,376	84	65,011
9	of which: secured by real estate ¹				5,283	83	120	3,024		8,511
10	of which: past due				173	6	4	234	55	471

31.12.21

Asset classes										
1	Central governments and central banks	5,900		91		62		573		6,626
2	Banks and securities dealers			11,113		520		18	3	11,654
3	Public-sector entities and multi-lateral development banks	2		2,732		295		51		3,079
4	Corporates			5,066		498	41	10,239	5	16,392
5	Retail				6,292		1,220	3,902	77	11,492
6	Equity									
7	Other assets	699						12,916		13,615
8	Total	6,601		19,001	6,292	1,376	1,261	27,700	84	62,858
9	of which: secured by real estate ¹				6,292		181	2,354		8,827
10	of which: past due				108	6	4	193	58	369

¹ Includes both residential mortgages and claims secured by other properties, such as commercial real estate. ² Included exposures to central counterparties risk-weighted with 2%. From 31 December 2022 onward, we have risk-weighted positions, which are not related to exposures secured by credit derivatives cleared through central counterparties, according to corporate risk weights or included them under settlement risk, as appropriate



Credit risk under internal ratings-based approaches

Annual I Under the advanced internal ratings-based (A-IRB) approach, the required capital for credit risk is quantified through empirical models that we have developed to estimate the probability of default (PD), loss given default (LGD), exposure at default (EAD) and other parameters, subject to FINMA approval. The table below presents an overview of Pillar 3 disclosures that are provided separately in our Annual Report 2022, available under “Annual reporting” at ubs.com/investors.

CRE: Qualitative disclosure related to IRB models

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Internal model development, controls and changes	Risk management and control	<ul style="list-style-type: none"> – Risk measurement – Credit risk models – Key features of our main credit risk models – Risk governance – Model risk management 	93–95 104–109 105 87–89 92–93
Relationships between risk management and internal audit and independent review of IRB models	Risk management and control	<ul style="list-style-type: none"> – Risk governance – Risk measurement 	87–89 93–95
Scope and content of the reporting related to credit risk models	Risk management and control	<ul style="list-style-type: none"> – Risk measurement – Credit risk – Overview of measurement, monitoring and management techniques – Credit risk models 	93–95 96–97 104–109
Supervisor approval of applied approaches	Risk management and control	<ul style="list-style-type: none"> – Risk measurement – Changes to models and model parameters during the period – Stress testing – Key features of our main credit risk models – Model risk management 	93–95 109 93–94 105 92–93
Number of key models used by portfolio and the main differences between models	Risk management and control	<ul style="list-style-type: none"> – Credit risk models 	104–109
Description of the main characteristics of approved models	Risk management and control	<ul style="list-style-type: none"> – Credit risk models 	104–109

Annual I Semi-annual I The CR6 table below provides information about credit risk exposures under the A-IRB approach, including a breakdown of the main parameters used in A-IRB models to calculate the capital requirements, presented by portfolio and PD range across FINMA-defined asset classes.

Under the A-IRB approach, the required capital for credit risk is quantified through empirical models that we have developed to estimate the PD, LGD, EAD and other parameters, subject to FINMA approval. ▲

Compared with 30 June 2022, EAD post-CCF and post-CRM increased by USD 2.3bn to USD 708.2bn, and RWA increased by USD 1.3bn to USD 121.0bn.

In the Central governments and central banks asset class, EAD post-CCF and post-CRM decreased by USD 3.6bn to USD 217.7bn, and RWA decreased by USD 0.3bn to USD 3.4bn, primarily driven by decreases in nostros and high-quality liquid assets (HQLA) in Group Functions.

In the Banks and securities dealers asset class, EAD post-CCF and post-CRM decreased by USD 0.3bn to USD 10.9bn, primarily due to a decrease in nostros in Group Functions. RWA increased by USD 1.4bn to USD 6.6bn, due to higher commitments related to the disposal of a business in Global Wealth Management.

In the Public-sector entities and multi-lateral development banks asset class, EAD post-CCF and post-CRM increased by USD 1.8bn to USD 8.6bn and RWA increased by USD 0.2bn to USD 0.8bn, primarily driven by an increase in HQLA.

In the Corporates: specialized lending asset class, EAD post-CCF and post-CRM increased by USD 0.9bn to USD 28.9bn, primarily due to currency effects in Personal & Corporate Banking. RWA decreased by USD 1.0bn to USD 13.1bn, mainly reflecting an improvement in the average PD and LGD distribution in Personal & Corporate Banking.

In the Corporates: other lending asset class, EAD post-CCF and post-CRM increased by USD 1.7bn to USD 61.6bn, primarily driven by an increase in loans and loan commitments, as well as currency effects, in Personal & Corporate Banking, partly offset by lower loan commitments in the Investment Bank. RWA decreased by USD 0.1bn to USD 38.0bn, primarily due to a decrease in loan commitments, partly offset by the phase-in impact related to updates to the LGD model for private equity and hedge fund financing trades in the Investment Bank, as well as business growth in Personal & Corporate Banking.

In the Retail: residential mortgages asset class, EAD post-CCF and post-CRM increased by USD 6.8bn to USD 174.8bn, primarily due to currency effects in Personal & Corporate Banking and business growth in Global Wealth Management. RWA increased by USD 1.4bn to USD 38.4bn, mainly reflecting currency effects, business growth and an update to the PD model for owner-occupied residential properties.

In the Retail: other retail asset class, EAD post-CCF and post-CRM decreased by USD 5.0bn to USD 200.7bn, primarily driven by a decrease in Lombard loans in Global Wealth Management. RWA decreased by USD 0.4bn to USD 19.6bn, mainly due to the aforementioned reduction in Lombard exposures, as well as rating improvements related to Lombard lending.

- › Refer to the “CR8: RWA flow statements of credit risk exposures under IRB” table in this section for further details about the movement of credit risk exposures under the A-IRB approach for the fourth quarter of 2022 ▲

Credit risk exposures by portfolio and PD range

Semi-annual I

CR6: IRB – Credit risk exposures by portfolio and PD range

<i>USD m, except where indicated</i>	Original on- balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre- CCF	Average CCF in %	EAD post-CCF and post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %	EL	Provisions ¹
Central governments and central banks as of 31.12.22													
0.00 to <0.15	214,433	2	214,435	40.3	216,920	0.0	<0.1	32.4	1.1	2,921	1.3	9	
0.15 to <0.25	810	0	810	0.0	729	0.2	<0.1	43.7	1.0	196	26.9	1	
0.25 to <0.50													
0.50 to <0.75	57	0	57	12.6	3	0.5	<0.1	17.0	3.3	1	32.0	0	
0.75 to <2.50	73	36	109	42.3	4	1.5	<0.1	34.9	3.6	5	130.5	0	
2.50 to <10.00	262	285	547	36.0	21	5.7	<0.1	46.8	2.0	36	166.8	1	
10.00 to <100.00	56	70	125	35.0	56	28.0	<0.1	75.0	1.0	232	415.8	12	
100.00 (default)	10	0	10	10.2	2	100.0	<0.1	75.0 ³	2.9	2	106.0	5	
Subtotal	215,700	393	216,093	36.4	217,735	0.0	0.1	32.4	1.1	3,393	1.6	27	5
Central governments and central banks as of 30.6.22													
0.00 to <0.15	217,843	1	217,844	19.1	220,550	0.0	<0.1	32.7	1.0	3,187	1.4	7	
0.15 to <0.25	745		745		660	0.2	<0.1	46.5	1.0	189	28.6	0	
0.25 to <0.50	0	1	1	55.0	0	0.3	<0.1	51.9	1.5	0	56.4	0	
0.50 to <0.75	60	3	63	55.0	2	0.5	<0.1	16.7	4.1	1	35.4	0	
0.75 to <2.50	44	63	107	41.5	1	1.5	<0.1	41.5	2.5	1	120.0	0	
2.50 to <10.00	153	317	470	36.2	7	4.8	<0.1	33.8	3.2	9	126.0	0	
10.00 to <100.00	73		73		73	28.0	<0.1	75.0	1.0	302	415.8	15	
100.00 (default)	11	0	12	55.0	3	100.0	<0.1	59.3 ³	3.8	4	106.0	5	
Subtotal	218,928	385	219,313	37.2	221,297	0.0	0.1	32.8	1.0	3,692	1.7	28	5
Central governments and central banks as of 31.12.21													
0.00 to <0.15	218,068	1	218,069	13.2	221,833	0.0	<0.1	32.2	1.0	2,311	1.0	4	
0.15 to <0.25	559		559		472	0.2	<0.1	46.7	1.0	135	28.7	0	
0.25 to <0.50													
0.50 to <0.75	73	3	77	55.0	5	0.6	<0.1	59.2	2.6	5	92.1	0	
0.75 to <2.50	33	86	119	35.6	4	1.5	<0.1	35.4	3.2	5	124.7	0	
2.50 to <10.00	169	393	562	37.1	28	5.2	<0.1	47.7	1.6	46	161.0	1	
10.00 to <100.00													
100.00 (default)	11	0	11	10.0	4	100.0	<0.1	50.1 ³	3.9	5	106.0	6	
Subtotal	218,913	483	219,397	36.9	222,347	0.0	0.1	32.2	1.0	2,506	1.1	12	5

CR6: IRB – Credit risk exposures by portfolio and PD range (continued)

<i>USD m, except where indicated</i>	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %	EL	Provisions ¹
Banks and securities dealers as of 31.12.22													
0.00 to <0.15	6,182	1,248	7,429	47.2	7,282	0.1	0.5	53.6	1.1	1,684	23.1	3	
0.15 to <0.25	712	380	1,092	37.3	920	0.2	0.4	56.2	1.6	514	55.9	2	
0.25 to <0.50	308	411	719	43.0	455	0.4	0.2	64.5	1.1	387	85.1	1	
0.50 to <0.75	113	121	235	51.1	167	0.6	0.1	52.1	1.1	157	93.9	1	
0.75 to <2.50	500	1,175	1,675	79.0	1,336	1.6	0.2	47.5	3.2	2,088	156.3	10	
2.50 to <10.00	797	580	1,378	43.2	655	4.6	0.2	64.7	1.0	1,533	234.1	20	
10.00 to <100.00	150	45	195	42.4	66	16.2	<0.1	68.2	2.1	263	398.4	7	
100.00 (default)													
Subtotal	8,761	3,961	12,722	54.7	10,881	0.7	1.6	54.3	1.4	6,626	60.9	44	13
Banks and securities dealers as of 30.6.22													
0.00 to <0.15	7,216	956	8,172	53.1	8,358	0.1	0.6	51.3	1.0	1,699	20.3	3	
0.15 to <0.25	657	302	959	39.4	804	0.2	0.3	55.6	1.7	443	55.1	1	
0.25 to <0.50	416	489	906	43.3	611	0.4	0.2	66.4	1.1	550	90.0	2	
0.50 to <0.75	171	122	293	48.6	192	0.6	0.1	55.0	1.1	195	101.4	1	
0.75 to <2.50	388	442	830	39.9	555	1.5	0.2	48.5	1.1	613	110.4	4	
2.50 to <10.00	611	628	1,239	44.7	578	4.6	0.2	67.6	1.0	1,374	237.5	18	
10.00 to <100.00	165	89	253	34.2	79	16.9	<0.1	70.0	1.0	314	398.9	10	
100.00 (default)													
Subtotal	9,624	3,028	12,652	45.7	11,176	0.5	1.5	53.3	1.1	5,187	46.4	38	11
Banks and securities dealers as of 31.12.21													
0.00 to <0.15	6,202	1,092	7,294	58.3	7,292	0.1	0.5	51.7	1.1	1,638	22.5	6	
0.15 to <0.25	748	268	1,016	36.3	754	0.2	0.3	54.1	1.5	390	51.7	2	
0.25 to <0.50	469	441	910	45.4	613	0.4	0.2	65.2	1.1	535	87.2	2	
0.50 to <0.75	302	252	554	41.9	365	0.7	0.1	70.0	1.0	471	129.2	2	
0.75 to <2.50	368	564	933	42.5	565	1.6	0.2	51.9	1.1	709	125.5	4	
2.50 to <10.00	764	642	1,406	43.2	603	4.0	0.2	67.1	1.0	1,380	228.8	16	
10.00 to <100.00	90	51	141	36.9	13	11.9	<0.1	60.6	1.1	41	313.7	1	
100.00 (default)													
Subtotal	8,944	3,310	12,254	47.6	10,206	0.4	1.5	54.3	1.1	5,164	50.6	33	12

CR6: IRB – Credit risk exposures by portfolio and PD range (continued)

<i>USD m, except where indicated</i>	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %	EL	Provisions ¹
Public-sector entities, multi-lateral development banks as of 31.12.22													
0.00 to <0.15	7,067	614	7,682	18.7	7,263	0.0	0.2	37.9	1.1	417	5.7	1	
0.15 to <0.25	405	565	970	25.2	553	0.2	0.2	25.6	2.2	118	21.4	0	
0.25 to <0.50	741	403	1,144	22.7	827	0.3	0.2	27.2	2.2	244	29.4	1	
0.50 to <0.75	3	1	3	16.0	2	0.6	<0.1	11.2	1.8	0	14.9	0	
0.75 to <2.50													
2.50 to <10.00													
10.00 to <100.00													
100.00 (default)													
Subtotal	8,217	1,583	9,800	22.0	8,646	0.1	0.6	36.1	1.2	779	9.0	2	0
Public-sector entities, multi-lateral development banks as of 30.6.22													
0.00 to <0.15	5,567	661	6,228	19.2	5,775	0.0	0.2	36.5	1.1	277	4.8	0	
0.15 to <0.25	170	473	643	24.6	285	0.2	0.2	31.4	2.0	68	23.8	0	
0.25 to <0.50	631	361	992	27.9	714	0.3	0.2	27.1	2.3	211	29.6	1	
0.50 to <0.75	34	17	51	29.9	39	0.6	<0.1	31.1	2.5	19	50.2	0	
0.75 to <2.50													
2.50 to <10.00	52		52		1	3.0	<0.1	17.1	5.0	0	50.4	0	
10.00 to <100.00													
100.00 (default)	4		4		4	100.0	<0.1	0.0 ³	1.0	4	106.0	0	
Subtotal	6,459	1,512	7,970	23.1	6,817	0.1	0.6	35.2	1.3	581	8.5	1	0
Public-sector entities, multi-lateral development banks as of 31.12.21													
0.00 to <0.15	4,682	1,183	5,865	19.1	4,985	0.0	0.2	38.0	1.1	323	6.5	1	
0.15 to <0.25	268	231	499	12.1	294	0.2	0.1	30.4	2.5	72	24.5	0	
0.25 to <0.50	617	428	1,045	27.8	721	0.4	0.2	27.4	2.3	215	29.8	1	
0.50 to <0.75	38	16	53	27.0	41	0.6	<0.1	31.0	2.6	21	51.5	0	
0.75 to <2.50													
2.50 to <10.00	58	0	58	0.0	1	3.0	<0.1	17.1	5.0	0	50.4	0	
10.00 to <100.00													
100.00 (default)	4		4		4	100.0	<0.1	0.2 ³	1.0	5	106.0	0	
Subtotal	5,667	1,858	7,525	20.3	6,046	0.1	0.6	36.3	1.3	636	10.5	2	0

CR6: IRB – Credit risk exposures by portfolio and PD range (continued)

<i>USD m, except where indicated</i>	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %	EL	Provisions ¹
Corporates: specialized lending as of 31.12.22													
0.00 to <0.15	4,143	1,017	5,160	68.1	4,835	0.1	0.5	13.6	2.0	330	6.8	0	
0.15 to <0.25	2,597	986	3,583	50.3	2,916	0.2	0.3	23.0	2.1	630	21.6	1	
0.25 to <0.50	4,361	2,534	6,895	33.0	5,178	0.4	0.6	27.4	1.9	2,043	39.5	5	
0.50 to <0.75	3,712	2,299	6,011	35.4	4,464	0.6	0.5	26.0	1.8	2,036	45.6	7	
0.75 to <2.50	8,550	3,017	11,567	28.6	9,360	1.3	1.3	27.6	1.8	5,875	62.8	35	
2.50 to <10.00	1,810	423	2,233	55.4	2,046	3.3	0.3	35.0	1.6	2,177	106.4	23	
10.00 to <100.00	1	0	1	0.0	1	11.0	<0.1	36.0	2.5	1	169.2	0	
100.00 (default)	151	2	153	70.9	50	100.0	<0.1	67.8 ³	4.8	53	106.0	104	
Subtotal	25,324	10,278	35,602	38.3	28,850	1.0	3.6	24.9	1.9	13,145	45.6	176	119
Corporates: specialized lending as of 30.6.22													
0.00 to <0.15	3,102	1,085	4,187	71.6	3,879	0.1	0.5	13.9	2.1	278	7.2	0	
0.15 to <0.25	2,013	1,021	3,034	43.6	2,363	0.2	0.3	25.6	2.0	572	24.2	1	
0.25 to <0.50	4,958	2,566	7,523	30.2	5,679	0.4	0.6	29.5	1.9	2,500	44.0	6	
0.50 to <0.75	4,269	2,000	6,269	37.1	4,940	0.6	0.6	27.5	2.0	2,421	49.0	9	
0.75 to <2.50	8,439	2,549	10,988	33.1	9,272	1.3	1.3	29.0	1.8	6,329	68.3	37	
2.50 to <10.00	1,520	529	2,049	48.5	1,783	3.5	0.3	35.7	1.8	1,947	109.2	22	
10.00 to <100.00	0	4	4	21.5	1	10.2	<0.1	65.0	1.4	3	375.2	0	
100.00 (default)	157	5	162	84.6	62	100.0	<0.1	62.1 ³	3.9	66	106.0	101	
Subtotal	24,457	9,760	34,217	39.4	27,978	1.1	3.6	26.7	1.9	14,117	50.5	176	123
Corporates: specialized lending as of 31.12.21													
0.00 to <0.15	2,903	1,060	3,963	73.1	3,516	0.1	0.5	13.9	2.1	264	7.5	0	
0.15 to <0.25	2,066	1,119	3,186	44.5	2,419	0.2	0.3	22.2	1.9	497	20.5	1	
0.25 to <0.50	4,793	2,566	7,359	33.6	5,577	0.4	0.6	26.9	2.0	2,318	41.6	5	
0.50 to <0.75	4,758	2,292	7,050	39.5	5,568	0.6	0.5	27.4	1.8	2,692	48.3	10	
0.75 to <2.50	8,128	3,593	11,721	32.4	9,282	1.3	1.3	28.3	1.9	6,266	67.5	36	
2.50 to <10.00	1,797	385	2,182	43.9	1,948	3.3	0.4	32.7	1.9	1,970	101.1	21	
10.00 to <100.00													
100.00 (default)	193	3	196	71.9	91	100.0	<0.1	53.6 ³	3.0	97	106.0	105	
Subtotal	24,640	11,017	35,657	39.7	28,402	1.2	3.6	25.9	1.9	14,103	49.7	179	116

CR6: IRB – Credit risk exposures by portfolio and PD range (continued)

<i>USD m, except where indicated</i>	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %	EL	Provisions ¹
Corporates: other lending as of 31.12.22													
0.00 to <0.15	12,395	19,869	32,264	37.5	19,348	0.1	7.3	34.7	1.8	4,308	22.3	4	
0.15 to <0.25	4,102	6,856	10,958	35.6	6,566	0.2	2.3	40.3	2.1	2,896	44.1	6	
0.25 to <0.50	5,956	6,183	12,138	35.2	7,854	0.4	3.0	36.0	2.3	4,564	58.1	10	
0.50 to <0.75	4,809	3,558	8,367	38.7	6,088	0.6	3.0	29.8	2.1	3,747	61.5	12	
0.75 to <2.50	9,866	8,132	17,998	39.9	12,159	1.4	10.7	29.0	2.1	8,305	68.3	50	
2.50 to <10.00	5,679	9,191	14,870	41.7	8,421	4.4	5.0	33.0	2.4	12,546	149.0	123	
10.00 to <100.00	327	442	770	57.8	462	15.0	0.2	23.9	1.9	869	187.9	17	
100.00 (default)	1,023	250	1,272	39.6	726	100.0	0.8	27.8 ³	2.8	769	106.0	325	
Subtotal	44,157	54,480	98,637	38.3	61,625	2.3	32.4	32.8	2.1	38,003	61.7	546	575
Corporates: other lending as of 30.6.22													
0.00 to <0.15	10,247	20,441	30,689	36.2	16,994	0.1	7.7	35.4	1.7	3,947	23.2	4	
0.15 to <0.25	5,626	6,883	12,510	35.7	8,080	0.2	2.4	36.1	2.2	3,156	39.1	6	
0.25 to <0.50	5,233	3,900	9,133	39.2	6,344	0.4	3.1	33.4	2.4	3,438	54.2	7	
0.50 to <0.75	4,691	3,872	8,562	38.1	6,064	0.6	2.9	28.1	2.1	3,367	55.5	11	
0.75 to <2.50	9,593	8,404	17,997	39.6	11,876	1.4	10.8	28.0	2.1	8,175	68.8	47	
2.50 to <10.00	5,792	12,557	18,349	38.5	9,300	4.3	5.4	33.8	2.3	14,033	150.9	137	
10.00 to <100.00	425	430	855	52.8	555	15.5	0.3	29.0	1.4	1,224	220.5	25	
100.00 (default)	1,105	203	1,308	40.7	748	100.0	0.7	28.4 ³	3.2	793	106.0	319	
Subtotal	42,713	56,691	99,403	37.6	59,961	2.5	33.2	32.0	2.1	38,133	63.6	557	604
Corporates: other lending as of 31.12.21													
0.00 to <0.15	12,096	19,907	32,003	36.7	17,136	0.1	8.0	34.6	1.7	3,865	22.6	4	
0.15 to <0.25	6,391	7,442	13,833	35.7	8,832	0.2	2.4	39.6	2.1	3,755	42.5	7	
0.25 to <0.50	6,048	4,988	11,036	37.0	7,114	0.4	3.1	28.9	2.3	3,365	47.3	7	
0.50 to <0.75	4,384	4,249	8,634	38.4	5,872	0.6	2.8	30.3	2.0	3,541	60.3	11	
0.75 to <2.50	10,164	8,245	18,409	42.7	12,052	1.5	11.0	29.0	2.1	8,721	72.4	52	
2.50 to <10.00	6,354	11,831	18,186	40.5	9,983	4.3	5.5	31.5	2.4	14,303	143.3	138	
10.00 to <100.00	364	410	774	54.7	516	13.4	0.3	28.2	1.6	949	184.0	20	
100.00 (default)	1,140	232	1,372	40.5	737	100.0	0.8	33.2 ³	3.5	781	106.0	369	
Subtotal	46,942	57,305	104,247	38.5	62,241	2.4	33.9	32.6	2.1	39,281	63.1	609	647

CR6: IRB – Credit risk exposures by portfolio and PD range (continued)

<i>USD m, except where indicated</i>	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %	EL	Provisions ¹
Retail: residential mortgages as of 31.12.22													
0.00 to <0.15	76,314	1,358	77,672	53.1	77,043	0.1	139.0	18.9		3,230	4.2	13	
0.15 to <0.25	20,092	271	20,363	75.3	20,291	0.2	22.9	25.5		2,076	10.2	10	
0.25 to <0.50	26,641	489	27,130	76.6	26,994	0.4	29.3	27.5		4,770	17.7	26	
0.50 to <0.75	16,731	351	17,081	82.5	17,021	0.6	14.6	30.5		5,054	29.7	33	
0.75 to <2.50	23,178	1,390	24,568	78.9	24,273	1.3	26.2	33.8		12,966	53.4	109	
2.50 to <10.00	7,506	333	7,838	82.7	7,784	4.4	8.4	33.6		8,217	105.6	113	
10.00 to <100.00	916	20	936	97.1	936	15.1	0.9	31.4		1,598	170.8	44	
100.00 (default)	503	1	504	77.4	478	100.0	0.7	5.2 ³		506	106.0	26	
Subtotal	171,880	4,212	176,092	70.7	174,820	0.9	242.0	24.8		38,417	22.0	374	186
Retail: residential mortgages as of 30.6.22													
0.00 to <0.15	73,745	1,304	75,049	52.9	74,438	0.1	139.1	18.6		3,073	4.1	12	
0.15 to <0.25	19,216	250	19,466	70.9	19,388	0.2	22.9	25.6		2,008	10.4	9	
0.25 to <0.50	25,544	460	26,004	78.3	25,900	0.4	29.3	27.8		4,676	18.1	25	
0.50 to <0.75	15,874	354	16,228	84.5	16,175	0.6	14.4	30.5		4,862	30.1	31	
0.75 to <2.50	22,301	1,464	23,764	77.6	23,436	1.3	26.3	34.1		12,696	54.2	106	
2.50 to <10.00	7,129	332	7,461	84.6	7,416	4.3	8.0	33.3		7,673	103.5	104	
10.00 to <100.00	794	9	803	94.2	804	15.2	0.8	32.9		1,446	180.0	41	
100.00 (default)	531	1	532	79.4	504	100.0	0.7	5.2 ³		534	106.0	27	
Subtotal	165,133	4,175	169,308	70.8	168,060	0.9	241.5	24.8		36,969	22.0	356	140
Retail: residential mortgages as of 31.12.21													
0.00 to <0.15	75,576	1,650	77,227	61.0	76,587	0.1	138.0	18.3		2,995	3.9	12	
0.15 to <0.25	18,717	354	19,071	75.5	18,985	0.2	22.5	25.5		1,894	10.0	9	
0.25 to <0.50	25,283	616	25,899	82.1	25,797	0.4	28.9	27.6		4,460	17.3	25	
0.50 to <0.75	15,659	459	16,118	89.0	16,069	0.6	14.3	30.4		4,637	28.9	31	
0.75 to <2.50	22,380	1,780	24,160	81.4	23,827	1.3	26.0	34.0		12,512	52.5	108	
2.50 to <10.00	7,163	462	7,624	87.7	7,573	4.3	7.9	33.1		7,599	100.4	108	
10.00 to <100.00	905	21	926	95.4	926	15.4	0.8	32.9		1,619	174.9	48	
100.00 (default)	577	2	579	66.5	552	100.0	0.8	4.6 ³		585	106.0	27	
Subtotal	166,261	5,344	171,605	51.0	170,315	1.0	239.0	24.5		36,302	21.3	368	152

CR6: IRB – Credit risk exposures by portfolio and PD range (continued)

<i>USD m, except where indicated</i>	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %	EL	Provisions ¹
Retail: qualifying revolving retail exposures (QRRE) as of 31.12.22						31.12.22							
0.00 to <0.15	245	3,628	3,873	53.0	2,169	0.0	457.1	37.4		46	2.1	0	
0.15 to <0.25	131	1,368	1,499	49.3	805	0.2	201.6	41.9		55	6.8	1	
0.25 to <0.50	163	595	758	51.1	467	0.4	95.6	45.6		62	13.3	1	
0.50 to <0.75	144	342	486	49.9	315	0.6	70.2	46.8		69	21.8	1	
0.75 to <2.50	362	706	1,069	58.0	720	1.4	143.7	49.1		295	41.0	5	
2.50 to <10.00	297	258	555	18.3	291	4.6	81.7	52.0		312	107.3	7	
10.00 to <100.00	61	10	70	56.0	66	19.3	14.7	56.2		164	249.0	7	
100.00 (default)	47	0	47	0.0	28	100.0	25.9	40.0 ³		30	106.0	19	
Subtotal	1,450	6,907	8,357	51.2	4,861	1.4	1,090.5	41.9		1,033	21.3	40	32
Retail: qualifying revolving retail exposures (QRRE) as of 30.6.22													
0.00 to <0.15	242	3,498	3,741	53.1	2,098	0.0	455.5	37.2		45	2.1	0	
0.15 to <0.25	127	1,355	1,482	49.6	798	0.2	208.9	41.9		55	6.8	1	
0.25 to <0.50	163	580	743	50.5	456	0.4	98.1	45.6		61	13.4	1	
0.50 to <0.75	141	320	461	49.9	300	0.6	69.9	46.6		65	21.8	1	
0.75 to <2.50	306	772	1,078	50.3	703	1.4	141.9	48.9		287	40.8	5	
2.50 to <10.00	328	150	478	31.7	351	4.2	82.6	49.6		326	92.9	8	
10.00 to <100.00	56	10	67	51.6	62	19.2	15.0	55.7		153	248.2	7	
100.00 (default)	41	0	41	0.0	25	100.0	21.1	40.0 ³		26	106.0	17	
Subtotal	1,405	6,686	8,091	51.2	4,794	1.4	1,092.9	41.8		1,018	21.2	38	29
Retail: qualifying revolving retail exposures (QRRE) as of 31.12.21													
0.00 to <0.15	238	3,790	4,028	52.0	2,209	0.0	458.1	37.2		48	2.2	0	
0.15 to <0.25	124	1,420	1,544	49.4	825	0.2	208.5	42.0		58	7.0	1	
0.25 to <0.50	158	594	753	49.5	453	0.4	97.3	45.8		62	13.7	1	
0.50 to <0.75	137	338	474	49.1	302	0.6	70.2	47.1		68	22.5	1	
0.75 to <2.50	296	658	954	59.7	704	1.4	138.9	49.1		295	41.8	5	
2.50 to <10.00	326	203	530	22.7	341	4.2	77.7	50.0		324	95.1	8	
10.00 to <100.00	52	9	61	55.4	57	19.1	13.3	56.1		145	254.9	6	
100.00 (default)	43	0	43	0.0	26	100.0	21.1	40.0 ³		27	106.0	17	
Subtotal	1,373	7,013	8,386	51.0	4,917	1.3	1,085.1	42.2		1,028	20.9	38	29

CR6: IRB – Credit risk exposures by portfolio and PD range (continued)

<i>USD m, except where indicated</i>	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %	EL	Provisions ¹
Retail: other retail as of 31.12.22²													
0.00 to <0.15	112,246	293,242	405,488	18.2	165,459	0.0	476.9	29.2		8,095	4.9	20	
0.15 to <0.25	4,477	8,336	12,814	20.9	6,215	0.2	11.4	27.7		808	13.0	3	
0.25 to <0.50	7,096	11,982	19,078	19.1	9,379	0.4	14.4	28.1		1,982	21.1	9	
0.50 to <0.75	6,982	13,524	20,506	20.5	9,752	0.6	18.8	23.8		2,424	24.9	15	
0.75 to <2.50	6,607	8,983	15,590	22.3	8,608	1.1	34.4	39.7		4,692	54.5	37	
2.50 to <10.00	1,029	891	1,920	17.0	1,179	4.5	3.2	63.4		1,413	119.9	38	
10.00 to <100.00	62	43	105	28.4	74	19.9	1.0	27.5		59	79.2	4	
100.00 (default)	92	1	93	71.0	82	100.0	<0.1	11.2 ⁴		87	106.0	10	
Subtotal	138,592	337,003	475,595	18.5	200,748	0.2	560.2	29.5		19,561	9.7	137	27
Retail: other retail as of 30.6.22²													
0.00 to <0.15	118,082	272,365	390,447	18.3	167,877	0.0	475.7	29.0		8,189	4.9	21	
0.15 to <0.25	4,525	8,467	12,993	19.4	6,169	0.2	11.2	27.7		796	12.9	3	
0.25 to <0.50	8,045	11,754	19,799	18.6	10,230	0.4	14.1	32.5		2,478	24.2	12	
0.50 to <0.75	7,539	13,683	21,222	20.0	10,280	0.6	17.3	24.6		2,597	25.3	16	
0.75 to <2.50	7,006	10,420	17,426	21.2	9,214	1.2	37.8	31.2		3,933	42.7	34	
2.50 to <10.00	1,322	1,545	2,868	21.0	1,645	3.8	3.3	54.8		1,629	99.0	38	
10.00 to <100.00	271	240	511	18.3	307	20.3	0.9	26.3		233	76.0	16	
100.00 (default)	83	1	84	42.0	57	100.0	<0.1	31.5 ³		60	106.0	24	
Subtotal	146,872	318,477	465,349	18.5	205,778	0.2	560.5	29.2		19,914	9.7	162	38
Retail: other retail as of 31.12.21²													
0.00 to <0.15	133,340	314,819	448,158	18.1	190,358	0.0	499.1	28.4		8,817	4.6	23	
0.15 to <0.25	5,729	8,764	14,493	19.0	7,395	0.2	9.3	27.9		951	12.9	4	
0.25 to <0.50	6,517	10,046	16,563	18.9	8,415	0.4	10.5	30.8		1,921	22.8	9	
0.50 to <0.75	4,410	7,997	12,407	19.4	5,963	0.6	11.3	24.4		1,506	25.3	9	
0.75 to <2.50	5,164	9,231	14,395	21.1	7,106	1.2	45.3	34.3		3,221	45.3	28	
2.50 to <10.00	795	1,087	1,882	22.4	1,038	4.4	3.5	46.4		902	86.9	27	
10.00 to <100.00	137	99	236	17.6	141	20.7	1.0	24.7		100	71.0	7	
100.00 (default)	38	3	41	10.1	14	100.0	<0.1	61.1 ³		14	106.0	25	
Subtotal	156,130	352,045	508,175	18.3	220,429	0.1	579.9	28.6		17,433	7.9	131	37
Total 31.12.22	614,082	418,816	1,032,899	23.0	708,165	0.6	1,930.9	30.0	1.3⁴	120,958	17.1	1,345	957
Total 30.6.22	615,591	400,713	1,016,304	23.1	705,861	0.6	1,934.0	30.0	1.3⁴	119,611	16.9	1,356	951
Total 31.12.21	628,870	438,375	1,067,245	23.0	724,901	0.5	1,943.8	29.5	1.3⁴	116,453	16.1	1,371	998

¹ In line with BCBS Pillar 3 disclosure requirements, provisions are only provided for the sub-totals by asset class. Expected credit loss (ECL) allowances and provisions amounted to USD 1,091m as of 31 December 2022, as disclosed in "Note 9 Financial assets at amortized cost and other positions in scope of expected credit loss measurement" of the UBS Group AG Annual Report 2022. This included USD 957m related to credit risk under the IRB approach, USD 128m related to credit risk under the standardized approach and USD 6m related to exposures under counterparty credit risk. The CR6 table includes ECL related to revocable off-balance sheet exposures of USD 38m, which are excluded from the "CR1: Credit quality of assets" table in this report. ² The "Retail: other retail" asset class includes risk-weighted assets of USD 3.5bn related to a new model for structured margin loans and similar products in Global Wealth Management. The USD 3.5bn was phased in over five quarters until June 2022, and relates to the expected impact of the model, which is planned to be introduced in 2023. The associated changes to PD and LGD, as well as a refinement to the asset class allocation, primarily toward the corporate asset class, will only be reflected with the introduction of the new model. ³ Average LGD for defaulted exposures disclosed in the table is not used to calculate RWA. The disclosed number is derived using ECL accounting provisions (stage 3) divided by total exposures pre-CCF. ⁴ Retail asset classes are excluded from the average maturity as maturity is not relevant for risk weighting.

Credit derivatives used as CRM techniques

Semi-annual I Where credit derivatives are used as credit risk mitigation, the probability of default (PD) of the obligor is in general substituted with the PD of the hedge provider. In addition, default correlation between the obligor and the hedge provider is taken into account through the double default approach. The impact of credit derivatives used as CRM techniques on IRB credit risk has been immaterial for past reporting periods and continued to be immaterial for this reporting period. Therefore, we have discontinued the disclosure of the “CR7: IRB – effect on RWA of credit derivatives used as CRM techniques” table, in line with FINMA Circular 2016/6, general principles of disclosure. ▲

› Refer to the “CCR6: Credit derivatives exposures” table in the “Counterparty credit risk” section of this report for notional and fair value information about credit derivatives used as CRM

The table below provides definitions applied in the CR8 table below.

Definitions of credit risk and counterparty credit risk RWA movement table components for CR8 and CCR7

The references in the table below refer to the line numbers provided in the CR8 and CCR7 movement tables below.

Reference	Description	Definition
2	Asset size	Movements arising in the ordinary course of business, such as new transactions, sales and write-offs.
3	Asset quality / Credit quality of counterparties	Movements resulting from changes in the underlying credit quality of counterparties. These are caused by changes to risk parameters, e.g., counterparty ratings, LGD estimates or credit hedges.
4	Model updates	Movements arising from the implementation of new models and from parameter changes to existing models. The RWA effect of model updates is estimated based on the portfolio at the time of the implementation of the change.
5	Methodology and policy	Movements due to methodological changes in calculations driven by regulatory policy changes, including revisions to existing regulations, new regulations and add-ons mandated by the regulator. The effect of methodology and policy changes on RWA is estimated based on the portfolio at the time of the implementation of the change.
6	Acquisitions and disposals	Movements as a result of disposal or acquisition of business operations, quantified based on the credit risk exposures as of the end of the quarter preceding a disposal or following an acquisition. Purchases and sales of exposures in the ordinary course of business are reflected under <i>Asset size</i> .
7	Foreign exchange movements	Movements as a result of exchange rate changes of transaction currencies against the US dollar.
8	Other	Movements due to changes that cannot be attributed to any other category.

RWA flow statements of credit risk exposures under IRB

Quarterly I Credit risk RWA under the A-IRB approach increased by USD 4.8bn to USD 121.0bn during the fourth quarter of 2022.

The RWA increase from asset size movements of USD 1.7bn was predominantly driven by increases from corporate loans in Personal & Corporate Banking. The decrease in RWA from asset quality of USD 2.1bn was primarily due to rating improvements on Lombard and mortgage loans.

Model updates resulted in an RWA increase of USD 0.4bn, primarily driven by a USD 0.7bn quarterly phase-in impact related to updates to the loss-given-default (LGD) model for private equity and hedge fund financing trades, partly offset by a reduction of USD 0.3bn related to updates to the model for standard Lombard loans. Foreign exchange movements led to an RWA increase of USD 4.8bn.

CR8: RWA flow statements of credit risk exposures under IRB

<i>USD m</i>	For the quarter ended 31.12.22	For the quarter ended 30.9.22	For the quarter ended 30.6.22	For the quarter ended 31.3.22
1 RWA as of the beginning of the quarter	116,158	119,611	118,609	116,453
2 Asset size	1,670	(2,365)	381	1,415
3 Asset quality	(2,055)	(902)	1,418	682
4 Model updates	405	1,344	1,840	1,180
5 Methodology and policy				
5a of which: regulatory add-ons				
6 Acquisitions and disposals		1,240		
7 Foreign exchange movements	4,780	(2,770)	(2,637)	(1,121)
8 Other				
9 RWA as of the end of the quarter	120,958	116,158	119,611	118,609

Backtesting

Annual I More information about backtesting of credit models is provided under "Backtesting" in the "Risk management and control" section of our Annual Report 2022.

CR9: IRB – Backtesting of probability of default (PD) per portfolio¹

PD range	External rating equivalent	External rating equivalent	External rating equivalent	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands)		Defaulted obligors in the year	of which: new defaulted obligors in the year	Average historical annual default rate in % ²
	Moody's	S&P	Fitch			End of the previous year	End of the year			
Central governments and central banks as of 31.12.22										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.0	0.0	< 0.1	< 0.1	0	0	0.0
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	< 0.1	< 0.1	0	0	0.0
0.25 to <0.50	Baa3	BBB–	BBB–	0.3	0.3	< 0.1	< 0.1	0	0	0.0
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.7	< 0.1	< 0.1	0	0	0.0
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.5	1.3	< 0.1	< 0.1	0	0	0.0
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	5.2	3.8	< 0.1	< 0.1	0	0	0.0
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C	12.9	13.0	< 0.1	< 0.1	0	0	0.0
Subtotal				0.0	1.2	< 0.1	0.1	0	0	0.0
Central governments and central banks as of 31.12.21										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.0	0.0	< 0.1	< 0.1	0	0	0.0
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	< 0.1	< 0.1	0	0	0.0
0.25 to <0.50	Baa3	BBB–	BBB–	0.3	0.3	< 0.1	< 0.1	0	0	0.0
0.50 to <0.75	Ba1	BB+	BB+	0.7	0.7	< 0.1	< 0.1	0	0	0.0
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.2	1.1	< 0.1	< 0.1	0	0	0.0
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	3.6	3.5	< 0.1	< 0.1	0	0	0.0
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C	13.2	10.8	< 0.1	< 0.1	0	0	0.0
Subtotal				0.0	1.7	< 0.1	< 0.1	0	0	0.0

CR9: IRB – Backtesting of probability of default (PD) per portfolio (continued)¹

PD range	External rating equivalent	External rating equivalent	External rating equivalent	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands)		Defaulted obligors in the year	of which: new defaulted obligors in the year	Average historical annual default rate in % ²
	Moody's	S&P	Fitch			End of the previous year	End of the year			
Banks and securities dealers as of 31.12.22										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.0	0.5	0.5	0	0	0.0
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.3	0.3	0	0	0.1
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	0.2	0.2	0	0	0.0
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	< 0.1	< 0.1	0	0	0.1
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.7	1.3	0.2	0.1	0	0	0.1
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.1	3.2	0.2	0.2	0	0	0.2
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C	11.9	16.0	< 0.1	< 0.1	0	0	0.9
Subtotal				0.5	0.6	1.4	1.5	0	0	0.1
Banks and securities dealers as of 31.12.21										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	0.5	0.5	0	0	0.0
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.3	0.3	0	0	0.1
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	0.2	0.2	0	0	0.0
0.50 to <0.75	Ba1	BB+	BB+	0.7	0.6	< 0.1	< 0.1	0	0	0.1
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.8	1.4	0.2	0.2	0	0	0.1
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.7	3.2	0.2	0.2	0	0	0.3
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C	10.8	17.8	< 0.1	< 0.1	0	0	0.9
Subtotal				0.5	0.8	1.4	1.4	0	0	0.1

CR9: IRB – Backtesting of probability of default (PD) per portfolio (continued)¹

PD range	External rating equivalent	External rating equivalent	External rating equivalent	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands)		Defaulted obligors in the year	<i>of which: new defaulted obligors in the year</i>	Average historical annual default rate in % ²
	Moody's	S&P	Fitch			End of the previous year	End of the year			
Public-sector entities, multi-lateral development banks as of 31.12.22										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	0.2	0.2	0	0	0.0
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.1	0.2	0	0	0.0
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.3	0.2	0.2	0	0	0.0
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	< 0.1	< 0.1	0	0	0.5
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	0.9	1.4	< 0.1	< 0.1	0	0	0.0
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	3.0	2.7	< 0.1	< 0.1	0	0	0.0
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C			0.0	0.0	0	0	6.7
Subtotal				0.5	0.2	0.6	0.6	0	0	0.0
Public-sector entities, multi-lateral development banks as of 31.12.21										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.0	0.1	0.3	0.2	0	0	0.0
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.2	0.1	0	0	0.0
0.25 to <0.50	Baa3	BBB–	BBB–	0.3	0.3	0.2	0.2	0	0	0.0
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	< 0.1	< 0.1	0	0	0.5
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.0	1.2	< 0.1	< 0.1	0	0	0.0
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	2.9	2.7	< 0.1	< 0.1	0	0	0.0
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C			0.0	0.0	0	0	7.1
Subtotal				0.3	0.2	0.7	0.6	0	0	0.0

CR9: IRB – Backtesting of probability of default (PD) per portfolio (continued)¹

PD range	External rating equivalent	External rating equivalent	External rating equivalent	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands)		Defaulted obligors in the year	<i>of which: new defaulted obligors in the year</i>	Average historical annual default rate in % ²
	Moody's	S&P	Fitch			End of the previous year	End of the year			
Corporates: specialized lending as of 31.12.22										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	0.5	0.5	0	0	0.1
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.3	0.3	0	0	0.1
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	0.6	0.6	0	0	0.1
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	0.5	0.5	0	0	0.2
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.3	1.4	1.3	1.3	1	0	0.4
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	3.3	3.4	0.4	0.3	3	0	1.2
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C	11.0	11.0	< 0.1	< 0.1	0	0	4.9
Subtotal				1.2	1.1	3.6	3.5	4	0	0.3
Corporates: specialized lending as of 31.12.21										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	0.5	0.5	0	0	0.1
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.3	0.3	0	0	0.1
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	0.6	0.6	1	0	0.1
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	0.6	0.5	0	0	0.2
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.4	1.4	1.4	1.3	2	0	0.4
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	3.4	3.4	0.3	0.4	2	0	1.2
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C			0.0	< 0.1	0	0	5.3
Subtotal				1.3	1.0	3.7	3.6	5	0	0.3

CR9: IRB – Backtesting of probability of default (PD) per portfolio (continued)¹

PD range	External rating equivalent	External rating equivalent	External rating equivalent	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands)		Defaulted obligors in the year	<i>of which: new defaulted obligors in the year</i>	Average historical annual default rate in % ²
	Moody's	S&P	Fitch			End of the previous year	End of the year			
Corporates: other lending as of 31.12.22³										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	7.0	6.9	19	2	0.0
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	2.3	2.3	9	1	0.0
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	3.0	3.0	8	1	0.2
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	2.8	2.9	8	1	0.3
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.5	1.5	10.8	10.5	116	48	0.7
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.3	4.1	5.5	5.0	150	17	2.1
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C	13.4	16.8	0.3	0.2	49	3	12.3
Subtotal				2.7	1.5	31.6	30.8	359	73	0.3
Corporates: other lending as of 31.12.21										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	3.7	3.9	0	0	0.0
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	1.6	1.6	3	0	0.0
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	2.6	2.4	4	1	0.2
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	2.4	2.3	9	0	0.3
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.4	1.5	10.7	10.2	81	1	0.6
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.4	3.9	4.9	5.2	90	1	2.0
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C	14.9	14.2	< 0.1	0.1	13	4	11.7
Subtotal				3.3	1.5	26.0	25.7	200	7	0.3

CR9: IRB – Backtesting of probability of default (PD) per portfolio (continued)¹

PD range	External rating equivalent	External rating equivalent	External rating equivalent	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands)		Defaulted obligors in the year	<i>of which: new defaulted obligors in the year</i>	Average historical annual default rate in % ²
	Moody's	S&P	Fitch			End of the previous year	End of the year			
Retail: residential mortgages as of 31.12.22										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	138.0	139.0	81	7	0.1
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	22.5	22.9	18	1	0.1
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	28.9	29.3	30	5	0.1
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	14.3	14.6	22	2	0.3
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.3	1.3	26.0	26.2	70	11	0.4
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.3	4.4	7.9	8.4	80	19	1.2
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C	15.4	15.7	0.8	0.9	33	5	3.5
Subtotal				1.0	0.5	238.2	241.4	334	50	0.2
Retail: residential mortgages as of 31.12.21										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	136.1	138.0	78	0	0.1
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	22.3	22.5	37	1	0.1
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	28.7	28.9	46	0	0.1
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	13.8	14.3	27	1	0.3
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.3	1.3	26.3	26.0	69	0	0.4
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.5	4.3	8.5	7.9	85	0	1.2
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C	15.2	16.0	0.9	0.8	27	0	3.5
Subtotal				1.1	0.5	236.6	238.2	369	2	0.2

CR9: IRB – Backtesting of probability of default (PD) per portfolio (continued)¹

PD range	External rating equivalent	External rating equivalent	External rating equivalent	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands)		Defaulted obligors in the year	<i>of which: new defaulted obligors in the year</i>	Average historical annual default rate in % ²
	Moody's	S&P	Fitch			End of the previous year	End of the year			
Retail: qualifying revolving retail exposure as of 31.12.22³										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.0	0.0	458.1	457.1	180	1	0.0
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	208.5	201.6	215	0	0.2
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.3	97.3	95.6	207	13	0.3
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	70.2	70.2	332	25	0.4
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.4	1.3	138.9	143.7	1,209	148	1.0
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.2	4.1	77.7	81.7	2,510	162	3.5
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C	19.1	19.3	13.3	14.7	3,742	696	24.9
Subtotal				1.3	0.8	1,064.0	1,064.6	8,395	1,045	0.7

Retail: qualifying revolving retail exposure as of 31.12.21⁴

0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–							
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB							
0.25 to <0.50	Baa3	BBB–	BBB–							
0.50 to <0.75	Ba1	BB+	BB+							
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–							
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–							
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C							
Subtotal										

CR9: IRB – Backtesting of probability of default (PD) per portfolio (continued)¹

PD range	External rating equivalent	External rating equivalent	External rating equivalent	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands)		Defaulted obligors in the year	<i>of which: new defaulted obligors in the year</i>	Average historical annual default rate in % ²
	Moody's	S&P	Fitch			End of the previous year	End of the year			
Retail: other retail as of 31.12.22³										
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.0	0.0	499.1	476.9	89	0	0.0
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	9.3	11.4	5	0	0.0
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.3	10.5	14.4	18	1	0.0
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	11.3	18.8	26	2	0.0
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.2	1.1	45.3	34.4	56	4	0.0
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.4	3.6	3.5	3.2	31	0	0.1
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C	20.7	20.7	1.0	1.0	56	2	0.4
Subtotal				0.1	0.2	579.9	560.2	281	9	0.0

Retail: other retail as of 31.12.21

0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.0	0.0	343.2	491.6	27	8	0.0
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	7.2	7.8	1	0	0.0
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	8.4	9.1	1	0	0.1
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	8.8	9.9	3	1	0.1
0.75 to <2.50	Ba2 to Ba3	BB to BB–	BB to BB–	1.1	1.1	47.8	43.5	13	1	0.0
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.8	3.6	3.4	2.9	2	1	0.1
10.00 to <100.00	Caa1 to C	CCC to C	CCC to C	18.4	21.0	0.9	0.7	3	0	0.1
Subtotal				0.2	0.3	419.6	565.4	50	11	0.0

¹ This table covers all Pillar 1 PD models that are approved by FINMA and are subject to yearly confirmation / backtesting. Refer to the “Key features of our main credit risk models” table under “Credit risk models” in the “Risk management and control” section of our Annual Report 2022 for more information. ² We use 15 years of data for the calculation of the “average historical annual default rate.” ³ During 2021 a new PD model for credit cards went live. Obligor subject to this model contribute to Corporates: other lending, Retail: qualifying revolving retail exposure, and Retail: other retail. Consequently, numbers shown for the end of the previous year may differ from those shown in previous reports. ⁴ This portfolio includes only obligors subject to the new Pillar 1 PD model for credit cards. 2022 was the first full year following go-live; consequently, no comparative period is shown.

Equity exposures

Semi-annual I The table below provides information about our equity exposures under the simple risk-weight method.

CR10: IRB (equities under the simple risk-weight method)

<i>USD m, except where indicated</i>	On-balance sheet amount	Off-balance sheet amount	Risk weight in % ¹	Exposure amount ²	RWA ¹
31.12.22					
Exchange-traded equity exposures	10		300	10	33
Other equity exposures	881		400	881	3,735
Total	891			891	3,768
30.6.22					
Exchange-traded equity exposures	10		300	10	32
Other equity exposures	850		400	850	3,601
Total	860			860	3,634
31.12.21					
Exchange-traded equity exposures	24		300	24	78
Other equity exposures	783		400	783	3,319
Total	807			807	3,396

¹ RWA are calculated post-application of the A-IRB multiplier of 6%, therefore the respective risk weight is higher than 300% and 400%. ² The exposure amount for equities in the banking book is based on the net position. ▲

Section 6 Counterparty credit risk

Introduction

Semi-annual I This section provides information about the exposures subject to the Basel III counterparty credit risk (CCR) framework. CCR arises from over-the-counter (OTC) derivatives and exchange-traded derivatives (ETDs), securities financing transactions (SFTs), and long settlement transactions. Within traded products, we determine the regulatory credit exposure on the majority of our derivatives portfolio by applying the internal model method. For the rest of the portfolio, we apply the standardized approach for counterparty credit risk (SA-CCR). For the majority of SFTs, we determine the regulatory credit exposure using the value-at-risk (VaR) approach. For the rest of the SFTs portfolio, we apply the comprehensive approach for credit risk mitigation. ▲

Counterparty credit risk management

Annual I The table below presents an overview of Pillar 3 disclosures that are provided separately in our Annual Report 2022, available under "Annual reporting" at ubs.com/investors.

CCRA: Counterparty credit risk management

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Risk management objectives and policies related to counterparty credit risk	Risk management and control	<ul style="list-style-type: none"> – Traded products – Credit hedging – Mitigation of settlement risk 	101–102 104 104
	Consolidated financial statements	<ul style="list-style-type: none"> – Note 1a item 2j Hedge accounting – Note 10 Derivative instruments 	273 291–293
The method used to assign the operating limits defined in terms of internal capacity for counterparty credit exposures and for CCP exposures	Risk management and control	– Risk governance	87–89
		– Portfolio and position limits	95
		– Credit risk – Overview of measurement, monitoring and management techniques	96–97
		– Credit hedging	104
Policies relating to guarantees and other risk mitigants, and counterparty risk assessment	Risk management and control	– Credit risk models	104–109
		Consolidated financial statements	102–104
Policies with respect to wrong-way risk exposures	Risk management and control	– Note 10 Derivative instruments	291–293
		– Note 21 Offsetting financial assets and financial liabilities	330–331
The effect on the firm of a credit rating downgrade (i.e., amount of collateral that the firm would be required to provide) and the disclosure on rating actions	Risk management and control	– Exposure at default	106
		– Credit ratings	148

Counterparty credit exposure

Semi-annual I The CCR1 table below presents the methods used to calculate counterparty credit risk exposure. Compared with 30 June 2022, decreases in exposures related to the internal model method and SA-CCR of USD 3.6bn and USD 3.3bn, respectively, primarily reflected market-driven movements on foreign exchange contracts mainly in the Investment Bank.

CCR1: Analysis of counterparty credit risk (CCR) exposure by approach

<i>USD m, except where indicated</i>	Replacement cost	Potential future exposure	EEPE	Alpha used for computing regulatory EAD	EAD post-CRM	RWA
31.12.22						
1 SA-CCR (for derivatives)	3,843	5,073		1.4	12,483	5,326
2 Internal model method (for derivatives)			27,400	1.6	43,840	16,066
3 Simple approach for credit risk mitigation (for SFTs)						
4 Comprehensive approach for credit risk mitigation (for SFTs)					14,311	3,959
5 VaR (for SFTs)					37,754	9,273
6 Total					108,387	34,624
30.6.22						
1 SA-CCR (for derivatives)	5,671	5,586		1.4	15,760	6,374
2 Internal model method (for derivatives)			29,629	1.6	47,406	17,390
3 Simple approach for credit risk mitigation (for SFTs)						
4 Comprehensive approach for credit risk mitigation (for SFTs)					12,806	3,480
5 VaR (for SFTs)					38,619	10,178
6 Total					114,591	37,422
31.12.21						
1 SA-CCR (for derivatives)	3,792	5,446		1.4	12,933	4,635
2 Internal model method (for derivatives)			27,493	1.6	43,989	17,150
3 Simple approach for credit risk mitigation (for SFTs)						
4 Comprehensive approach for credit risk mitigation (for SFTs)					20,773	5,198
5 VaR (for SFTs)					39,285	8,730
6 Total					116,980	35,712

Semi-annual I The CCR2 table below presents the credit valuation adjustment (CVA) capital charge with a breakdown by standardized and advanced approaches. In addition to the default risk capital requirements for CCR on derivatives, we add a CVA capital charge to cover the risk of mark-to-market losses associated with the deterioration of counterparty credit quality. The advanced CVA value-at-risk (VaR) approach has been used to calculate the CVA capital charge where we use the internal model method (the IMM). Where this is not the case, the standardized CVA approach has been used.

Compared with 30 June 2022, CVA RWA increased by USD 0.4bn to USD 4.3bn, primarily reflecting higher advanced CVA RWA, mainly as a result of higher average VaR levels in the average 60-day window.

CCR2: Credit valuation adjustment (CVA) capital charge

<i>USD m</i>	31.12.22		30.6.22		31.12.21	
	EAD post-CRM	RWA	EAD post-CRM	RWA	EAD post-CRM	RWA
Total portfolios subject to the advanced CVA capital charge	42,687	1,526	46,920	1,038	43,666	985
1 (i) VaR component (including the 3x multiplier)		208		155		212
2 (ii) Stressed VaR component (including the 3x multiplier)		1,317		882		773
3 All portfolios subject to the standardized CVA capital charge	12,176	2,784	14,908	2,833	12,652	2,626
4 Total subject to the CVA capital charge	54,863	4,310	61,827	3,871	56,318	3,611

Semi-annual I We have discontinued the disclosure of the “CCR3: Standardized approach – CCR exposures by regulatory portfolio and risk weights” table, starting with the 31 December 2022 Pillar 3 Report on the grounds of materiality. The majority of our CCR exposures are subject to internal ratings-based (IRB) risk weights or disclosed separately when related to central counterparties. Our CCR exposures subject to standardized risk weights amounted to USD 2.3bn, of which USD 1.8bn related to the corporate asset class under the 100% risk-weight category.

- Refer to the “CCR4: IRB – CCR exposures by portfolio and PD scale” table and the “CCR8: exposures to central counterparties” in this section for more information about counterparty credit risk exposures subject to IRB risk weights and central counterparties, respectively

Semi-annual I The CCR4 table below provides a breakdown of the key parameters used for the calculation of capital requirements under the advanced internal ratings-based (A-IRB) approach across FINMA-defined asset classes.

Compared with 30 June 2022, exposure at default (EAD) post credit risk mitigation (CRM) decreased by USD 6.1bn to USD 106.1bn across the various asset classes and RWA decreased by USD 2.7bn to USD 32.5bn.

In the Central governments and central banks asset class, EAD post-CRM increased by USD 5.3bn to USD 13.8bn and RWA increased by USD 0.4bn to USD 1.1bn, mainly as a result of increased exposures in SFTs in the Investment Bank and Group Functions.

In the Banks and securities dealers asset class, EAD post-CRM decreased by USD 1.2bn to USD 22.9bn and RWA decreased by USD 0.2bn to USD 6.2bn, primarily driven by lower derivative exposures in the Investment Bank.

In the Public-sector entities and multi-lateral development banks asset class, EAD post-CRM decreased by USD 0.1bn to USD 0.5bn and RWA remained unchanged at USD 0.1bn.

In the Corporates asset class, EAD post-CRM decreased by USD 9.2bn to USD 62.7bn and RWA decreased by USD 3.0bn to USD 24.4bn, due to exposure decreases in SFTs and foreign exchange derivatives mainly in the Investment Bank.

In the Retail: other retail asset class, EAD post-CRM decreased by USD 0.9bn to USD 6.2bn, mainly due to a decrease in derivatives in Global Wealth Management. RWA increased by USD 0.1bn to USD 0.8bn.

➤ Refer to the "CCR7: RWA flow statements of CCR exposures under internal model method (IMM) and value-at-risk (VaR)" table in this section for more information about RWA, including details of movements in CCR RWA

CCR4: IRB – CCR exposures by portfolio and PD scale

<i>USD m, except where indicated</i>	EAD post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years ¹	RWA	RWA density in %
Central governments and central banks as of 31.12.22							
0.00 to <0.15	13,058	0.0	0.1	46.2	0.6	572	4.4
0.15 to <0.25	248	0.2	< 0.1	52.2	0.4	63	25.4
0.25 to <0.50	482	0.3	< 0.1	93.3	0.6	434	90.0
0.50 to <0.75							
0.75 to <2.50	15	1.1	< 0.1	95.0	0.2	21	142.1
2.50 to <10.00							
10.00 to <100.00							
100.00 (default)							
Subtotal	13,802	0.0	0.1	48.0	0.6	1,089	7.9
Central governments and central banks as of 30.6.22							
0.00 to <0.15	8,151	0.0	0.1	39.5	0.5	422	5.2
0.15 to <0.25	216	0.2	< 0.1	54.1	0.3	56	25.9
0.25 to <0.50	179	0.3	< 0.1	97.8	1.0	172	96.4
0.50 to <0.75							
0.75 to <2.50	1	1.6	< 0.1	65.0	1.0	1	136.2
2.50 to <10.00	0	2.6	< 0.1	75.0	1.0	0	228.3
10.00 to <100.00							
100.00 (default)							
Subtotal	8,547	0.0	0.1	41.1	0.5	652	7.6
Central governments and central banks as of 31.12.21							
0.00 to <0.15	10,084	0.0	0.1	35.7	0.6	410	4.1
0.15 to <0.25	164	0.2	<0.1	66.3	0.3	52	32.1
0.25 to <0.50	368	0.3	<0.1	93.4	0.7	333	90.4
0.50 to <0.75	6	0.7	<0.1	100.0	1.0	9	146.2
0.75 to <2.50	2	1.6	<0.1	65.0	1.0	3	136.2
2.50 to <10.00							
10.00 to <100.00							
100.00 (default)							
Subtotal	10,624	0.0	0.1	38.2	0.6	807	7.6

¹ Average maturity for defaulted exposures disclosed in the table is not used to calculate RWA. ² Includes exposures to managed funds. ³ From 30 June 2022 onward, the limit information for Lombard trading clients was refined, which resulted in a change in the distribution of the numbers of obligors by probability of default range. ⁴ Retail asset classes are excluded from the average maturity as they are not subject to maturity treatment.

CCR4: IRB – CCR exposures by portfolio and PD scale (continued)

<i>USD m, except where indicated</i>	EAD post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years ¹	RWA	RWA density in %
Banks and securities dealers as of 31.12.22							
0.00 to <0.15	16,205	0.1	0.3	49.9	0.7	2,960	18.3
0.15 to <0.25	3,876	0.2	0.2	48.4	0.7	1,390	35.9
0.25 to <0.50	1,713	0.4	0.1	53.0	0.6	802	46.8
0.50 to <0.75	431	0.6	< 0.1	56.3	0.7	286	66.3
0.75 to <2.50	553	1.2	< 0.1	59.5	0.7	660	119.4
2.50 to <10.00	95	4.2	< 0.1	85.5	0.3	78	82.5
10.00 to <100.00							
100.00 (default)							
Subtotal	22,872	0.2	0.9	50.4	0.7	6,176	27.0
Banks and securities dealers as of 30.6.22							
0.00 to <0.15	17,853	0.1	0.4	49.6	0.7	3,307	18.5
0.15 to <0.25	3,565	0.2	0.2	50.1	0.7	1,310	36.7
0.25 to <0.50	1,607	0.4	0.1	53.5	0.7	790	49.1
0.50 to <0.75	411	0.6	< 0.1	55.3	0.7	295	71.8
0.75 to <2.50	534	1.2	0.1	55.0	0.8	583	109.3
2.50 to <10.00	53	3.9	< 0.1	77.4	0.5	81	151.6
10.00 to <100.00	0	19.7	< 0.1	78.0	1.0	0	463.8
100.00 (default)							
Subtotal	24,024	0.1	0.9	50.2	0.7	6,366	26.5
Banks and securities dealers as of 31.12.21							
0.00 to <0.15	16,427	0.1	0.4	49.4	0.7	2,848	17.3
0.15 to <0.25	3,555	0.2	0.2	48.9	0.6	1,238	34.8
0.25 to <0.50	1,587	0.4	0.2	53.5	0.7	839	52.8
0.50 to <0.75	449	0.6	< 0.1	60.8	0.8	405	90.1
0.75 to <2.50	512	1.3	0.1	44.8	0.7	481	94.0
2.50 to <10.00	56	3.4	< 0.1	76.4	0.7	103	184.5
10.00 to <100.00	0	22.0	< 0.1	45.0	1.0	0	244.7
100.00 (default)							
Subtotal	22,586	0.2	0.9	49.8	0.7	5,915	26.2
Public-sector entities and multi-lateral development banks as of 31.12.22							
0.00 to <0.15	438	0.0	< 0.1	51.5	0.9	45	10.2
0.15 to <0.25	97	0.2	< 0.1	37.6	1.3	20	20.6
0.25 to <0.50	1	0.4	< 0.1	88.3	1.5	1	82.0
0.50 to <0.75	0	0.6	< 0.1	35.0	1.0	0	39.4
0.75 to <2.50	0	1.9	< 0.1	5.0	1.0	0	8.9
2.50 to <10.00							
10.00 to <100.00							
100.00 (default)							
Subtotal	536	0.1	< 0.1	49.1	1.0	66	12.2
Public-sector entities and multi-lateral development banks as of 30.6.22							
0.00 to <0.15	507	0.0	< 0.1	53.0	1.1	56	11.0
0.15 to <0.25	93	0.2	< 0.1	46.5	1.2	24	26.2
0.25 to <0.50	0	0.4	< 0.1	100.0	1.0	0	81.4
0.50 to <0.75							
0.75 to <2.50	0	1.9	< 0.1	5.0	1.0	0	8.9
2.50 to <10.00							
10.00 to <100.00							
100.00 (default)							
Subtotal	600	0.0	< 0.1	52.0	1.1	81	13.4
Public-sector entities and multi-lateral development banks as of 31.12.21							
0.00 to <0.15	383	0.0	< 0.1	69.8	1.2	76	19.8
0.15 to <0.25	117	0.2	< 0.1	27.5	1.4	18	15.5
0.25 to <0.50	0	0.4	< 0.1	100.0	1.0	0	81.5
0.50 to <0.75							
0.75 to <2.50							
2.50 to <10.00	0	2.7	< 0.1	5.0	1.0	0	9.8
10.00 to <100.00							
100.00 (default)							
Subtotal	501	0.1	0.0	60.0	1.2	94	18.8

¹ Average maturity for defaulted exposures disclosed in the table is not used to calculate RWA. ² Includes exposures to managed funds. ³ From 30 June 2022 onward, the limit information for Lombard trading clients was refined, which resulted in a change in the distribution of the numbers of obligors by probability of default range. ⁴ Retail asset classes are excluded from the average maturity as they are not subject to maturity treatment.

CCR4: IRB – CCR exposures by portfolio and PD scale (continued)

<i>USD m, except where indicated</i>	EAD post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years ¹	RWA	RWA density in %
Corporates: including specialized lending as of 31.12.22²							
0.00 to <0.15	43,162	0.0	11.5	34.3	0.5	5,820	13.5
0.15 to <0.25	7,559	0.2	2.1	53.0	0.6	4,154	54.9
0.25 to <0.50	3,206	0.4	0.6	91.7	0.7	4,828	150.6
0.50 to <0.75	1,857	0.6	0.6	79.0	0.7	3,478	187.3
0.75 to <2.50	4,933	1.2	1.0	35.0	0.4	4,454	90.3
2.50 to <10.00	1,938	3.8	0.1	17.8	1.3	1,675	86.4
10.00 to <100.00							
100.00 (default)	6	100.0	< 0.1		2.5	6	106.0
Subtotal	62,660	0.3	15.8	40.4	0.5	24,416	39.0
Corporates: including specialized lending as of 30.6.22²							
0.00 to <0.15	48,067	0.0	12.5	34.2	0.5	6,514	13.6
0.15 to <0.25	10,276	0.2	2.1	53.6	0.6	5,976	58.2
0.25 to <0.50	3,173	0.4	0.6	85.2	0.7	4,450	140.3
0.50 to <0.75	2,363	0.6	0.6	68.9	0.5	4,114	174.1
0.75 to <2.50	5,689	1.3	1.1	28.4	0.5	4,085	71.8
2.50 to <10.00	2,284	4.1	0.1	19.5	1.5	2,234	97.8
10.00 to <100.00	2	13.4	< 0.1	63.3	1.0	14	755.8
100.00 (default)	10	100.0	< 0.1		2.4	10	106.0
Subtotal	71,864	0.3	17.1	39.5	0.6	27,398	38.1
Corporates: including specialized lending as of 31.12.21²							
0.00 to <0.15	48,743	0.0	11.5	33.8	0.5	6,173	12.7
0.15 to <0.25	7,935	0.2	2.1	54.1	0.6	4,574	57.6
0.25 to <0.50	3,337	0.4	0.7	86.1	0.7	4,767	142.9
0.50 to <0.75	2,799	0.6	0.7	44.4	0.5	3,006	107.4
0.75 to <2.50	7,748	1.2	1.2	23.4	0.4	4,781	61.7
2.50 to <10.00	1,655	2.9	0.2	17.7	0.5	1,372	82.9
10.00 to <100.00	0	13.0	< 0.1	50.0	1.0	0	424.9
100.00 (default)	20	100.0	< 0.1		2.4	20	102.6
Subtotal	72,236	0.3	16.2	37.3	0.5	24,693	34.2
Retail: other retail as of 31.12.22							
0.00 to <0.15	4,680	0.0	16.0	29.4		214	4.6
0.15 to <0.25	148	0.2	1.0	30.2		21	14.0
0.25 to <0.50	260	0.3	1.2	28.0		58	22.3
0.50 to <0.75	295	0.6	1.9	27.6		89	30.2
0.75 to <2.50	686	1.1	1.3	35.7		315	45.9
2.50 to <10.00	99	3.4	0.2	30.4		57	57.3
10.00 to <100.00	21	15.3	0.1	41.9		37	175.9
100.00 (default)							
Subtotal	6,189	0.3	21.8	30.0		791	12.8
Retail: other retail as of 30.6.22³							
0.00 to <0.15	5,658	0.0	17.7	28.7		253	4.5
0.15 to <0.25	290	0.2	1.0	27.5		35	12.0
0.25 to <0.50	364	0.4	1.2	39.0		106	29.0
0.50 to <0.75	185	0.6	0.7	28.0		55	29.6
0.75 to <2.50	495	1.1	1.0	28.2		192	38.9
2.50 to <10.00	108	3.2	0.2	32.5		66	60.9
10.00 to <100.00	11	21.7	< 0.1	21.3		7	60.7
100.00 (default)							
Subtotal	7,110	0.2	21.9	29.2		713	10.0
Retail: other retail as of 31.12.21							
0.00 to <0.15	5,534	0.0	12.8	28.3		253	4.6
0.15 to <0.25	126	0.2	0.1	24.9		13	10.5
0.25 to <0.50	168	0.3	0.2	35.2		45	27.0
0.50 to <0.75	123	0.6	0.1	30.0		51	41.4
0.75 to <2.50	684	1.0	8.3	29.0		262	38.3
2.50 to <10.00	52	3.1	< 0.1	28.9		25	49.2
10.00 to <100.00	9	13.9	< 0.1	31.9		7	74.6
100.00 (default)							
Subtotal	6,696	0.2	21.6	28.5		657	9.8
Total 31.12.22	106,060	0.2	38.7	43.0	0.6⁴	32,538	30.7
Total 30.6.22	112,146	0.3	40.0	41.3	0.6⁴	35,209	31.4
Total 31.12.21	112,644	0.2	39.0	39.5	0.5⁴	32,166	28.6

¹ Average maturity for defaulted exposures disclosed in the table is not used to calculate RWA. ² Includes exposures to managed funds. ³ From 30 June 2022 onward, the limit information for Lombard trading clients was refined, which resulted in a change in the distribution of the numbers of obligors by probability of default range. ⁴ Retail asset classes are excluded from the average maturity as they are not subject to maturity treatment.



Semi-annual | The CCR5 table below presents a breakdown of collateral posted or received relating to counterparty credit risk exposures from derivative transactions and SFTs.

Compared with 30 June 2022, the fair value of collateral received for derivatives decreased by USD 7.1bn to USD 78.3bn, and the fair value of collateral posted for derivatives decreased by USD 3.7bn to USD 59.5bn, primarily reflecting maturing transactions and market-driven movements.

The fair value of collateral received for SFTs increased by USD 2.0bn to USD 559.8bn, and the fair value of collateral posted for SFTs increased by USD 12.3bn to USD 431.5bn. The increase in collateral received mainly related to sovereign debt, primarily driven by a balance sheet increase in Group Treasury. The increase in posted collateral was mainly related to increases in sovereign debt and equity securities primarily in the Investment Bank, due to an increase in client activity.

CCR5: Composition of collateral for CCR exposure¹

USD m	Collateral used in derivative transactions						Collateral used in SFTs	
	Fair value of collateral received			Fair value of posted collateral			Fair value of collateral received	Fair value of posted collateral
	Segregated ²	Unsegregated	Total	Segregated ³	Unsegregated	Total		
31.12.22								
Cash – domestic currency ⁴	1,904	28,136	30,040	1,719	11,627	13,346	33,378	56,422
Cash – other currencies ⁴	0	20,408	20,408	4,895	16,856	21,750	13,950	32,551
Sovereign debt	9,446	9,500	18,947	5,243	9,294	14,537	219,698	153,964
Other debt securities	1,446	2,866	4,312	235	1,617	1,852	66,112	34,412
Equity securities	4,299	272	4,571	1,659	6,392	8,051	226,634	154,140
Total	17,096	61,181	78,277	13,751	45,786	59,537	559,773	431,488
30.6.22								
Cash – domestic currency ⁴	3,133	28,749	31,883	2,022	18,526	20,548	35,345	62,856
Cash – other currencies ⁴	0	24,222	24,222	6,124	17,081	23,205	13,788	25,848
Sovereign debt	6,900	11,566	18,466	2,620	9,865	12,485	210,988	147,333
Other debt securities	1,357	2,751	4,108	140	2,217	2,357	66,098	33,899
Equity securities	6,425	309	6,734	2,704	1,978	4,682	231,573	149,238
Total	17,815	67,598	85,413	13,609	49,668	63,276	557,792	419,174
31.12.21								
Cash – domestic currency ⁴	1,856	18,833	20,689	2,265	12,138	14,403	28,985	68,484
Cash – other currencies ⁴	0	21,755	21,755	3,051	13,167	16,218	11,330	30,603
Sovereign debt	6,943	9,579	16,522	7,435	8,214	15,649	249,209	166,892
Other debt securities	1,312	3,500	4,812	203	745	947	74,238	36,152
Equity securities	9,466	268	9,735	3,070	6,695	9,765	295,834	171,492
Total	19,578	53,935	73,513	16,023	40,959	56,982	659,595	473,623

¹ This table includes collateral received and posted with and without the right of rehypothecation, but excludes securities placed with central banks related to undrawn credit lines and for payment, clearing and settlement purposes for which there were no associated liabilities or contingent liabilities. ² Includes collateral received in derivative transactions, primarily initial margins, that is placed with a third-party custodian and to which UBS has access only in the event of counterparty default. ³ Includes collateral posted to central counterparties, where we apply a 0% risk weight for trades that we have entered into on behalf of a client and where the client has signed a legally enforceable agreement stipulating that the default risk of that central counterparty is carried by the client. Furthermore, it includes posted collateral, which is held in a segregated, bankruptcy-remote account and is therefore not considered in the determination of the net independent collateral amount. ⁴ Cash collateral received and posted for derivatives and SFTs are subject to netting recognized on the IFRS balance sheet.

Semi-annual | The CCR6 table below presents an overview of credit risk protection bought or sold through credit derivatives.

Compared with 30 June 2022, notionals for credit derivatives decreased by USD 13.4bn to USD 45.6bn for protection bought and by USD 10.9bn to USD 41.6bn for protection sold. This was primarily driven by single-name credit default swaps and index credit default swaps, mostly due to compression activity in Group Treasury, as well as lower trade volumes in the Investment Bank.

CCR6: Credit derivatives exposures

USD m	31.12.22		30.6.22		31.12.21	
	Protection bought	Protection sold	Protection bought	Protection sold	Protection bought	Protection sold
Notionals¹						
Single-name credit default swaps	20,257	22,545	25,060	27,314	24,167	26,431
Index credit default swaps	22,824	18,687	27,769	23,566	25,554	18,842
Total return swaps	794	413	1,821	626	2,354	623
Credit options	1,693	0	4,325	1,000	4,000	500
Total notionals	45,567	41,645	58,975	52,506	56,075	46,396
Fair values						
Positive fair value (asset)	568	482	1,724	379	488	937
Negative fair value (liability)	577	632	505	1,325	1,193	570

¹ Includes notional amounts for client-cleared transactions.

Counterparty credit risk risk-weighted assets

Quarterly | The CCR7 table below presents a flow statement explaining changes in counterparty credit risk RWA determined under the IMM for derivatives and the VaR approach for SFTs.

CCR RWA on derivatives under the IMM decreased by USD 2.1bn to USD 16.4bn during the fourth quarter of 2022. The RWA decrease of USD 3.1bn from asset size movements was primarily due to market-driven movements on foreign exchange contracts in the Investment Bank. These decreases were partly offset by an increase of USD 0.9bn related to currency effects.

CCR RWA on SFTs under the VaR approach remained unchanged at USD 9.4bn during the fourth quarter of 2022, as an increase from currency effects was offset by a decrease in asset size.

› Refer to "Definitions of credit risk and counterparty credit risk RWA movement table components for CR8 and CCR7" in the "Credit risk" section of this report for definitions of CCR RWA movement table components

CCR7: RWA flow statements of CCR exposures under internal model method (IMM) and value-at-risk (VaR)

USD m	For the quarter ended 31.12.22			For the quarter ended 30.9.22			For the quarter ended 30.6.22			For the quarter ended 31.3.22		
	Derivatives	SFTs	Total	Derivatives	SFTs	Total	Derivatives	SFTs	Total	Derivatives	SFTs	Total
	Subject to IMM	Subject to VaR		Subject to IMM	Subject to VaR		Subject to IMM	Subject to VaR		Subject to IMM	Subject to VaR	
1 RWA as of the beginning of the quarter	18,574	9,389	27,962	17,786	10,263	28,049	18,480	9,625	28,105	17,506	8,854	26,360
2 Asset size	(3,079)	(229)	(3,308)	989	(800)	190	(35)	(339)	(374)	1,049	828	1,877
3 Credit quality of counterparties	(44)	(13)	(56)	180	33	213	16	(95)	(79)	54	4	59
4 Model updates	50		50	360	61	421	87	980	1,067	14		14
5 Methodology and policy								294	294			
5a of which: regulatory add-ons								294	294			
6 Acquisitions and disposals												
7 Foreign exchange movements	936	275	1,211	(742)	(168)	(910)	(762)	(203)	(965)	(143)	(61)	(204)
8 Other												
9 RWA as of the end of the quarter	16,438	9,421	25,859	18,574	9,389	27,962	17,786	10,263	28,049	18,480	9,625	28,105

Semi-annual | The CCR8 table below presents a breakdown of exposures to central counterparties and related RWA. Compared with 30 June 2022, exposures to qualifying central counterparties decreased by USD 14.4bn to USD 53.9bn, primarily reflecting roll-offs of foreign currency and equity / index contracts, as well as market-driven movements in the Investment Bank.

CCR8: Exposures to central counterparties

USD m	31.12.22		30.6.22		31.12.21	
	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA
1 Exposures to QCCPs (total) ¹	53,936	1,374	68,346	1,568	63,590	1,667
2 Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which						
3 (i) OTC derivatives	31,367	554	32,778	552	31,939	499
4 (ii) Exchange-traded derivatives	6,053	116	2,291	42	2,209	41
5 (iii) Securities financing transactions	17,442	281	25,195	405	25,022	365
6 (iv) Netting sets where cross-product netting has been approved	7,872	157	5,292	106	4,708	94
7 Segregated initial margin						
8 Non-segregated initial margin ²	20,720	84	33,754	238	29,187	150
9 Pre-funded default fund contributions	1,849	737	1,813	778	2,464	1,017
10 Unfunded default fund contributions	0	0				
11 Exposures to non-QCCPs (total)	438	633	252	438	379	601
12 Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which						
13 (i) OTC derivatives	397	397	215	215	311	311
14 (ii) Exchange-traded derivatives						
15 (iii) Securities financing transactions						
16 (iv) Netting sets where cross-product netting has been approved						
17 Segregated initial margin						
18 Non-segregated initial margin ²	11	11	8	8	48	48
19 Pre-funded default fund contributions	16	49	15	51	8	104
20 Unfunded default fund contributions	14	176	13	164	11	138

¹ Qualifying central counterparties (QCCPs) are entities licensed by regulators to operate as CCPs and meet the requirements outlined in FINMA Circular 2017/7. ² Exposures associated with initial margin, where the exposures are measured under the IMM or the VaR approach, have been included within the exposures for trades (refer to line 2 for QCCPs and line 12 for non-QCCPs). The exposures for non-segregated initial margin (refer to line 8 for QCCPs and line 18 for non-QCCPs), i.e., not bankruptcy-remote in accordance with FINMA Circular 2017/7, reflect the replacement costs under SA-CCR multiplied by an alpha factor of 1.4. The RWA reflect the exposure multiplied by the applied risk weight of derivatives. Under SA-CCR, collateral posted to a segregated, bankruptcy-remote account does not increase the value of replacement costs.

Section 7 Comparison of A-IRB approach and standardized approach for credit risk

Background

Annual | In accordance with current prudential regulations, the Swiss Financial Market Supervisory Authority (FINMA) has approved our use of the advanced internal ratings-based (A-IRB) approach for calculating the required capital for the majority of our credit risk exposures.

The principal differences between the standardized approach (the SA) and the A-IRB approach identified below are based on the current SA rules without consideration of the material revisions announced by the Basel Committee on Banking Supervision (the BCBS) in December 2017.

We believe advanced approaches that adequately capture economic risks are paramount for the appropriate representation of the capital requirements related to risk-taking activities. Within a strong risk control framework, in combination with robust stress-testing practices, strict risk limits, as well as leverage and liquidity requirements, advanced approaches promote a proactive risk culture, setting the right incentives to prudently manage risks.

Refer to the “Introduction and basis for preparation” section of this report for information about FINMA-defined asset classes.

Key methodological differences between the A-IRB approach and current SA

In line with the BCBS objectives, the A-IRB approach aims to balance the maintaining of prudent levels of capital while encouraging, where appropriate, the use of advanced risk management techniques. By design, the calibration of the current SA and the A-IRB approach is such that low-risk, short-maturity, well-collateralized portfolios across the various asset classes (with the exception of Central governments and central banks) receive lower risk weights under the A-IRB than under the current SA rules. Accordingly, risk-weighted assets (RWA) and capital requirements under the current SA would be substantially higher than under the A-IRB approach for lower-risk portfolios. Conversely, RWA for higher-risk portfolios are higher under the A-IRB approach than under the current SA.

Methodological differences primarily arise due to the measurement of exposure at default (EAD) and the risk weights applied. In both cases, the treatment of risk mitigation, such as collateral, can have a significant effect.

EAD measurement

For the measurement of EAD, the main methodological differences relate to derivatives, driven by the differences between the internal model method (IMM) and the regulatory-prescribed standardized approach for counterparty credit risk (SA-CCR).

The model-based approaches to derive estimates of EAD for derivatives and securities financing transactions (SFTs) reflect the detailed characteristics of individual transactions. They model the range of possible exposure outcomes across all transactions within the same legally enforceable netting set at various future time points. The modeling assesses the net amount that may be owed to us or that we may owe to others, taking into account the effect of correlated market moves over the potential time it may take to close out a position. The calculation considers current market conditions and is therefore sensitive to deteriorations in the market environment.

In contrast, EAD under the regulatory-prescribed rules is calculated as replacement costs at the balance sheet date plus regulatory add-ons, which take into account potential future market movements but at predetermined fixed rates, not sensitive to changes in market conditions. These add-ons are crudely differentiated by reference to only five product types and three maturity buckets. Moreover, the current regulatory-prescribed rules-based calculation gives very limited recognition to the benefits of diversification across transactions covered under the same legally enforceable netting agreement. As a result, large, diversified portfolios, such as those arising from our activities with other market-making banks, will generate much higher EAD under the current regulatory-prescribed rules than under our internal model-based approaches.

Risk weights

Under the A-IRB approach, risk weights are assigned according to the firm’s internal credit assessment of the counterparty to determine the probability of default (PD) and loss given default (LGD).

PD is an estimate of the likelihood of a counterparty defaulting on its contractual obligations over the next 12 months. It is assessed using rating tools tailored to the various categories of counterparties. Statistically developed scorecards, based on key attributes of the obligor, are used to determine PD for many of our corporate clients and for loans secured by real estate. Where available, market data may also be used to derive the PD for large corporate counterparties. For low-default portfolios, we take into account, where available, relevant external default data in the rating tool development. For Lombard loans, Merton-type historical return-based model simulations taking into account potential changes in the value of securities collateral are used in our rating approach. PD is not only an integral part of the credit risk measurement, but also an important input for determining the level of credit approval required for any given transaction. Moreover, for the purpose of capital underpinning, the majority of counterparty PDs are subject to a floor.

LGD is the magnitude of the likely loss if there is a default. The calculation takes into account the loss of principal, interest and other amounts, such as workout costs, including the cost of carrying an impaired position during the workout process, less recovered amounts. Importantly, LGD considers the likely recovery rate of claims against defaulted counterparties, which depends on the type of counterparty and any credit mitigation by way of collateral or guarantees, with our estimates being supported by our internal historical loss data and external information where available.

The combination of PD and LGD determined at the counterparty level results in a highly granular level of differentiation of the economic risk from different borrowers and transactions.

In contrast, SA risk weights are largely reliant on external rating agencies' assessments of the credit quality of the counterparty, with a 100% risk weight typically being applied where no external rating is available. Even where external ratings are available, there is only a coarse granularity of risk weights, with only four primary risk weights used for differentiating counterparties, with the addition of a 0% risk weight for AA- or better rated central governments and central banks. Risk weights of 35%, 75% and 100% are used for mortgages not in default, and risk weights of 75% and 100% are used for retail exposures not in default.

The SA does not differentiate across transaction maturities except for exposures to banks, albeit in a very simplistic manner considering transactions only shorter or longer than three months. This has clear limitations: for example, the economic risk of a six-month loan to a BB-rated US corporation is significantly different to that of a 10-year loan to the same borrower. This difference is evident from the distinction of PD levels based on ratings assigned by external rating agencies through their separate ratings for short-term and long-term debt for a given issuer.

The SA typically assigns lower risk weights to sub-investment grade counterparties than the A-IRB approach, thereby potentially understating the economic risk. Conversely, investment grade counterparties typically receive higher risk weights under the SA than under the A-IRB approach.

Maturity is also an important factor for all asset classes except Retail, with the A-IRB approach producing a higher capital requirement for longer-maturity exposures than for shorter-maturity exposures.

Additionally, under the A-IRB approach, we calculate expected loss measures that are deducted from common equity tier 1 (CET1) capital to the extent that they exceed eligible provisions, which is not the case under the SA.

Given the divergence between the SA and the economic risk, which is better represented under the A-IRB approach, particularly for lower-grade counterparties, there is a risk that applying the SA could incentivize higher levels of risk-taking without a commensurate increase in required capital.

Comparison of the A-IRB approach EAD and leverage ratio denominator by asset class

The leverage ratio denominator (the LRD) estimates presented in the table below reflect the credit risk and counterparty credit risk components of exposures only, and are therefore not representative of the LRD requirement at UBS level overall. The LRD estimates exclude exposures subject to market risk, non-counterparty-related risk and SA credit risk to provide a like-for-like comparison with the A-IRB credit risk EAD disclosed below.

Comparison of A-IRB approach EAD and leverage ratio denominator by asset class

31.12.22 <i>in USD bn, except where indicated</i>	A-IRB, credit and counterparty credit risk			LRD
	Net EAD	Average RW %	RWA	
Central governments and central banks	232	2	4	236
Multi-lateral development banks	5	1	0	5
Public-sector entities	4	19	1	5
Banks and securities dealers	34	38	13	138
Corporates	153	49	76	224
Retail	387	15	60	321
<i>of which: Residential mortgages</i>	<i>175</i>	<i>22</i>	<i>38</i>	<i>173</i>
<i>of which: Lombard lending</i>	<i>207</i>	<i>10</i>	<i>20</i>	<i>146</i>
Total	814	19	154	930

Comparison of the A-IRB approach, the SA and LRD by asset class

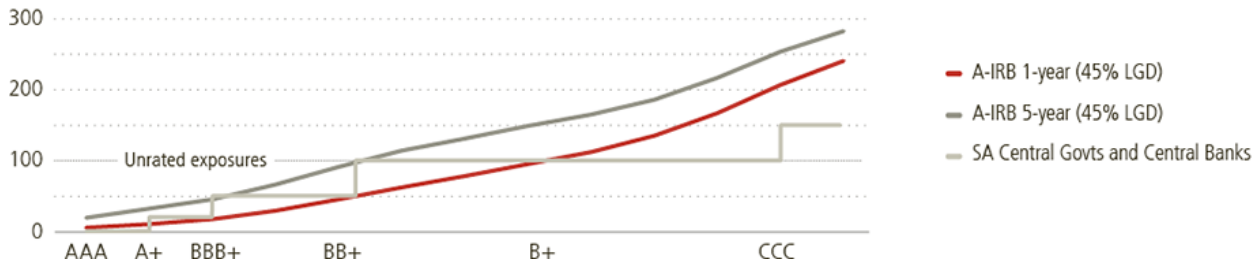
The differences between the A-IRB approach, the SA and the LRD per asset class are discussed below.

Central governments and central banks, Public-sector entities, and Multi-lateral development banks

The regulatory net EAD for Central governments and central banks, Public-sector entities, and Multi-lateral development banks as of 31 December 2022 was USD 241bn under the A-IRB approach. Since the vast majority of our exposure is driven by exposures to banking products, the LRD is broadly in line with the A-IRB net EAD and we would expect a similar amount under the SA.

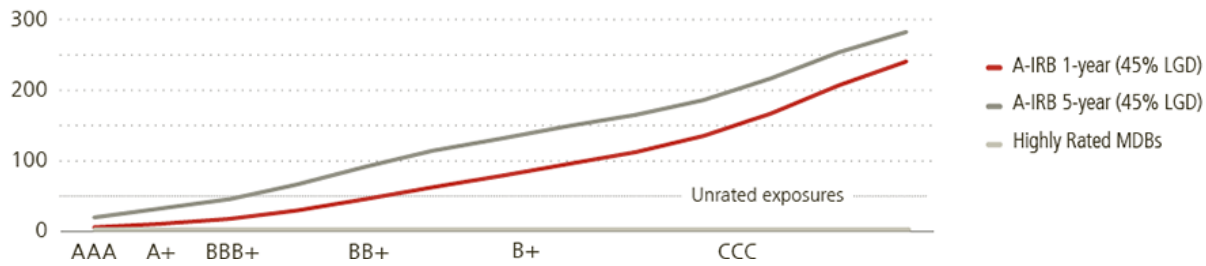
The charts below provide comparisons of risk weights for exposures to the asset class Central governments and central banks and the sub-asset classes (i) highly rated Multi-lateral development banks and (ii) other Multi-lateral development banks and Public-sector entities calculated under the A-IRB approach and the SA. Risk weights under the A-IRB approach are shown for one-year and five-year maturities, both assuming an LGD of 45%. Our internal A-IRB ratings have been mapped to external ratings based on the long-term average of one-year default rates available from the major credit rating agencies, as described under "Credit risk models" in the "Risk management and control" section of our Annual Report 2022.

Comparison of risk weights – Central governments and central banks



The SA assigns a zero risk weight to central governments and central banks rated AA– and better, as well as to highly rated Multi-lateral development bank counterparties, while the A-IRB approach generally assigns risk weights higher than zero to even the highest-quality sovereign counterparties.

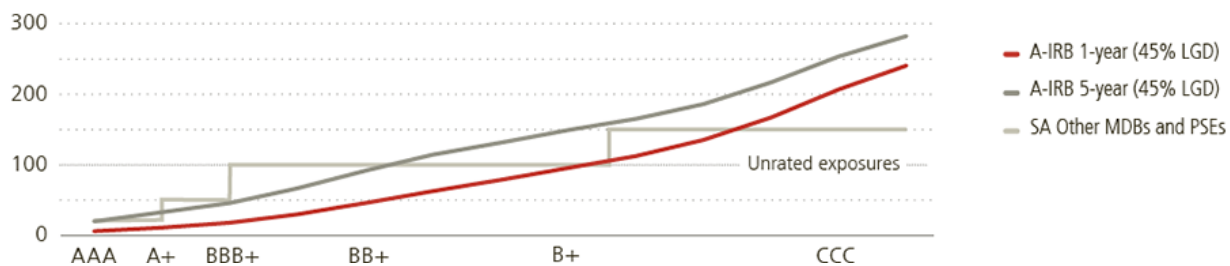
Comparison of risk weights – Highly rated Multi-lateral development banks



For other Multi-lateral development bank and Public-sector entity counterparties rated AA– and better, the risk weight applied under the SA is 20%.

However, because this asset class is not a significant driver of RWA, we would expect any resulting RWA difference between the A-IRB approach and the SA to be relatively small.

Comparison of risk weights – Other Multi-lateral development banks and Public-sector entities

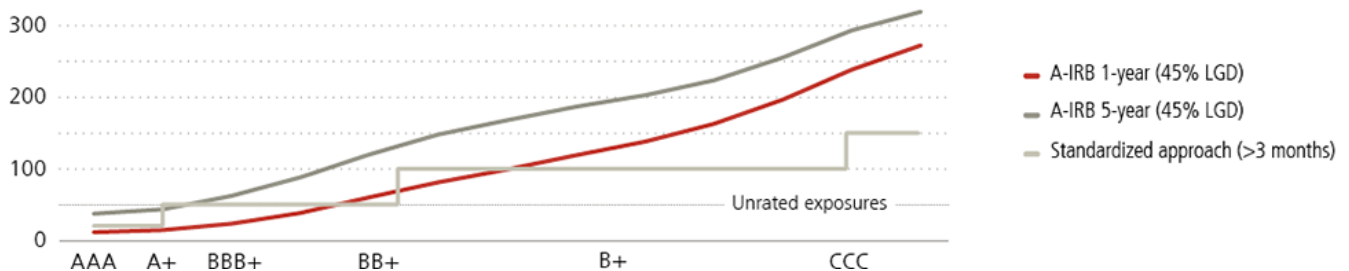


Banks and securities dealers

The regulatory net EAD for the asset class Banks and securities dealers as of 31 December 2022 was USD 34bn under the A-IRB approach. The A-IRB net EAD is lower than the LRD, mainly due to collateral mitigation on derivatives and SFTs. We would expect the net EAD to increase under the SA, related to derivatives and SFTs within the Investment Bank, due to the aforementioned methodological differences between the calculation of EAD under the two approaches.

The chart below provides a comparison of risk weights for Banks and securities dealers exposures calculated under the A-IRB approach and the SA.

Comparison of risk weights – Banks and securities dealers



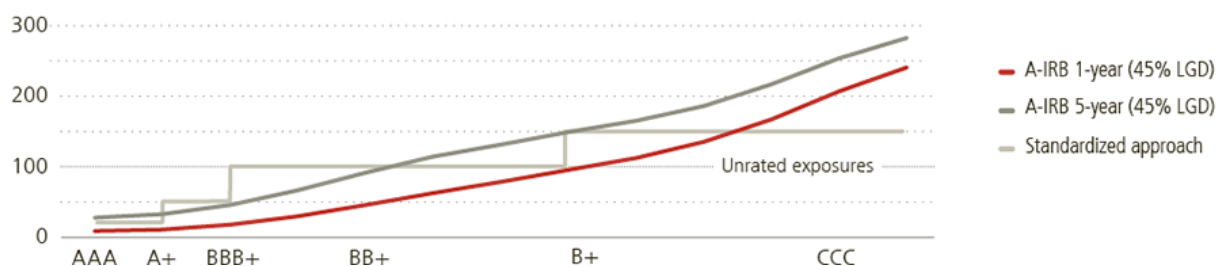
The vast majority of our exposure with Banks and securities dealers is of investment-grade quality. The average contractual maturity of this exposure is closer to the one-year example provided in the chart above. Therefore, we would expect a higher average risk weight under the SA than the 38% average risk weight under the A-IRB approach. In combination with higher EAD, we would expect this to lead to significantly higher RWA for Banks and securities dealers under the SA.

Corporates

The regulatory net EAD for the Corporates asset class as of 31 December 2022 was USD 153bn under the A-IRB approach. The A-IRB net EAD is lower than the LRD, mainly due to collateral mitigation on derivatives and SFTs. We would expect the EAD to be higher under the SA related to derivatives and SFTs, due to the aforementioned methodological differences between the calculation of EAD under the two approaches. Derivatives and SFTs account for 41% of the EAD for this asset class as of 31 December 2022.

The following chart provides a comparison of risk weights for Corporates exposures calculated under the A-IRB approach and the SA. These exposures primarily arise from corporate lending and derivatives trading within the Investment Bank, and lending to large corporate clients and small and medium-sized entities in Switzerland. The comparison does not include the FINMA-required multiplier applied to the Investment Bank's Corporates exposures under the A-IRB approach.

Comparison of risk weights – Corporates



Investment-grade counterparties typically receive higher risk weights under the SA than under the A-IRB approach. The majority of our Corporates exposures fall into this category. We would therefore expect risk weights for Corporates to be generally higher under the SA.

In addition, SA risk weights rely on external ratings, with a default weighting of 100% being applied where no external rating is available. Typically, counterparties with no external rating are riskier and thus have higher risk weights under the A-IRB approach. However, managed funds, which account for nearly one-third of our Corporates EAD, typically have no debt and are therefore unrated. The SA applies a 100% risk weight to exposures to such funds. Under A-IRB, these funds are considered very low risk and as of 31 December 2022 had an average risk weight of 17%. We believe the SA significantly overstates the associated risk.

Conversely, for certain exposures we consider the risk weight of 100% under the SA resulting from the absence of an external rating as insufficient, as is evident from the hypothetical leveraged finance counterparty example in the table below.

Comparison of risk weights as a function of internal rating assessment

The table assumes two counterparties without external rating assignments.

	Interest payment coverage (EBITDA / total interest payments)	Total debt / EBITDA	Debt / assets	Liquidity (fraction of assets that are liquid)	Internal rating assessment	Exposure maturity	A-IRB risk weight range	SA risk weight
Managed funds	NA	NA	0	100%	AAA-AA	< 1Y	10–20%	100%
Leveraged finance counterparty	< 2	> 2.5	> 50%	0%	BB-C	> 5Y	100–600%	100%

Retail

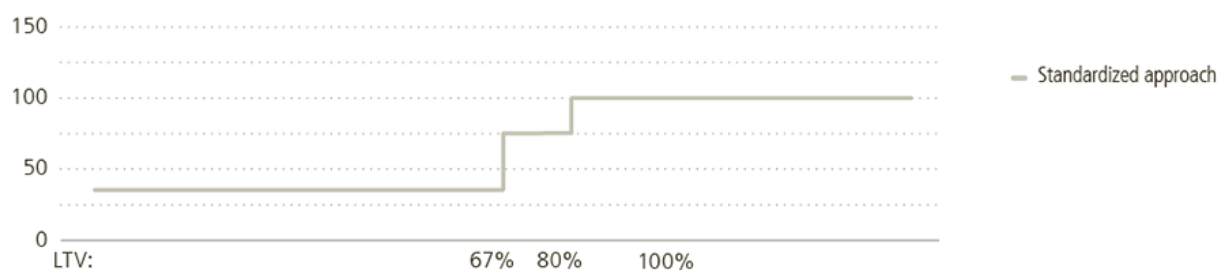
Residential mortgages

The regulatory net EAD for the sub-asset class Residential mortgages as of 31 December 2022 was USD 175bn under the A-IRB approach. Since the vast majority of our exposures is driven by banking products, the LRD is broadly in line with the A-IRB net EAD and we would expect a similar amount under the SA.

Due to the size of our personal and corporate banking business in Switzerland, our domestic portfolios represent a significant portion of our overall lending exposures, with the largest being loans secured by residential properties. Our internal models assign risk weights to such loans by considering the debt service capacity of borrowers and the availability of other collateral, among other factors. These are important considerations for the Swiss market, where there is legal recourse to the borrower.

In contrast, and different to the assignment of risk weights for the aforementioned asset classes, the SA is less complex and only differentiates the risk weights based on loan-to-value (LTV) ranges, as shown in the chart below.

SA risk weights – Residential mortgages



The vast majority of our exposures would attract the minimum 35% risk weight under the SA, compared with an average of 22% as of 31 December 2022 observed under the A-IRB approach.

The difference is largely due to the current SA rules not providing any benefit to the portion of exposures with an LTV below 67%. The vast majority of exposures fall within this category, as shown in the “Swiss mortgages: distribution of net exposure at default (EAD) across exposure segments and loan-to-value (LTV) buckets” table in the “Risk management and control” section of our Annual Report 2022, available under “Annual reporting” at ubs.com/investors.

Lombard lending

The regulatory net EAD for the Lombard loans sub-asset class as of 31 December 2022 was USD 207bn under the A-IRB approach, and mainly arises in our wealth management business.

Eligible collateral is more limited under the SA than under the A-IRB approach. However, the haircuts applied to collateral under the A-IRB approach are generally greater than those prescribed under the SA. Given this, we would expect the overall effect of applying current SA rules to be limited for this portfolio. ▲

Section 8 Securitizations

SECA: Introduction

Annual I This section provides details of traditional and synthetic securitization exposures in the banking and trading book based on the Basel III securitization framework.

In a traditional securitization, a pool of loans (or other debt obligations) is transferred to structured entities that have been established to own the loan pool and to issue tranching securities to third-party investors referencing this pool of loans. In a synthetic securitization, legal ownership of securitized pools of assets is typically retained but associated credit risk is transferred to structured entities, commonly through guarantees, credit derivatives or credit-linked notes. Hybrid structures with a mix of traditional and synthetic features are disclosed as synthetic securitizations.

We act in different roles in securitization transactions. As originator, we create or purchase financial assets, which are then securitized in traditional or synthetic securitization transactions, enabling us to transfer significant risk to third-party investors. As sponsor, we manage, provide financing for or advise on securitization programs. In line with the Basel III framework, sponsoring includes underwriting activities. In all other cases we act as an investor, by taking securitization positions.

SECA: Objectives, roles and involvement

Securitization in the banking book

Securitization positions held in the banking book include legacy risk positions in Non-core and Legacy Portfolio within Group Functions. In 2022, for the majority of securitization carrying amounts on the balance sheet we acted as an originator or investor. Securitization and re-securitization positions in the banking book are measured at fair value, reflecting market prices where available, or based on our internal pricing models.

Securitization in the trading book

Securitizations held in the trading book are part of trading activities, including market-making and client facilitation, that could result in retention of certain securitization positions as an investor, including those we may have originated or sponsored. In the trading book, securitization and re-securitization positions are measured at fair value, reflecting market prices where available, or based on our internal pricing models.

Type of structured entities and affiliated entities involved in securitization transactions

For securitization transactions, the type of structured entities or special purpose vehicles employed is selected as appropriate based on the type of transaction undertaken. Examples include limited liability companies, common law trusts and depositor entities.

Refer to “Note 28 Interests in subsidiaries and other entities” of our Annual Report 2022, available under “Annual reporting” at ubs.com/investors, for further information about interests in structured entities.

Managing and monitoring of the credit and market risk of securitization positions

The banking book securitization and re-securitization portfolio is subject to specific risk monitoring, which may include interest rate and credit spread sensitivity analysis, as well as inclusion in firm-wide earnings-at-risk, capital-at-risk and combined stress test metrics.

The trading book securitization positions are also subject to multiple risk limits, such as management value-at-risk (VaR) and stress limits, as well as market value limits. As part of managing risks within predefined risk limits, traders may utilize hedging and risk mitigation strategies. Hedging may, however, expose us to basis risks, as the hedging instrument and the position being hedged may not always move in parallel. Such basis risks are managed within the overall limits. Any retained securitization from origination activities and any purchased securitization positions are governed by risk limits together with any other trading positions. Legacy trading book securitization exposure is subject to the same management VaR limit framework. Additionally, risk limits are used to control the unwinding, novation and asset sales process on an ongoing basis.

Accounting policies

Refer to “Consolidation” in “Note 1 Summary of material accounting policies” in the “Consolidated financial statements” section of our Annual Report 2022, available under “Annual reporting” at ubs.com/investors, for information about accounting policies that relate to securitization activities.

Regulatory capital treatment of securitization exposures

In line with the revised securitization framework for banking book securitization exposures, we apply the following approaches to calculate the associated risk-weighted assets (RWA):

- we use external ratings (the external ratings-based approach (SEC-ERBA)), if available, from S&P, Moody’s Investors Service and Fitch Ratings for securitization exposures, provided that we are able to demonstrate our expertise in both critically challenging and reviewing the external ratings; or
- if we cannot apply the ERBA method, we apply the standardized approach (SEC-SA) where the delinquency status of a significant portion of the underlying exposure can be determined, or a risk weight of 1,250%. Re-securitization positions are either treated under the standardized approach or risk-weighted 1,250%;
- we do not use the internal assessment approach (IAA).

The selection of the external credit assessment institutions (ECAIs) is based on the primary rating agency concept. This concept is applied, in principle, to avoid having the credit assessment by one ECAI applied to one or more tranches and by another ECAI to the other tranches, unless this is the result of the application of the specific rules for multiple assessments. If any two of the aforementioned rating agencies have issued a rating for a particular exposure, we apply the lower of the two credit ratings. If all three rating agencies have issued a rating for a particular exposure, we apply the middle of the three credit ratings. ▲

Securitization exposures in the banking and trading book

Semi-annual | The “Securitization exposures in the banking and trading book and associated regulatory capital requirements” table below outlines the carrying values in the banking and trading books as of 31 December 2022, 30 June 2022 and 31 December 2021. For synthetic securitization transactions, the amounts disclosed reflect the net exposure amounts of the securitized exposures. The table also shows the RWA from securitization and the capital charge after application of the revised securitization framework caps. The semi-annual securitization disclosures (SEC 1–SEC 4) have been condensed into the aforementioned form based on materiality.

- › Refer to our **31 December 2020 Pillar 3 Report**, available under “Pillar 3 disclosures” at ubs.com/investors, for more information on the condensed semi-annual securitization disclosures

Development of securitization exposures in the second half of 2022

Compared with 30 June 2022, securitization exposures in the banking book increased by USD 0.5bn, primarily due to a wholesale investment where UBS acts as an investor. The securitization exposures in the trading book were broadly unchanged. ▲

Securitization exposures in the banking and trading book and associated regulatory capital requirements

USD m	Carrying value / EAD	RWA	Total Capital Charge after cap
31.12.22			
Asset Classes – Banking Book¹			
Retail	2	22	2
Wholesale	1,424	249	20
Re-securitization	0	0	0
Total Banking Book	1,425	271	22
<i>of which: UBS acts as investor</i>	<i>1,425</i>	<i>271</i>	<i>22</i>
<i>of which: UBS acts as originator and / or sponsor</i>	<i>0</i>	<i>0</i>	<i>0</i>
Asset Classes – Trading Book			
Retail	8	89	7
Wholesale	313	299	24
Re-securitization	6	75	6
Total Trading Book	328	463	37
Total	1,753	734	59
30.6.22			
Asset Classes – Banking Book¹			
Retail	2	20	2
Wholesale	941	189	15
Re-securitization	0	0	0
Total Banking Book	943	209	17
<i>of which: UBS acts as investor</i>	<i>943</i>	<i>209</i>	<i>17</i>
<i>of which: UBS acts as originator and / or sponsor</i>	<i>0</i>	<i>0</i>	<i>0</i>
Asset Classes – Trading Book			
Retail	24	108	9
Wholesale	333	423	34
Re-securitization	7	84	7
Total Trading Book	364	615	49
Total	1,307	824	66
31.12.21			
Asset Classes – Banking Book¹			
Retail	36	256	20
Wholesale	686	119	10
Re-securitization	0	0	0
Total Banking Book	723	375	30
<i>of which: UBS acts as investor</i>	<i>688</i>	<i>141</i>	<i>11</i>
<i>of which: UBS acts as originator and / or sponsor</i>	<i>35</i>	<i>234</i>	<i>19</i>
Asset Classes – Trading Book			
Retail	56	113	9
Wholesale	476	447	36
Re-securitization	8	92	7
Total Trading Book	540	652	52
Total	1,263	1,027	82

¹ Of the securitization exposures in the banking book, 99.8% carried a risk weighting of up to 100% as of 31 December 2022 (30 June 2022: 99.6%; 31 December 2021: 95.0%).



Section 9 Market risk

Overview

Semi-annual | The amount of capital required to underpin market risk in the regulatory trading book is calculated using a variety of methods approved by the Swiss Financial Market Supervisory Authority (FINMA). The components contributing to market risk risk-weighted assets (RWA) are value-at-risk (VaR), stressed value-at-risk (SVaR), an add-on for risks that are potentially not fully modeled in VaR (risks not in VaR, or RniV), the incremental risk charge (the IRC) and the securitization framework for securitization positions in the trading book. More information about each of these components is provided below. ▲

Annual | The table below presents an overview of Pillar 3 disclosures separately provided in our Annual Report 2022, available under "Annual reporting" at ubs.com/investors.

MRA: Market risk

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Strategies and processes of the bank for market risk	Risk management and control	– Risk appetite framework	89–91
		– Market risk – Overview of measurement, monitoring and management techniques	111–112
		– Market risk stress loss, Value-at-risk	112–115
	Consolidated financial statements	– Note 10 Derivative instruments	291–293
Structure and organization of the market risk management function	Risk management and control	– Key risks by business division and Group Functions	84
		– Risk governance	87–89
Scope and nature of risk reporting and measurement systems	Risk management and control	– Internal risk reporting – Main sources of market risk, Overview of measurement, monitoring and management techniques	92111–112

Market risk risk-weighted assets

Market risk RWA development in the fourth quarter of 2022

Quarterly | The three main components that contribute to market risk RWA are VaR, SVaR and IRC. The VaR and SVaR components include the RWA charge for RniV.

The MR2 table below provides a breakdown of the movement in market risk RWA in the fourth quarter of 2022 under an internal models approach across those components, pursuant to the movement categories defined by the Basel Committee on Banking Supervision. These categories are described below. ▲

Definitions of market risk RWA movement table components for MR2

References in the table below link to the line numbers provided in the movement table below.

Reference	Description	Definition
1/8c	RWA as of previous and current reporting period end (end of period)	Quarter-end RWA.
1a/8b	Regulatory adjustment	Indicates the difference between rows 1 and 1b, and 8c and 8a, respectively.
1b/8a	RWA at previous and current quarter-end (end of day)	For a given component (e.g., VaR), this refers to the RWA computed whenever that component's snapshot quarter-end figure is higher than the 60-day average for regulatory VaR, and the 12-week average for SVaR and IRC, thus determining the quarter-end RWA. The regulatory adjustment would be zero if the quarter-end RWA were triggered by the snapshot quarter-end figure.
Movement of end-of-day RWA		
2	Movement in risk levels	Movements due to changes in positions and risk levels.
3	Model updates / changes	Movements due to routine updates to model parameters and model changes.
4	Methodology and policy	Movements due to methodological changes in calculations driven by regulatory policy changes, including revisions of existing regulations, new regulations and add-ons mandated by the regulator.
5	Acquisitions and disposals	Movements due to the disposal or acquisition of business operations, quantified based on the market risk exposures at the end of the quarter preceding a disposal or following an acquisition. Purchases and sales of exposures in the ordinary course of business are reflected in "Movement in risk levels."
6	Foreign exchange movements	Movements due to changes in exchange rates. Note that the effect of movements in exchange rates is captured in "Movement in risk levels," since exchange rate movements are part of the effects of market movements on risk levels.
7	Other	Movements due to changes that cannot be attributed to any other category.

RWA flow

Quarterly | Market risk RWA under an internal models approach increased by USD 1.0bn to USD 13.0bn in the fourth quarter of 2022, driven by an increase in regulatory add-ons, reflecting updates from the monthly RNIV assessment. An RWA decrease, driven by a VaR model change that went live in the fourth quarter of 2022, was offset by an RWA increase arising from the introduction of a FINMA-agreed temporary measure to offset the aforementioned decrease in VaR-model-change-related RWA. 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.

The VaR multiplier was unchanged compared with the prior quarter, at 3.0.

MR2: RWA flow statements of market risk exposures under an IMA¹

<i>USD m</i>	VaR	Stressed VaR	IRC	CRM	Other	Total RWA
1 RWA as of 31.12.21	2,872	5,883	1,673			10,428
1a <i>Regulatory adjustment</i>	<i>(2,368)</i>	<i>(4,916)</i>	<i>(284)</i>			<i>(7,567)</i>
1b RWA at previous quarter-end (end of day)	504	968	1,389			2,860
2 <i>Movement in risk levels</i>	<i>1,996</i>	<i>2,028</i>	<i>180</i>			<i>4,204</i>
3 <i>Model updates / changes</i>	<i>(161)</i>	<i>36</i>	<i>0</i>			<i>(125)</i>
4 <i>Methodology and policy</i>	<i>0</i>	<i>0</i>	<i>0</i>			<i>0</i>
5 <i>Acquisitions and disposals</i>	<i>0</i>	<i>0</i>	<i>0</i>			<i>0</i>
6 <i>Foreign exchange movements</i>	<i>0</i>	<i>0</i>	<i>0</i>			<i>0</i>
7 <i>Other</i>	<i>39</i>	<i>87</i>	<i>0</i>			<i>126</i>
8a RWA at the end of the reporting period (end of day)	2,379	3,118	1,569			7,065
8b <i>Regulatory adjustment</i>	<i>1,985</i>	<i>4,227</i>	<i>66</i>			<i>6,279</i>
8c RWA as of 31.3.22	4,364	7,345	1,635			13,344
1 RWA as of 31.3.22	4,364	7,345	1,635			13,344
1a <i>Regulatory adjustment</i>	<i>(1,985)</i>	<i>(4,227)</i>	<i>(66)</i>			<i>(6,279)</i>
1b RWA at previous quarter-end (end of day)	2,379	3,118	1,569			7,065
2 <i>Movement in risk levels</i>	<i>(1,002)</i>	<i>(426)</i>	<i>140</i>			<i>(1,288)</i>
3 <i>Model updates / changes</i>	<i>5</i>	<i>(41)</i>	<i>0</i>			<i>(36)</i>
4 <i>Methodology and policy</i>	<i>0</i>	<i>0</i>	<i>0</i>			<i>0</i>
5 <i>Acquisitions and disposals</i>	<i>0</i>	<i>0</i>	<i>0</i>			<i>0</i>
6 <i>Foreign exchange movements</i>	<i>0</i>	<i>0</i>	<i>0</i>			<i>0</i>
7 <i>Other</i>	<i>82</i>	<i>176</i>	<i>0</i>			<i>258</i>
8a RWA at the end of the reporting period (end of day)	1,464	2,827	1,709			5,999
8b <i>Regulatory adjustment</i>	<i>3,493</i>	<i>5,404</i>	<i>0</i>			<i>8,897</i>
8c RWA as of 30.6.22	4,956	8,231	1,709			14,896
1 RWA as of 30.6.22	4,956	8,231	1,709			14,896
1a <i>Regulatory adjustment</i>	<i>(3,493)</i>	<i>(5,404)</i>	<i>0</i>			<i>(8,897)</i>
1b RWA at previous quarter-end (end of day)	1,464	2,827	1,709			5,999
2 <i>Movement in risk levels</i>	<i>1,531</i>	<i>1,403</i>	<i>(35)</i>			<i>2,899</i>
3 <i>Model updates / changes</i>	<i>25</i>	<i>15</i>	<i>0</i>			<i>40</i>
4 <i>Methodology and policy</i>	<i>0</i>	<i>0</i>	<i>0</i>			<i>0</i>
5 <i>Acquisitions and disposals</i>	<i>0</i>	<i>0</i>	<i>0</i>			<i>0</i>
6 <i>Foreign exchange movements</i>	<i>0</i>	<i>0</i>	<i>0</i>			<i>0</i>
7 <i>Other</i>	<i>58</i>	<i>206</i>	<i>0</i>			<i>264</i>
8a RWA at the end of the reporting period (end of day)	3,078	4,450	1,674			9,202
8b <i>Regulatory adjustment</i>	<i>406</i>	<i>2,453</i>	<i>0</i>			<i>2,859</i>
8c RWA as of 30.9.22	3,484	6,903	1,674			12,061
1 RWA as of 30.9.22	3,484	6,903	1,674			12,061
1a <i>Regulatory adjustment</i>	<i>(406)</i>	<i>(2,453)</i>	<i>0</i>			<i>(2,859)</i>
1b RWA at previous quarter-end (end of day)	3,078	4,450	1,674			9,202
2 <i>Movement in risk levels</i>	<i>(725)</i>	<i>(800)</i>	<i>458</i>			<i>(1,067)</i>
3 <i>Model updates / changes</i>	<i>(100)</i>	<i>(633)</i>	<i>0</i>			<i>(733)</i>
4 <i>Methodology and policy</i>	<i>64</i>	<i>217</i>	<i>0</i>			<i>281</i>
5 <i>Acquisitions and disposals</i>	<i>0</i>	<i>0</i>	<i>0</i>			<i>0</i>
6 <i>Foreign exchange movements</i>	<i>0</i>	<i>0</i>	<i>0</i>			<i>0</i>
7 <i>Other</i>	<i>18</i>	<i>57</i>	<i>0</i>			<i>75</i>
8a RWA at the end of the reporting period (end of day)	2,335	3,291	2,132			7,758
8b <i>Regulatory adjustment</i>	<i>1,298</i>	<i>3,960</i>	<i>0</i>			<i>5,257</i>
8c RWA as of 31.12.22	3,633	7,251	2,132			13,015

¹ Components that describe movements in RWA are presented in italics.



Securitization positions in the trading book

Semi-annual I Our exposure to securitization positions in the trading book includes exposures arising from secondary trading in commercial mortgage-backed securities in the Investment Bank, and limited positions in the Non-core and Legacy Portfolio within Group Functions that we continue to wind down.

Securitization exposures in the trading book is the only relevant disclosure component of market risk under the standardized approach. Securitization exposures subject to market risk RWA decreased by USD 36m to USD 328m as of 31 December 2022. ▲

› Refer to the “Securitized” section of this report for more information about the securitization exposures in the trading book

Annual I The table below presents an overview of Pillar 3 disclosures separately provided in our Annual Report 2022, available under “Annual reporting” at ubs.com/investors.

MRB: Internal models approach

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Description of activities and risks covered by the VaR models and stressed VaR models	Risk management and control	<ul style="list-style-type: none"> – Value-at-risk – Main sources of market risk 	112–115 111
VaR models applied by different entities within the Group	Risk management and control	<ul style="list-style-type: none"> – Main sources of market risk – Value-at-risk 	111 112–115
General description of VaR and stressed VaR models	Risk management and control	<ul style="list-style-type: none"> – Value-at-risk 	112–115
Main differences between the VaR and stressed VaR models used for management purposes and for regulatory purposes	Risk management and control	<ul style="list-style-type: none"> – Value-at-risk 	112–115
Further information on VaR models	Risk management and control	<ul style="list-style-type: none"> – Value-at-risk – Market risk stress loss – Market risk – Overview of measurement, monitoring and management techniques 	112–115 112 111–112
	Consolidated financial statements	<ul style="list-style-type: none"> – Note 20 Fair value measurement 	316–329
Description of stress testing applied to modeling parameters	Consolidated financial statements	<ul style="list-style-type: none"> – Note 20 Fair value measurement 	316–329
Description of backtesting approach	Risk management and control	<ul style="list-style-type: none"> – Backtesting of VaR 	114–115
		<ul style="list-style-type: none"> – VaR model confirmation 	115



Regulatory calculation of market risk

Semi-annual | The MR3 table below shows minimum, maximum, average and period-end regulatory VaR, SVaR, the incremental risk charge (IRC) and the comprehensive risk capital charge. Since the second quarter of 2019, we have not held eligible correlation trading positions.

During the second half of 2022, 10-day 99% regulatory VaR and SVaR decreased, driven mainly by a VaR model change in October 2022.

MR3: IMA values for trading portfolios

		For the six-month period ended 31.12.22	For the six-month period ended 30.6.22	For the six-month period ended 31.12.21
<i>USD m</i>				
VaR (10-day 99%)				
1	Maximum value	134	152	130
2	Average value	63	92	80
3	Minimum value	13	30	9
4	Period end	53	52	21
Stressed VaR (10-day 99%)				
5	Maximum value	186	191	197
6	Average value	94	127	127
7	Minimum value	35	45	29
8	Period end	78	164	40
Incremental risk charge (99.9%)				
9	Maximum value	199	155	232
10	Average value	124	119	130
11	Minimum value	89	75	98
12	Period end	171	137	111
Comprehensive risk capital charge (99.9%)				
13	Maximum value			
14	Average value			
15	Minimum value			
16	Period end			
17	Floor (standardized measurement method)			

Value-at-risk

VaR definition

Annual | 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 price 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 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 population for management and regulatory VaR is 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 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. ▲

Derivation of VaR- and SVaR-based RWA

Annual | VaR and SVaR are used to derive the VaR and SVaR components of the market risk Basel III RWA. This calculation takes the maximum of the respective period-end VaR measure and the product of the average VaR measure for the 60 business days immediately preceding the period end and a VaR multiplier set by FINMA. The VaR multiplier, which was 3.0 as of 31 December 2022, is dependent upon the number of VaR backtesting exceptions within a 250-business-day window. When the number of exceptions is greater than four, the multiplier increases gradually from three to a maximum of four if 10 or more backtesting exceptions occur. This is then multiplied by a risk weight factor of 1,250% to determine RWA. This calculation is set out in the table below.

Figures shown below exclude the effects of the time decay add-on.

VaR- and SVaR-based RWA

As of 31.12.22

<i>USD m</i>	Period-end VaR (A)	60-day average VaR (B)	VaR multiplier (C)	Max. (A, B x C) (D)	Risk weight factor (E)	Basel III RWA (D x E)
VaR (10-day 99%)	14	24	3.00	71	1,250%	881
Stressed VaR (10-day 99%)	45	60	3.00	181	1,250%	2,258

▲

MR4: Comparison of VaR estimates with gains / losses

Semi-annual | VaR backtesting is a performance measurement process in which a 1-day VaR prediction is compared with the realized 1-day profit or loss. 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 profit-or-loss 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, to provide for a like-for-like comparison. A backtesting exception occurs when backtesting revenues are lower than the previous day's backtesting VaR.

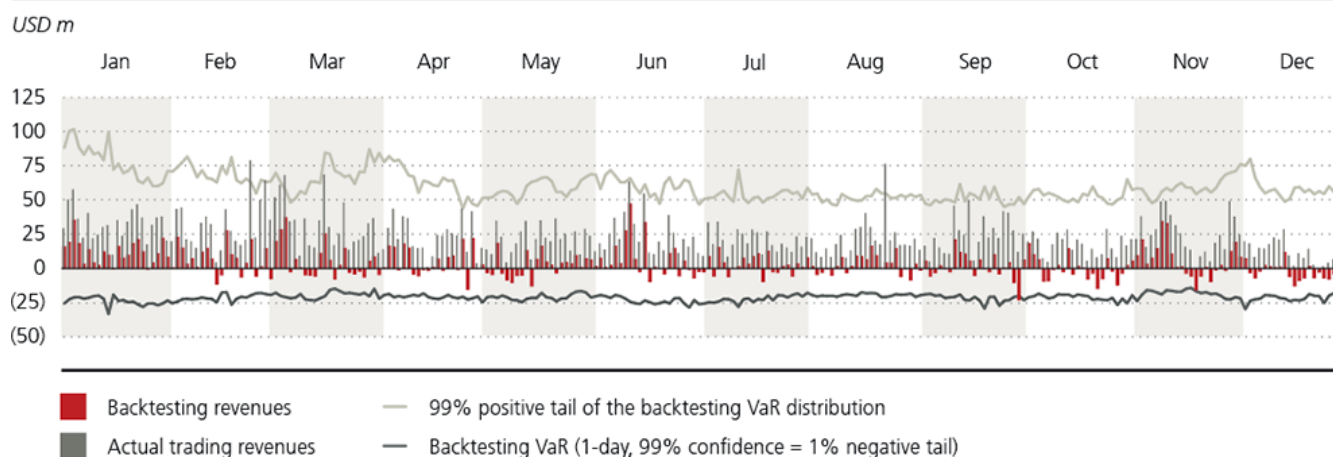
Statistically, given the 99% confidence level, two or three backtesting exceptions a year can be expected. More than four exceptions could indicate that the VaR model is not performing appropriately, as could too few exceptions over a long period. However, as noted under "VaR limitations" in the "Risk management and control" section of our Annual Report 2022, 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 Chief Risk Officer and the Group Chief Market & Treasury Risk Officer. Internal and external auditors and relevant regulators are also informed of backtesting exceptions.

The "Group: development of regulatory backtesting revenues and actual trading revenues against backtesting VaR" chart below shows the 12-month development of backtesting VaR against the Group's backtesting revenues and actual trading revenues for 2022. The chart shows both the 99% and the 1% backtesting VaR. 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.

There was one new Group VaR negative backtesting exception in the second half of 2022, and the total number of negative backtesting exceptions within the most recent 250-business-day window remained at one. As these backtesting exceptions remained below five, the FINMA VaR multiplier used to compute regulatory and stressed VaR RWA remained unchanged at three throughout the period.

Group: development of regulatory backtesting revenues¹ and actual trading revenues² against backtesting VaR³ (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. ▲

Risks not in VaR

Risks not in VaR definition

Annual We have a framework to identify and quantify potential risks that are not entirely captured by our VaR model. We refer to these as risks not in VaR (RniV). This framework is used to underpin these potential risks with regulatory capital, calculated as a multiple of VaR and SVaR.

Our VaR model can be split into two components: the profit-or-loss representation and the risk factor model. This gives rise to two RniV categories: profit-or-loss representation RniV and risk factor RniV. Profit-or-loss representation RniV arise from approximations made by the VaR model to quantify the effect of risk factor changes on the profit and loss of positions and portfolios. Risk factor RniV originate from an inadequate modeling of the stochastic behavior of the risk factors.

Risks not in VaR quantification

The RniV quantification is conducted on the basis of a quantitative approach that was developed within the Risk Methodology department and that has been approved by FINMA. We quantify RniV on a monthly basis. The framework applies to both categories of RniV: profit-or-loss representation RniV and risk factor RniV.

Risks not in VaR mitigation

Material RniV items are monitored and controlled by means and measures other than VaR, such as position limits and stress limits. Additionally, there are ongoing initiatives to extend the VaR model to better capture these risks.

Derivation of RWA add-on for risks not in VaR

The RniV framework is used to derive the RniV-based component of the market risk Basel III RWA, using the aforementioned approach, which is approved by FINMA and is subject to recalibration at least once a quarter. As RWA from RniV are add-ons, they do not reflect any diversification benefits across risks capitalized through VaR and SVaR.

The RniV VaR and SVaR capital ratios applicable as of 31 December 2022 were 138% and 153%, respectively.

FINMA continues to require that RniV stressed VaR capital is floored at RniV VaR capital.

The period-end RWA shown below does not include the time decay add-on.

RniV-based RWA

As of 31.12.22

USD m	Period-end RWA (A)	RniV add-on (B)	RniV RWA (A x B)
Regulatory VaR	881	138%	1,213
Stressed VaR	2,258	153%	3,454
Total RniV RWA			4,667

Incremental risk charge

IRC is the potential loss due to the defaulting or credit migration of issuers of non-securitized credit instruments in the trading book. IRC is calculated as the portfolio loss at the 99.9th percentile of the portfolio loss distribution over a one-year time horizon. It uses a multi-factor model applying the constant position assumption for all positions in the IRC portfolio. This means that all positions are kept unchanged over a one-year time period.

The portfolio loss distribution is estimated using a Monte Carlo simulation approach. The simulation is performed in two steps: first, the distribution of credit ratings (including the defaulted state) at the one-year time horizon is estimated by a portfolio rating migration model; and, second, default and migration losses conditional on credit events generated by the migration model are calculated and aggregated.

The portfolio rating migration model is of the Merton type: migrations of credit ratings are considered to be functions of the underlying asset value of a firm. The correlation structure of asset values is based on the FIS APT factor model, with factor loadings and volatilities homogenized within region / industry / size buckets. For the government bucket, a conservative expert-based correlation value is used. The transition matrix approach is utilized to set migration and default thresholds. The transition matrix for sovereign obligors is calibrated to the history of S&P sovereign ratings. The transition matrix for non-sovereigns is calibrated to the history of UBS internal ratings.

For each position related to a defaulted obligor, default losses are calculated based on the maximum default exposure measure (the loss in the case of a default event assuming zero recovery) and a random recovery concept. To account for potential basis risk between instruments, different recovery values may be generated for different instruments even if they belong to the same issuer. To calculate rating migration losses, a linear (delta) approximation is used. A loss resulting from a migration event is calculated as a change in the average credit spread due to the rating change, multiplied by the corresponding sensitivity of a position to changes in credit spreads.

The validation of the IRC model relies heavily on sensitivity analyses embedded into the annual model reconfirmation.

Derivation of IRC-based RWA

IRC is calculated weekly and the results are used to derive the IRC-based component of the market risk Basel III RWA. The derivation is similar to that for VaR- and SVaR-based RWA, but without a VaR multiplier, and is shown below.

IRC-based RWA

As of 31.12.22

	Period-end IRC (A)	Average of last 12 weeks IRC (B)	Max (A, B) (C)	Risk weight factor (D)	Basel III RWA (C x D)
<i>USD m</i>	171	134	171	1,250%	2,132

Comprehensive risk measure

The comprehensive risk measure (the CRM) is an estimate of the default and complex price risk, including the convexity and cross-convexity of the CRM portfolio across credit spread, correlation and recovery, measured over a one-year time horizon at a 99.9% confidence level. The calculation assumes a static portfolio with trade aging, a modeling choice consistent with the portfolio being hedged in a back-to-back manner. The model scope covers collateralized debt obligation swaps, credit-linked notes (CLNs), 1st- and nth-to-default swaps, and CLNs and hedges for these positions, including single-name credit default swaps (CDSs), CLNs and index CDSs.

The CRM profit and loss distribution is estimated using a Monte Carlo simulation of defaults, loss given default rates and market data changes over the next 12 months, where spreads follow their own stochastic processes and are correlated to defaults. The risk engine loads the definition of all trades and, for each Monte Carlo scenario, generates the trade cash flows over the next 12 months and revalues the trades on the horizon date. The revaluation relies on sampled FX rates, credit spreads and index bases and introduces a correlation skew by using stochastic correlations and stochastic LGD rates. The correlation skew is calibrated at irregular intervals. The 99.9% negative quantile of the resulting profit and loss distribution is then taken to be the CRM result. Our CRM methodology is subject to minimum qualitative standards.

Since the second quarter of 2019, we have not held eligible correlation trading positions and therefore the CRM-based capital requirement has not been applicable to us. ▲

Section 10 Operational risk

Annual I The table below presents an overview of Pillar 3 disclosures separately provided in our Annual Report 2022, available under "Annual reporting" at ubs.com/investors.

ORA: Operational risk

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Details of the approach for operational risk capital assessment for which the bank qualifies	Risk management and control	– Non-financial risk framework	131–132
Description of the advanced measurement approaches (AMA) for operational risk	Risk management and control	– AMA model	132



Section 11 Interest rate risk in the banking book

Annual I The table below presents an overview of Pillar 3 disclosures that are provided separately in our Annual Report 2022, available under "Annual reporting" at ubs.com/investors.

IRRBB: Interest rate risk in the banking book

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
The nature of interest rate risk in the banking book and key assumptions applied	Risk management and control	– Interest rate risk in the banking book	115–118
Sources of interest rate risk in the banking book	Risk management and control	– Interest rate risk in the banking book	115–118
Interest rate risk management and governance	Risk management and control	– Interest rate risk in the banking book	115–118

Economic value and net interest income sensitivity

The interest rate risk sensitivity figures presented in the IRRBB1 table below represent the effect of six interest rate scenarios defined by FINMA on the economic value of equity (EVE), which represents the present value of future cash flows related to the banking book irrespective of accounting treatment. EVE sensitivity excludes any modeled duration assigned to equity, goodwill, real estate and, as prescribed by FINMA, also excludes additional tier 1 (AT1) capital instruments that otherwise would be included under general Basel Committee on Banking Supervision (BCBS) guidance.

As of 31 December 2022, the "Parallel up" scenario 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 higher 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 net interest income, 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.

The more adverse of the two parallel interest rate scenarios with regard to net interest income (NII) over the next 12 months was the "Parallel up" scenario, resulting in a potential change of negative USD 0.1bn. This excludes the contribution from cash held at central banks as per FINMA Pillar 3 disclosure requirements. With the inclusion of the cash held at central banks, the NII would increase by USD 2.7bn under the "Parallel up" scenario.

IRBB1: Quantitative information about IRBB

As of 31.12.22	Delta EVE – Change of economic value of equity		Delta NII – Change of Net interest income ¹	
	31.12.22	31.12.21	31.12.22	31.12.21
<i>USD m</i>				
Parallel up ²	(4,629)	(6,041)	(119)	(953)
Parallel down ²	4,842	5,150	415	2,058
Steeper ³	(1,409)	(1,180)		
Flattener ⁴	344	(207)		
Short-term up ⁵	(1,539)	(2,363)		
Short-term down ⁶	1,683	2,466		
Maximum ⁷	(4,629)	(6,041)	(119)	(953)
Period	31.12.22		31.12.21	
Tier 1 capital	58,321		60,488	

¹ Disclosure of NII sensitivity is only required for the two parallel shock scenarios. The NII sensitivity estimates reflect the impact of immediate changes in interest rates, relative to constant rates, and assume no change to balance sheet size and structure, constant foreign exchange rates and no specific management action. Furthermore, the change in NII does not include the contribution from cash held at central banks. 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. ⁷ "Maximum" indicates the most adverse interest rate scenario as shown in the table.

IRBB1: Quantitative disclosures relating to the position structure and interest rate reset of IRBB risk

As of 31.12.22	Volume ¹				Average interest rate repricing period (in years)		Maximum interest rate repricing period (in years) for exposures with modeled interest rate repricing dates	
	Total	of which: CHF	of which: EUR	of which: USD	Total	of which: CHF	Total	of which: CHF
<i>USD m, except where indicated</i>								
Determined repricing period ²	Loans and advances to banks	35,823	6,699	13,845	11,679	0.25	0.40	
	Loans and advances to customers	168,791	31,560	20,167	102,433	0.70	0.92	
	Money market mortgages	52,658	52,658			0.04	0.04	
	Fixed-rate mortgages	113,540	104,247	12	8,868	4.27	4.07	
	Financial investments	78,274	19,276	10,575	41,539	3.04	0.97	
	Other receivables	140,072	7,083	15,685	95,496	0.30	0.04	
	Receivables from interest rate derivatives	777,967	144,946	89,388	498,395	1.51	0.68	
	Amounts due to banks	(27,566)	(6,712)	(3,365)	(16,943)	1.31	0.16	
	Customer deposits	(150,568)	(488)	(8,220)	(118,270)	0.39	0.42	
	Medium-term notes	(44)	(43)	0		2.85	2.84	
	Bonds and covered bonds	(99,097)	(11,523)	(25,582)	(50,041)	2.94	4.40	
	Other liabilities	(32,422)	(3,703)	(4,977)	(15,119)	0.12	0.04	
	Liabilities from interest rate derivatives	(769,414)	(234,976)	(66,683)	(420,210)	0.91	0.49	
Undetermined repricing period ³	Loans and advances to banks							
	Loans and advances to customers	18,960	2,877	4,394	10,162	0.44	0.99	
	Variable-rate mortgages	25,985	19	0	23,747	3.54	1.17	
	Other receivables on sight	207	207			1.55	1.55	
	Liabilities on sight in personal and current accounts	(296,335)	(77,496)	(50,774)	(147,706)	1.68	1.85	
	Other liabilities on sight	(12,711)	(240)	(1,838)	(9,572)	0.26	0.04	
	Liabilities from customer deposits, callable but not transferable	(120,967)	(120,967)			1.93	1.93	
Total	475,165	201,807	4,394	33,909	1.65	1.91	10	10

¹ The volume figures cover only banking book positions and are risk-based measures which differ from the accounting values on the IFRS balance sheet. ² Receivables and payables from securities financing transactions are reported on a gross basis, consistent with our interest rate risk management and monitoring process. Additional tier 1 capital instruments are excluded. ³ Swiss franc variable-rate mortgages and balances associated with loans and advances to banks with a combined volume below USD 1bn are reported under Loans and advances to customers, consistent with our interest rate risk management and monitoring process.

IRRBA1: Quantitative disclosures relating to the position structure and interest rate reset of IRRBB risk

As of 31.12.21 USD m, except where indicated		Volume ¹				Average interest rate repricing period (in years)		Maximum interest rate repricing period (in years) for exposures with modeled interest rate repricing dates	
		Total	of which: CHF	of which: EUR	of which: USD	Total	of which: CHF	Total	of which: CHF
Determined repricing period ²	Loans and advances to banks	9,278	1,106	4,818	2,113	1.40	2.00		
	Loans and advances to customers	174,786	34,028	16,325	108,626	0.72	1.43		
	Money market mortgages	43,140	43,140			0.08	0.08		
	Fixed-rate mortgages	113,531	112,318	58	400	3.67	3.70		
	Financial investments	51,594	4,045	8,683	34,034	2.95	3.45		
	Other receivables	197,238	4,395	41,553	127,586	0.10	0.19		
	Receivables from interest rate derivatives	736,022	158,882	97,820	435,565	1.30	0.71		
	Amounts due to banks	(1,060)	(526)		(267)	0.09	0.00		
	Customer deposits	(67,272)	(41)	(3,024)	(43,886)	0.15	2.20		
	Medium-term notes	(60)	(60)	0		3.03	3.03		
	Bonds and covered bonds	(140,128)	(12,771)	(30,910)	(78,603)	2.34	4.51		
	Other liabilities	(91,582)	(786)	(21,837)	(55,160)	0.24	0.75		
	Liabilities from interest rate derivatives	(727,339)	(234,105)	(86,853)	(352,116)	0.56	0.59		
Undetermined repricing period ³	Loans and advances to banks	328	328			1.61	1.61		
	Loans and advances to customers	26,470	2,405	4,297	17,847	1.31	0.82		
	Variable-rate mortgages	22,302	139		18,998	2.55	1.24		
	Other receivables on sight	222	222			1.75	1.75		
	Liabilities on sight in personal and current accounts	(371,449)	(74,943)	(55,952)	(210,511)	1.32	1.74		
	Other liabilities on sight	(16,046)	(729)	(2,818)	(11,323)	0.17	0.04		
	Liabilities from customer deposits, callable but not transferable	(117,816)	(117,816)			2.06	2.06		
Total	554,632	196,582	63,067	258,678	1.41	1.94	10	10	

¹ The volume figures cover only banking book positions and are risk-based measures which differ from the accounting values on the IFRS balance sheet. ² Receivables and payables from securities financing transactions are reported on a gross basis, consistent with our interest rate risk management and monitoring process. Subordinated liabilities are excluded. ³ Swiss franc variable-rate mortgages and balances associated with loans and advances to banks with a combined volume below USD 1bn are reported under Loans and advances to customers, consistent with our interest rate risk management and monitoring process.

Section 12 Going and gone concern requirements and eligible capital

Quarterly | The table below provides details of the Swiss systemically relevant bank (SRB) going and gone concern capital requirements as required by the Swiss Financial Market Supervisory Authority (FINMA).

› Refer to the “Capital management” section of our Annual Report 2022 report, available under “Annual reporting” at ubs.com/investors, for more information about capital management

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	14.64¹	46,802	5.00¹	51,423
Common equity tier 1 capital	10.34	33,060	3.50²	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 capital³	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 capacity⁴	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.

Semi-annual I The CCyB1 table below provides details of the underlying exposures and risk-weighted assets (RWA) used in the computation of the countercyclical capital buffer (CCyB) requirement applicable to UBS Group AG consolidated. In the second half of 2022, the CCyB for Sweden and the CCyB for the UK were each set at a level of 1.00%, effective from 29 September 2022 and 13 December 2022, respectively, on risk-weighted positions that are related to private sector exposures. This increased our bank-specific countercyclical capital buffer rate to 7 basis points as per 31 December 2022.

› Refer to the “Risk management and control” section of our Annual Report 2022, available under “Annual reporting” at ubs.com/investors, for further information about the methodology of geographical allocation used

CCyB1: Geographical distribution of credit exposures used in the countercyclical capital buffer

USD m, except where indicated

Geographical breakdown	Countercyclical capital buffer rate, %	31.12.22 Exposure values and / or risk-weighted assets used in the computation of the countercyclical capital buffer		Bank-specific countercyclical capital buffer rate, %	Countercyclical amount
		Exposure values ¹	Risk-weighted assets		
		Hong Kong SAR	1.00		
Luxembourg	0.50	18,240	4,745		
Sweden	1.00	1,417	320		
United Kingdom	1.00	36,400	10,187		
Sum		62,480	17,388		
Total		632,724	207,040	0.07	232

¹ Includes private sector exposures in the countries that are Basel Committee on Banking Supervision member jurisdictions under categories “Credit risk,” “Counterparty credit risk,” “Equity positions in the banking book,” “Settlement risk,” “Securitization exposures in the banking book” and “Amounts below thresholds for deduction,” as well as the corresponding trading book charges included under “Market Risk.”



Semi-annual I The CC2 table below provides a reconciliation of the International Financial Reporting Standards (IFRS) balance sheet to the balance sheet according to the regulatory scope of consolidation as defined by the Basel Committee on Banking Supervision (the BCBS) and FINMA. Lines in the balance sheet under the regulatory scope of consolidation are expanded and referenced where relevant to display all components that are used in the “CC1: Composition of regulatory capital” table.

- › Refer to “LIA: Explanation of the differences between the IFRS and regulatory scopes of consolidation” in the “Linkage between financial statements and regulatory exposures” section of this report for more information about the most significant entities consolidated under IFRS but not included in the regulatory scope of consolidation

CC2: Reconciliation of accounting balance sheet to balance sheet under the regulatory scope of consolidation

As of 31.12.22	Balance sheet in accordance with IFRS scope of consolidation	Effect of deconsolidated or proportionally consolidated entities for regulatory consolidation	Effect of additional consolidated entities for regulatory consolidation	Balance sheet in accordance with regulatory scope of consolidation	References ¹
<i>USD m</i>					
Assets					
Cash and balances at central banks	169,445	0		169,445	
Loans and advances to banks	14,792	(89)		14,703	
Receivables from securities financing transactions	67,814	(25)		67,789	
Cash collateral receivables on derivative instruments	35,032			35,032	
Loans and advances to customers	387,220	43		387,264	
Other financial assets measured at amortized cost	53,264	(100)		53,164	
Total financial assets measured at amortized cost	727,568	(171)		727,397	
Financial assets at fair value held for trading	107,866	13		107,879	
<i>of which: assets pledged as collateral that may be sold or repledged by counterparties</i>	<i>36,742</i>			<i>36,742</i>	
Derivative financial instruments	150,108	18		150,126	
Brokerage receivables	17,576			17,576	
Financial assets at fair value not held for trading	59,796	(13,076)		46,720	
Total financial assets measured at fair value through profit or loss	335,347	(13,045)		322,301	
Financial assets measured at fair value through other comprehensive income	2,239	(40)		2,199	
Investments in associates	1,101	48		1,149	
<i>of which: goodwill</i>	<i>24</i>			<i>24</i>	<i>4</i>
Property, equipment and software	12,288	(47)		12,242	
Goodwill and intangible assets	6,267	(67)		6,200	
<i>of which: goodwill</i>	<i>6,043</i>			<i>6,043</i>	<i>4</i>
<i>of which: intangible assets</i>	<i>224</i>	<i>(67)</i>		<i>157</i>	<i>5</i>
Deferred tax assets	9,389	(14)		9,375	
<i>of which: deferred tax assets recognized for tax loss carry-forwards</i>	<i>3,988</i>	<i>(6)</i>		<i>3,983</i>	<i>6</i>
<i>of which: deferred tax assets on temporary differences</i>	<i>5,400</i>	<i>(8)</i>		<i>5,392</i>	<i>10</i>
Other non-financial assets	10,166	(7)		10,159	
<i>of which: net defined benefit pension and other post-employment assets</i>	<i>355</i>			<i>355</i>	<i>8</i>
Total assets	1,104,364	(13,342)		1,091,022	

CC2: Reconciliation of accounting balance sheet to balance sheet under the regulatory scope of consolidation (continued)

As of 31.12.22	Balance sheet in accordance with IFRS scope of consolidation	Effect of deconsolidated or proportionally consolidated entities for regulatory consolidation	Effect of additional consolidated entities for regulatory consolidation	Balance sheet in accordance with regulatory scope of consolidation	References ¹
<i>USD m</i>					
Liabilities					
Amounts due to banks	11,596			11,596	
Payables from securities financing transactions	4,202			4,202	
Cash collateral payables on derivative instruments	36,436			36,436	
Customer deposits	525,051	23		525,075	
Debt issued measured at amortized cost	114,621	0		114,621	
<i>of which: amount eligible for high-trigger loss-absorbing additional tier 1 capital</i>	<i>9,882</i>			<i>9,882</i>	<i>9</i>
<i>of which: amount eligible for low-trigger loss-absorbing additional tier 1 capital</i>	<i>1,189</i>			<i>1,189</i>	<i>9</i>
<i>of which: amount eligible for low-trigger loss-absorbing tier 2 capital</i>	<i>2,422</i>			<i>2,422</i>	<i>11</i>
Other financial liabilities measured at amortized cost	9,575	(7)		9,568	
Total financial liabilities measured at amortized cost	701,481	16		701,497	
Financial liabilities at fair value held for trading	29,515			29,515	
Derivative financial instruments	154,906	11		154,918	
Brokerage payables designated at fair value	45,085			45,085	
Debt issued designated at fair value	73,638	13		73,650	
Other financial liabilities designated at fair value	30,237	(13,221)		17,017	
Total financial liabilities measured at fair value through profit or loss	333,381	(13,197)		320,185	
Provisions	3,243	(1)		3,241	
Other non-financial liabilities	9,040	(27)		9,014	
<i>of which: amount eligible for high-trigger loss-absorbing capital (Deferred Contingent Capital Plan (DCCP))²</i>	<i>1,376</i>			<i>1,376</i>	<i>9</i>
<i>of which: deferred tax liabilities related to goodwill</i>	<i>309</i>			<i>309</i>	<i>4</i>
<i>of which: deferred tax liabilities related to other intangible assets</i>	<i>8</i>			<i>8</i>	<i>5</i>
Total liabilities	1,047,146	(13,209)		1,033,937	
Equity					
Share capital	304			304	1
Share premium	13,546			13,546	1
Treasury shares	(6,874)			(6,874)	3
Retained earnings	50,004	(6)		49,998	2
Other comprehensive income recognized directly in equity, net of tax	(103)	9		(94)	3
<i>of which: unrealized gains / (losses) from cash flow hedges</i>	<i>(4,234)</i>			<i>(4,234)</i>	<i>7</i>
Equity attributable to shareholders	56,876	3		56,880	
Equity attributable to non-controlling interests	342	(137)		205	
Total equity	57,218	(134)		57,085	
Total liabilities and equity	1,104,364	(13,342)		1,091,022	

¹ References link the lines of this table to the respective reference numbers provided in the "References" column in the "CC1: Composition of regulatory capital" table in this section. ² The IFRS carrying amount of total DCCP liabilities was USD 1,614m as of 31 December 2022. Refer to the "Compensation" section of our Annual Report 2022, available under "Annual reporting" at ubs.com/investors, for more information about the DCCP.



Semi-annual I The CC1 table below provides the composition of capital in the format prescribed by the BCBS and FINMA, and is based on BCBS Basel III rules, unless stated otherwise. Reference is made to items reconciling to the balance sheet under the regulatory scope of consolidation as disclosed in the “CC2: Reconciliation of accounting balance sheet to balance sheet under the regulatory scope of consolidation” table in this section.

- Refer to the documents titled “Capital and total loss-absorbing capacity instruments of UBS Group AG consolidated and UBS AG consolidated and standalone – key features” and “UBS Group AG consolidated capital instruments and TLAC-eligible senior unsecured debt,” available under “Bondholder information” at ubs.com/investors, for an overview of the main features of our regulatory capital instruments, as well as the full terms and conditions

CC1: Composition of regulatory capital

As of 31.12.22	Amounts	References ¹	
<i>USD m, except where indicated</i>			
Common Equity Tier 1 capital: instruments and reserves			
1	Directly issued qualifying common share (and equivalent for non-joint stock companies) capital plus related stock surplus	13,850	1
2	Retained earnings	49,998	2
3	Accumulated other comprehensive income (and other reserves)	(6,968)	3
5	Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)		
6	Common Equity Tier 1 capital before regulatory adjustments	56,880	
Common Equity Tier 1 capital: regulatory adjustments			
7	Prudent valuation adjustments	(201)	
8	Goodwill (net of related tax liability)	(5,754)	4
9	Other intangibles other than mortgage servicing rights (net of related tax liability)	(150)	5
10	Deferred tax assets that rely on future profitability, excluding those arising from temporary differences (net of related tax liability) ²	(4,077)	6
11	Cash flow hedge reserve	4,234	7
12	Shortfall of provisions to expected losses	(471)	
13	Securitization gain on sale		
14	Gains and losses due to changes in own credit risk on fair valued liabilities	(627)	
15	Defined benefit pension fund net assets	(311)	8
16	Investments in own shares (if not already subtracted from paid-in capital on reported balance sheet)	(1,552)	9
17	Reciprocal cross-holdings in common equity		
17a	Qualified holdings where a significant influence is exercised with other owners (CET1 instruments)		
17b	Immaterial investments (CET1 items)		
18	Investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, where the bank does not own more than 10% of the issued share capital (amount above 10% threshold)		
19	Significant investments in the common stock of banking, financial and insurance entities that are outside the scope of regulatory consolidation (amount above 10% threshold)		
20	Mortgage servicing rights (amount above 10% threshold)		
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability)	(64)	10
22	Amount exceeding the 15% threshold		
23	<i>Of which: significant investments in the common stock of financials</i>		
24	<i>Of which: mortgage servicing rights</i>		
25	<i>Of which: deferred tax assets arising from temporary differences</i>		
26	Expected losses on equity investment under the PD / LGD approach		
26a	Further adjustments to financial statements in accordance with a recognized international accounting standard		
26b	Other adjustments	(2,450) ³	
27	Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions		
28	Total regulatory adjustments to Common Equity Tier 1	(11,423)	
29	Common Equity Tier 1 capital (CET1)	45,457	

CC1: Composition of regulatory capital (continued)

As of 31.12.22	Amounts	References ¹
<i>USD m, except where indicated</i>		
Additional Tier 1 capital: instruments		
30	Directly issued qualifying additional Tier 1 instruments plus related stock surplus	12,864
31	<i>Of which: classified as equity under applicable accounting standards</i>	
32	<i>Of which: classified as liabilities under applicable accounting standards</i>	12,864
34	Additional Tier 1 instruments (and CET1 instruments not included in row 5) issued by subsidiaries and held by third parties (amount allowed in group AT1)	
36	Additional Tier 1 capital before regulatory adjustments	12,864
Additional Tier 1 capital: regulatory adjustments		
37	Investments in own additional Tier 1 instruments ⁴	
38	Reciprocal cross-holdings in additional Tier 1 instruments	
38a	Qualified holdings where a significant influence is exercised with other owners (AT1 instruments)	
38b	Immaterial investments (AT1 instruments)	
39	Investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, where the bank does not own more than 10% of the issued common share capital of the entity (amount above 10% threshold)	
40	Significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation	
41	Other adjustments	
42	Regulatory adjustments applied to additional Tier 1 due to insufficient Tier 2 to cover deductions	
42a	Regulatory adjustments applied to CET1 capital due to insufficient additional Tier 1 to cover deductions	
43	Total regulatory adjustments to additional Tier 1 capital	
44	Additional Tier 1 capital (AT1)	12,864
45	Tier 1 capital (T1 = CET1 + AT1)	58,321
Tier 2 capital: instruments and provisions		
46	Directly issued qualifying Tier 2 instruments plus related stock surplus	484 ⁵
48	Tier 2 instruments (and CET1 and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties (amount allowed in group Tier 2)	
50	Provisions	
51	Tier 2 capital before regulatory adjustments	484
Tier 2 capital: regulatory adjustments		
52	Investments in own Tier 2 instruments ⁴	
53	Reciprocal cross-holdings in Tier 2 instruments and other TLAC liabilities	
53a	Qualified holdings where a significant influence is exercised with other owners (T2 instruments and other TLAC instruments)	
53b	Immaterial investments (T2 instruments and other TLAC instruments)	
54	Investments in the capital and other TLAC liabilities of banking, financial and insurance entities that are outside the scope of regulatory consolidation, where the bank does not own more than 10% of the issued common share capital of the entity (amount above 10% threshold)	
55	Significant investments in the capital and other TLAC liabilities of banking, financial and insurance entities that are outside the scope of regulatory consolidation (net of eligible short positions)	
56	Other adjustments	
56a	Excess of the adjustments, which are allocated to the AT1 capital	
57	Total regulatory adjustments to Tier 2 capital	
58	Tier 2 capital (T2)	484
59	Total regulatory capital (TC = T1 + T2)	58,806
60	Total risk-weighted assets	319,585
Capital ratios and buffers		
61	Common Equity Tier 1 (as a percentage of risk-weighted assets)	14.22
62	Tier 1 (as a percentage of risk-weighted assets)	18.25
63	Total capital (as a percentage of risk-weighted assets)	18.40
64	Institution-specific buffer requirement (capital conservation buffer plus countercyclical buffer requirements plus higher loss absorbency requirement, expressed as a percentage of risk-weighted assets) ⁶	3.57
65	<i>Of which: capital conservation buffer requirement</i>	2.50
66	<i>Of which: bank-specific countercyclical buffer requirement</i>	0.07
67	<i>Of which: higher loss absorbency requirement</i>	1.00
68	Common Equity Tier 1 (as a percentage of risk-weighted assets) available after meeting the bank's minimum capital requirements	9.72
Amounts below the thresholds for deduction (before risk weighting)		
72	Non-significant investments in the capital and other TLAC liabilities of other financial entities	2,214
73	Significant investments in the common stock of financial entities	1,112
74	Mortgage servicing rights (net of related tax liability)	
75	Deferred tax assets arising from temporary differences (net of related tax liability)	4,552
Applicable caps on the inclusion of provisions in Tier 2		
76	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to standardized approach (prior to application of cap)	
77	Cap on inclusion of provisions in Tier 2 under standardized approach	
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	
79	Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	

¹ References link the lines of this table to the respective reference numbers provided in the "References" column in the "CC2: Reconciliation of accounting balance sheet to balance sheet under the regulatory scope of consolidation" table in this section. ² IFRS netting for deferred tax assets and liabilities is reversed for items deducted from CET1 capital. ³ Includes USD 767m in compensation-related charge for regulatory capital purposes. ⁴ Under IFRS, debt issued and subsequently repurchased is treated as extinguished. ⁵ Consists of instruments with an IFRS carrying amount of USD 2.4bn less amortization of instruments where remaining maturity is between one and five years, own instruments held and 45% of the gross unrealized gains on debt instruments measured at fair value through other comprehensive income, which are measured at the lower of cost or market value for regulatory capital purposes. ⁶ BCBS requirements are exceeded by our Swiss SRB requirements. Refer to the "Capital, liquidity and funding, and balance sheet" section of our Annual Report 2022, available under "Annual reporting" at ubs.com/investors, for more information about the Swiss SRB requirements.

Prudent valuation adjustments

Annual | The PV1 table below provides a breakdown of prudent valuation adjustments to common equity tier 1 capital. These adjustments are incremental to those made under IFRS, which include adjustments for liquidity and model uncertainty, as well as credit, funding and debit valuation adjustments.

Instruments that are measured as part of a portfolio of combined long and short positions are valued at mid-market levels in an effort 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 market liquidity levels.

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 an effort to ensure compliance with the prudent valuation requirements, UBS has established systems, controls and governance around the valuation of positions measured at fair value.

As of 31 December 2022, the prudent valuation adjustment had increased by USD 34m to USD 201m compared with the prior year. This was primarily driven by reduced market liquidity, new positions and a longer closeout period used in credit valuation adjustment closeout calculations that are reported under *Unearned credit spreads*.

➤ Refer to "Note 20 Fair value measurement" of our Annual Report 2022 for more information about the valuation adjustments in the financial accounts and related governance

PV1: Prudent valuation adjustments (PVA)

As of 31.12.22

USD m	Equity	Interest rates	FX	Credit	Commodities	Total	Of which: In the trading book	Of which: In the banking book
1 Closeout uncertainty, of which:	(17)	(77)	0	(64)	0	(158)	(34)	(123)
2 Mid-market value								
3 Closeout cost								
4 Concentration	(17)	(77)	0	(64)	0	(158)	(34)	(123)
5 Early termination								
6 Model risk								
7 Operational risk								
8 Investing and funding costs								
9 Unearned credit spreads	0	0	0	(43)	0	(43)	(43)	0
10 Future administrative costs								
11 Other								
12 Total adjustment	(17)	(77)	0	(107)	0	(201)	(77)	(123)

As of 31.12.21

1 Closeout uncertainty, of which:	(18)	(91)	0	(34)	0	(143)	(28)	(114)
2 Mid-market value								
3 Closeout cost								
4 Concentration	(18)	(91)	0	(34)	0	(143)	(28)	(114)
5 Early termination								
6 Model risk								
7 Operational risk								
8 Investing and funding costs								
9 Unearned credit spreads	0	0	0	(25)	0	(25)	(25)	0
10 Future administrative costs								
11 Other								
12 Total adjustment¹	(18)	(91)	0	(58)	0	(167)	(53)	(114)

¹ Valuation adjustments recognized already under the financial accounting standards are USD 918m as of 31 December 2022 (31 December 2021: USD 1,004m), of which valuation adjustments account for USD 311m (31 December 2021: USD 341m) of liquidity and for USD 529m (31 December 2021: USD 571m) of model uncertainty. Further details are provided in "Note 20 Fair Value measurement" in the "Consolidated financial statements" section of our Annual Report 2022.



Section 13 Total loss-absorbing capacity

Resolution group – composition of total loss-absorbing capacity (TLAC)

Semi-annual | The TLAC1 table below is based on Basel Committee on Banking Supervision (BCBS) rules, and only applicable to UBS Group AG as the ultimate parent entity of the defined UBS resolution group, to which, in case of resolution, resolution tools (e.g., a bail-in) are expected to be applied.

In the second half of 2022, our eligible additional tier 1 (AT1) instruments decreased by USD 2.2bn, 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.

Non-regulatory capital instruments increased by USD 0.7bn to USD 44.6bn as of 31 December 2022, mainly due to eight new issuances of TLAC-eligible senior unsecured debt denominated in US dollars, euro and yen amounting to USD 5.3bn equivalent, partly offset by two calls of TLAC-eligible unsecured debt denominated in US dollars amounting to USD 3.3bn and interest rate risk hedge, foreign currency translation and other effects.

TLAC1: composition for G-SIBs (at resolution group level)

	31.12.22	30.6.22	31.12.21
<i>USD m, except where indicated</i>			
Regulatory capital elements of TLAC and adjustments			
1 Common Equity Tier 1 capital (CET1)	45,457	44,798	45,281
2 Additional Tier 1 capital (AT1) before TLAC adjustments	12,864	15,108	15,207
3 AT1 ineligible as TLAC as issued out of subsidiaries to third parties			
4 Other adjustments			
5 Total AT1 instruments eligible under the TLAC framework	12,864	15,108	15,207
6 Tier 2 capital (T2) before TLAC adjustments	484	494	1,440
7 Amortized portion of T2 instruments where remaining maturity > 1 year	1,938	1,977	1,735
8 T2 capital ineligible as TLAC as issued out of subsidiaries to third parties			
9 Other adjustments			
10 Total T2 instruments eligible under the TLAC framework	2,422	2,471	3,174
11 TLAC arising from regulatory capital	60,743	62,378	63,662
Non-regulatory capital elements of TLAC			
12 External TLAC instruments issued directly by the bank and subordinated to excluded liabilities			
13 External TLAC instruments issued directly by the bank which are not subordinated to excluded liabilities but meet all other TLAC term sheet requirements	44,033	43,333	41,120
14 <i>of which: amount eligible as TLAC after application of the caps</i>			
15 External TLAC instruments issued by funding vehicles prior to 1 January 2022	536	538	
16 Eligible ex ante commitments to recapitalize a G-SIB in resolution			
17 TLAC arising from non-regulatory capital instruments before adjustments	44,569	43,870	41,120
Non-regulatory capital elements of TLAC: adjustments			
18 TLAC before deductions	105,312	106,249	104,783
19 Deductions of exposures between multiple-point-of-entry (MPE) resolution groups that correspond to items eligible for TLAC (not applicable to SPE G-SIBs)			
20 Deduction of investments in own other TLAC liabilities			
21 Other adjustments to TLAC			
22 TLAC after deductions	105,312	106,249	104,783
Risk-weighted assets and leverage exposure measure for TLAC purposes			
23 Total risk-weighted assets adjusted as permitted under the TLAC regime	319,585	315,685	302,209
24 Leverage exposure measure	1,028,461	1,025,422	1,068,862
TLAC ratios and buffers			
25 TLAC (as a percentage of risk-weighted assets adjusted as permitted under the TLAC regime)	32.95	33.66	34.67
26 TLAC (as a percentage of leverage exposure)	10.24	10.36	9.80
27 CET1 (as a percentage of risk-weighted assets) available after meeting the resolution group's minimum capital and TLAC requirements	9.72	9.69	10.48
28 Institution-specific buffer requirement (capital conservation buffer plus countercyclical buffer requirements plus higher loss absorbency requirement, expressed as a percentage of risk-weighted assets)	3.57	3.52	3.52
29 <i>of which: capital conservation buffer requirement</i>	2.50	2.50	2.50
30 <i>of which: bank-specific countercyclical buffer requirement</i>	0.07	0.02	0.02
31 <i>of which: higher loss absorbency requirement</i>	1.00	1.00	1.00



Resolution entity – creditor ranking at legal entity level

Semi-annual I The TLAC3 table below provides an overview of the creditor ranking structure of the resolution entity, UBS Group AG, on a standalone basis.

UBS Group AG issues loss-absorbing additional tier 1 capital instruments and TLAC-eligible senior unsecured debt.

UBS Group AG grants Deferred Contingent Capital Plan awards to UBS Group employees, which qualify as Basel III AT1 capital on a UBS Group consolidated basis and totaled USD 1,794m as of 31 December 2022 (30 June 2022: USD 1,814m). The related liabilities of UBS Group AG on a standalone basis of USD 1,365m (30 June 2022: USD 1,301m) are not included in the table below, as these do not give rise to any current claims until the awards are legally vested.

As of 31 December 2022, the TLAC available on a UBS Group AG consolidated basis amounted to USD 105,312m (30 June 2022: USD 106,249m).

- Refer to “Holding company and significant regulated subsidiaries and sub-groups” at ubs.com/investors for more information about UBS Group AG standalone for the year ended 31 December 2022
- Refer to “Bondholder information” at ubs.com/investors for more information
- Refer to the “TLAC1: TLAC composition for G-SIBs (at resolution group level)” table in this section for more information about TLAC for UBS Group AG consolidated

TLAC3: creditor ranking at legal entity level for the resolution entity, UBS Group AG

As of 31.12.22 USD m	Creditor ranking			Total
	1	2	3	
			Bail-in debt and pari passu liabilities (most senior)	
1 Description of creditor ranking	Common shares (most junior) ²	Additional Tier 1		
2 Total capital and liabilities net of credit risk mitigation ¹	38,093	14,353	52,577	105,023
3 Subset of row 2 that are excluded liabilities				
4 Total capital and liabilities less excluded liabilities (row 2 minus row 3)	38,093	14,353 ^{3,4}	52,577 ^{5,6}	105,023
5 Subset of row 4 that are potentially eligible as TLAC	38,093	11,968	49,476	99,537
6 Subset of row 5 with 1 year ≤ residual maturity < 2 years			4,864	4,864
7 Subset of row 5 with 2 years ≤ residual maturity < 5 years			22,522	22,522
8 Subset of row 5 with 5 years ≤ residual maturity < 10 years			13,340	13,340
9 Subset of row 5 with residual maturity ≥ 10 years, but excluding perpetual securities			8,749	8,749
10 Subset of row 5 that is perpetual securities	38,093	11,968		50,061

¹ No credit risk mitigation is applied to capital and liabilities for UBS Group AG standalone. ² Common shares including the associated reserves are equal to equity attributable to shareholders as disclosed in the UBS Group AG standalone financial statements as of 31 December 2022, which were prepared in accordance with the principles of the Swiss Law on Accounting and Financial Reporting (32nd title of the Swiss Code of Obligations). ³ Includes interest expense accrued on AT1 capital instruments, which is not eligible as TLAC. ⁴ Includes an AT1 instrument in the amount of USD 2bn, the call of which was announced on 5 December 2022 (call date 31 January 2023). ⁵ Includes interest expense accrued on bail-in debt, interest-bearing liabilities that consist of loans from UBS AG and UBS Switzerland AG, negative replacement values, and tax and other liabilities that are not excluded liabilities under Swiss law and that rank pari-passu to bail-in debt. ⁶ Bail-in debt of USD 4.5bn was redeemed and bail-in debt of USD 5.4bn was issued during the six months ended 31 December 2022.



Section 14 Leverage ratio

Basel III leverage ratio

Quarterly I The Basel Committee on Banking Supervision (the BCBS) leverage ratio, as summarized in the “KM1: Key metrics” table in section 2 of this report, is calculated by dividing the period-end tier 1 capital by the period-end leverage ratio denominator (the LRD).

The LRD consists of on-balance sheet assets and off-balance sheet items based on International Financial Reporting Standards (IFRS). Derivative exposures are adjusted for a number of items, including replacement values and eligible cash variation margin netting, the current exposure method add-on for potential future exposure and net notional amounts for written credit derivatives. The LRD also includes an additional charge for counterparty credit risk related to securities financing transactions (SFTs).

The table below shows the difference between total IFRS assets per IFRS consolidation scope and the BCBS total on-balance sheet exposures. Those exposures are the starting point for calculating the BCBS LRD, as shown in the LR2 table in this section. The difference is due to the application of the regulatory scope of consolidation for the purpose of the BCBS calculation. In addition, carrying amounts for derivative financial instruments and SFTs are deducted from IFRS total assets. They are measured differently under BCBS leverage ratio rules and are therefore added back in separate exposure line items in the LR2 table.

Difference between the Swiss SRB and BCBS leverage ratio

The LRD is the same under Swiss systemically relevant bank (SRB) and BCBS rules. However, there is a difference in the capital numerator between the two frameworks. Under BCBS rules, only common equity tier 1 and additional tier 1 capital are included in the numerator. Under Swiss SRB rules UBS is required to meet going and gone concern leverage ratio requirements. Therefore, depending on the requirement, the numerator includes tier 1 capital instruments, tier 2 capital instruments and / or total loss-absorbing capacity-eligible senior unsecured debt.

Reconciliation of IFRS total assets to BCBS Basel III total on-balance sheet exposures excluding derivatives and securities financing transactions

USD m	31.12.22	30.9.22	31.12.21
On-balance sheet exposures			
IFRS total assets	1,104,364	1,111,753	1,117,182
Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	(13,342)	(12,436)	(21,618)
Adjustment for investments in banking, financial, insurance or commercial entities that are outside the scope of consolidation for accounting purposes but consolidated for regulatory purposes			
Adjustment for fiduciary assets recognized on the balance sheet pursuant to the operative accounting framework but excluded from the leverage ratio exposure measure			
Less carrying amount of derivative financial instruments in IFRS total assets ¹	(185,159)	(243,429)	(148,669)
Less carrying amount of securities financing transactions in IFRS total assets ²	(89,882)	(96,087)	(99,484)
Adjustments to accounting values			
On-balance sheet items excluding derivatives and securities financing transactions, but including collateral	815,981	759,801	847,412
Asset amounts deducted in determining BCBS Basel III tier 1 capital	(10,826)	(11,052)	(11,452)
Total on-balance sheet exposures (excluding derivatives and securities financing transactions)	805,155	748,749	835,959

¹ The exposures consist of derivative financial instruments and cash collateral receivables on derivative instruments, all of which are in accordance with the regulatory scope of consolidation. ² The exposures consist of receivables from SFTs, margin loans, prime brokerage receivables and financial assets at fair value not held for trading, both related to SFTs, all of which are in accordance with the regulatory scope of consolidation.

Quarterly During the fourth quarter of 2022, the LRD increased by USD 38.7bn to USD 1,028.5bn, including currency effects of USD 38.5bn. On-balance sheet exposures (excluding derivatives and SFTs) increased by USD 56.4bn, mainly driven by higher trading portfolio assets in the Investment Bank, increases in lending assets in Personal & Corporate Banking and Global Wealth Management, and purchases of high-quality liquid asset securities. Derivatives decreased by USD 14.9bn, mainly in the Investment Bank, primarily reflecting roll-offs of foreign exchange and equity / index contracts, as well as market-driven movements.

Securities financing transactions decreased by USD 5.6bn, mainly driven by a reduction in collateral sourcing for hedging client positions and lower brokerage receivables in the Investment Bank, partly offset by higher excess cash reinvestment trades in Group Treasury. Off-balance sheet items increased by USD 2.8bn, mainly due to higher unutilized credit lines in Global Wealth Management and Personal & Corporate Banking.

› Refer to “Leverage ratio denominator” in the “Capital, liquidity and funding, and balance sheet” section of our Annual Report 2022, available under “Annual reporting” at ubs.com/investors, for more information

LR2: BCBS Basel III leverage ratio common disclosure

	31.12.22	30.9.22	31.12.21
<i>USD m, except where indicated</i>			
On-balance sheet exposures			
1 On-balance sheet items excluding derivatives and SFTs, but including collateral	815,981	759,801	847,412
2 (Asset amounts deducted in determining Basel III Tier 1 capital)	(10,826)	(11,052)	(11,452)
3 Total on-balance sheet exposures (excluding derivatives and SFTs)	805,155	748,749	835,959
Derivative exposures			
4 Replacement cost associated with all derivatives transactions (i.e., net of eligible cash variation margin)	52,184	75,257	45,332
5 Add-on amounts for PFE associated with all derivatives transactions	72,077	72,334	78,959
6 Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the operative accounting framework			
7 (Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(22,067)	(29,424)	(18,984)
8 (Exempted QCCP leg of client-cleared trade exposures)	(12,413)	(13,535)	(14,987)
9 Adjusted effective notional amount of all written credit derivatives ¹	41,188	50,857	44,243
10 (Adjusted effective notional offsets and add-on deductions for written credit derivatives) ²	(40,702)	(50,329)	(43,629)
11 Total derivative exposures	90,266	105,161	90,934
Securities financing transaction exposures			
12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions	177,828	157,654	200,921
13 (Netted amounts of cash payables and cash receivables of gross SFT assets)	(87,946)	(61,567)	(101,437)
14 CCR exposure for SFT assets	8,741	8,168	9,695
15 Agent transaction exposures			
16 Total securities financing transaction exposures	98,623	104,255	109,179
Other off-balance sheet exposures			
17 Off-balance sheet exposure at gross notional amount	111,555	103,838	106,112
18 (Adjustments for conversion to credit equivalent amounts)	(77,139)	(72,216)	(73,322)
19 Total off-balance sheet items	34,416	31,622	32,790
Total exposures (leverage ratio denominator)	1,028,461	989,787	1,068,862
Capital and total exposures (leverage ratio denominator)			
20 Tier 1 capital	58,321	59,359	60,488
21 Total exposures (leverage ratio denominator)	1,028,461	989,787	1,068,862
Leverage ratio			
22 Basel III leverage ratio (%)	5.7	6.0	5.7

¹ Includes protection sold, including agency transactions. ² Protection sold can be offset with protection bought on the same underlying reference entity, provided that the conditions according to the Basel III leverage ratio framework and disclosure requirements are met.

LR1: BCBS Basel III leverage ratio summary comparison

	31.12.22	30.9.22	31.12.21
<i>USD m</i>			
1 Total consolidated assets as per published financial statements	1,104,364	1,111,753	1,117,182
2 Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation ¹	(24,169)	(23,488)	(33,070)
3 Adjustment for fiduciary assets recognized on the balance sheet pursuant to the operative accounting framework but excluded from the leverage ratio exposure measure			
4 Adjustments for derivative financial instruments	(94,893)	(138,268)	(57,734)
5 Adjustment for securities financing transactions (i.e., repos and similar secured lending)	8,741	8,168	9,695
6 Adjustment for off-balance sheet items (i.e., conversion to credit equivalent amounts of off-balance sheet exposures)	34,416	31,622	32,790
7 Other adjustments			
8 Leverage ratio exposure (leverage ratio denominator)	1,028,461	989,787	1,068,862

¹ Includes assets that are deducted from tier 1 capital.

Section 15 Liquidity and funding

Liquidity coverage ratio

Quarterly | We monitor the liquidity coverage ratio (the LCR) in all significant currencies in order to manage any currency mismatch between high-quality liquid assets (HQLA) and the net expected cash outflows in times of stress. ▲

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Concentration of funding sources	Capital, liquidity and funding, and balance sheet	– Balance sheet and off-balance sheet: Liabilities by product and currency	154
Concentration of funding sources	Capital, liquidity and funding, and balance sheet	– Liquidity and funding management: Funding management	148
Currency mismatch in the LCR	Capital, liquidity and funding, and balance sheet	– Liquidity and funding management: Liquidity coverage ratio	149

High-quality liquid assets

Quarterly | HQLA must be easily and immediately convertible into cash at little or no loss of value, especially during a period of stress. HQLA are assets that are of low risk and are unencumbered. Other characteristics of HQLA are ease and certainty of valuation, low correlation with risky assets, listing of the assets on a developed and recognized exchange, existence of an active and sizable market for the assets, and low volatility. Our HQLA predominantly consist of assets that qualify as Level 1 in the LCR framework, including cash, central bank reserves and government bonds.

High-quality liquid assets (HQLA)

	Average 4Q22 ¹			Average 3Q22 ¹		
	Level 1 weighted liquidity value ²	Level 2 weighted liquidity value ²	Total weighted liquidity value ²	Level 1 weighted liquidity value ²	Level 2 weighted liquidity value ²	Total weighted liquidity value ²
<i>USD bn, except where indicated</i>						
Cash balances ³	151.5		151.5	167.0		167.0
Securities (on- and off-balance sheet)	66.1	21.0	87.1	53.8	19.6	73.5
Total HQLA⁴	217.6	21.0	238.6	220.8	19.6	240.4

¹ Calculated based on an average of 63 data points in the fourth quarter of 2022 and 66 data points in the third quarter of 2022. ² Calculated after the application of haircuts and, where applicable, caps on Level 2 assets. ³ Includes cash and balances with central banks and other eligible balances as prescribed by FINMA. ⁴ Calculated in accordance with FINMA requirements.

LCR development during the fourth quarter of 2022

Quarterly | In the fourth quarter of 2022, the quarterly average LCR of UBS Group increased 1.0 percentage point to 163.7%, remaining above the prudential requirement communicated by the Swiss Financial Market Supervisory Authority (FINMA). The movement in the average LCR was driven by a reduction in the average net cash outflows of USD 1.8bn to USD 146.0bn, mainly due to lower outflows from customer deposits, partially offset by lower inflows from loans. The effect of the reduction in the average net cash outflows was largely offset by a decrease in the average HQLA of USD 1.8bn to USD 238.6bn, mainly driven by lower average cash balances due to higher funding consumption from the business divisions.

LIQ1: Liquidity coverage ratio

		Average 4Q22 ¹		Average 3Q22 ¹	
		Unweighted value	Weighted value ²	Unweighted value	Weighted value ²
<i>USD bn, except where indicated</i>					
High-quality liquid assets (HQLA)					
1	Total HQLA	242.6	238.6	244.1	240.4
Cash outflows					
2	Retail deposits and deposits from small business customers	270.1	30.3	277.0	31.3
3	<i>of which: stable deposits</i>	37.9	1.3	38.8	1.4
4	<i>of which: less stable deposits</i>	232.2	29.0	238.2	29.9
5	Unsecured wholesale funding	215.0	113.0	225.1	118.2
6	<i>of which: operational deposits (all counterparties)</i>	49.4	12.2	51.4	12.7
7	<i>of which: non-operational deposits (all counterparties)</i>	154.1	89.4	161.8	93.5
8	<i>of which: unsecured debt</i>	11.4	11.4	12.0	12.0
9	Secured wholesale funding		66.3		66.5
10	Additional requirements:	104.0	31.7	99.8	30.0
11	<i>of which: outflows related to derivatives and other transactions</i>	66.5	21.4	62.1	20.5
12	<i>of which: outflows related to loss of funding on debt products³</i>	0.1	0.1	0.1	0.1
13	<i>of which: committed credit and liquidity facilities</i>	37.5	10.2	37.6	9.4
14	Other contractual funding obligations	17.9	16.9	14.7	13.7
15	Other contingent funding obligations	195.8	4.0	199.7	4.0
16	Total cash outflows		262.1		263.7
Cash inflows					
17	Secured lending	213.7	66.6	208.1	67.1
18	Inflows from fully performing exposures	53.5	23.8	57.3	25.4
19	Other cash inflows	25.7	25.7	23.3	23.3
20	Total cash inflows	292.8	116.2	288.7	115.9
		Average 4Q22 ¹		Average 3Q22 ¹	
		Total adjusted value ⁴		Total adjusted value ⁴	
<i>USD bn, except where indicated</i>					
Liquidity coverage ratio (LCR)					
21	Total HQLA		238.6		240.4
22	Net cash outflows		146.0		147.8
23	LCR (%)		163.7		162.7

¹ Calculated based on an average of 63 data points in the fourth quarter of 2022 and 66 data points in the third quarter of 2022. ² Calculated after the application of haircuts and inflow and outflow rates. ³ Includes outflows related to loss of funding on asset-backed securities, covered bonds, other structured financing instruments, asset-backed commercial papers, structured entities (conduits), securities investment vehicles and other such financing facilities. ⁴ Calculated after the application of haircuts and inflow and outflow rates, as well as, where applicable, caps on Level 2 assets and cash inflows.

Liquidity risk management

Annual I The table below presents an overview of risk management disclosures related to risks resulting from liquidity and funding activities that are provided separately in our Annual Report 2022, available under “Annual reporting” at ubs.com/investors.

LIQA: Liquidity risk management

Pillar 3 disclosure requirement	Annual Report 2022 section	Disclosure	Annual Report 2022 page number
Liquidity risk management, including risk tolerance and target / limit setting, monitoring and reporting, including policies and practices, as well as governance and governance structure	Capital, liquidity and funding, and balance sheet	– Liquidity and funding management: Strategy, objectives and governance	147
Funding risk strategy and management: objective, diversification of funding sources, limits and targets approach	Capital, liquidity and funding, and balance sheet	– Liquidity and funding management: Funding management and Strategy, objectives and governance	147–148
Liquidity risk management and strategy: objective, diversification of liquid assets, limits and targets approach	Capital, liquidity and funding, and balance sheet	– Liquidity and funding management: Liquidity and funding stress testing and Strategy, objectives and governance	147–148
Stress testing approach and stress scenario description	Capital, liquidity and funding, and balance sheet	– Liquidity and funding management: Liquidity and funding stress testing	147–148
Contingency funding plan	Capital, liquidity and funding, and balance sheet	– Liquidity and funding management: Contingency funding plan	148
Asset encumbrance (encumbered, unencumbered and assets that cannot be pledged as collateral); unencumbered assets by currency	Capital, liquidity and funding, and balance sheet	– Balance sheet and off-balance sheet: Asset encumbrance – Unencumbered assets available to secure funding on a Group and / or legal entity level by currency	151 151
Limitations on the transferability of liquidity	Capital, liquidity and funding, and balance sheet	– Liquidity and funding management / Liquidity coverage ratio: Trapped liquidity at Group level (High-quality liquid assets paragraph)	149
Maturity of assets and liabilities to provide a view on the balance sheet and off-balance sheet structure	UBS Group AG consolidated financial statements	– Note 23 Maturity analysis of assets and liabilities	334–336



Net Stable Funding ratio

NSFR development during the fourth quarter of 2022

Semi-annual I As of 31 December 2022, the net stable funding ratio (the NSFR) of UBS Group decreased 0.6 percentage points to 119.8%, remaining above the prudential requirement communicated by FINMA.

The movement in the NSFR was driven by USD 25.0bn higher required stable funding, mainly due to an increase in trading assets and loans to customers, partially offset by lower derivative balances. Available stable funding increased by USD 27.5bn, predominantly due to increased customer deposits and debt securities issued.

› Refer to “Liquidity and funding management” in the “Capital, liquidity and funding, and balance sheet” section of our Annual Report 2022, available under “Annual reporting” at ubs.com/investors, for more information

LIQ2: Net stable funding ratio (NSFR)

USD bn	31.12.22					30.9.22				
	Unweighted value by residual maturity				Weighted Value	Unweighted value by residual maturity				Weighted Value
	No Maturity	< 6 months	6 months to < 1 year	≥ 1 year		No Maturity	< 6 months	6 months to < 1 year	≥ 1 year	
Available Stable Funding (ASF) Item										
1	Capital:	56.9		13.1	69.9	55.8		13.4	69.2	
2	Regulatory Capital	56.9		12.5	69.4	55.8		12.9	68.7	
3	Other Capital Instruments			0.5	0.5			0.5	0.5	
4	Retail deposits and deposits from small business customers:		294.6	7.4	10.3	284.0	289.2	0.5	1.7	264.4
5	Stable deposits		37.7	0.0	0.0	35.8	38.9	0.0	0.0	37.0
6	Less stable deposits		256.9	7.4	10.3	248.1	250.3	0.5	1.7	227.5
7	Wholesale Funding:		339.6	26.2	103.1	200.5	331.3	19.9	101.9	193.1
8	Operational Deposits		51.3			25.7	50.1			25.1
9	Other wholesale funding		288.3	26.2	103.1	174.8	281.2	19.9	101.9	168.0
10	Liabilities with matching interdependent assets		4.0				3.6			
11	Other liabilities:	36.3	72.5		6.0	7.0	39.8	95.6		0.9
12	NSFR derivative liabilities				5.0 ¹					
13	All other liabilities and equity not included in the above categories	36.3	72.5		0.9	7.0	39.8	95.6		0.9
14	Total ASF				561.4					533.9
Required Stable Funding (RSF) Item										
15	Total NSFR high-quality liquid assets (HQLA)				28.3					21.2
16	Deposits held at other financial institutions for operational purposes		9.2		4.9		9.1			4.9
17	Performing loans and securities:	43.5	167.5	26.4	312.6	351.8	31.5	176.3	28.0	296.3
18	Performing loans to financial institutions secured by Level 1 HQLA or Level 2a HQLA		33.1	0.1	0.3	7.1		32.0	0.3	0.4
19	Performing loans to financial institutions secured by Level 2b HQLA or non-HQLA and unsecured performing loans to financial institutions		61.3	5.0	38.5	53.0		74.2	6.7	31.1
20	Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and PSEs, of which:		59.5	14.5	110.0	127.9		55.4	13.8	111.6
21	With a risk weight of less than or equal to 35% under Basel II standardized approach for credit risk		4.9	0.2	2.4	2.4		0.8	0.1	2.3
22	Performing residential mortgages, of which:		9.7	5.4	153.0	114.9		9.9	6.0	143.0
23	With a risk weight of less than or equal to 35% under Basel II standardized approach for credit risk		8.6	5.2	136.3	99.8		8.9	5.7	127.3
24	Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	43.5	3.9	1.3	10.8	49.0	31.5	4.7	1.3	10.3
25	Assets with matching interdependent liabilities	4.0					3.6			
26	Other assets:	36.8	20.3	0.1	94.1	80.9	36.3	41.5	0.1	101.7
27	Physical traded commodities, including gold	0.5				0.4	0.5			0.4
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs				24.8 ¹	21.1				21.1 ¹
29	NSFR derivative assets									6.5 ¹
30	NSFR derivative liabilities before deduction of variation margin posted				60.3 ¹	12.1				66.2 ¹
31	All other assets not included in the above categories	36.3	20.3	0.1	9.0	47.3	35.8	41.5	0.1	8.0
32	Off-balance sheet items		20.5	6.6	33.0	2.6		23.1	6.5	28.4
33	Total RSF				468.5					443.5
34	Net Stable Funding Ratio (%)				119.8					120.4

¹ The ≥ 1 year maturity bucket includes balances for which differentiation by maturity is not required.

Section 16 Remuneration

Annual I Pillar 3 disclosures on remuneration are separately provided on pages 179–180 and pages 197–238 in our Annual Report 2022, available under “Annual reporting” at ubs.com/investors. ▲

Section 17 Requirements for global systemically important banks and related indicators

Semi-annual I The Financial Stability Board (the FSB) has determined that UBS is a global systemically important bank (a G-SIB), using an indicator-based methodology adopted by the Basel Committee on Banking Supervision (the BCBS). Banks that qualify as G-SIBs are required to disclose 12 indicators for assessing the systemic importance of G-SIBs as defined by the BCBS. These indicators are used for the G-SIB score calculation and cover five categories: size, cross-jurisdictional activity, interconnectedness, substitutability / financial institution infrastructure, and complexity.

Based on the published indicators, G-SIBs are subject to additional common equity tier 1 (CET1) capital buffer requirements in the range from 1.0% to 3.5%. In November 2022, the FSB confirmed that, based on the year-end 2021 indicators, the additional CET1 capital buffer requirement for UBS Group will remain at 1.0%. As our Swiss systemically relevant bank Basel III capital requirements exceed the BCBS requirements, including the G-SIB buffer, we are not affected by these additional G-SIB requirements.

The BCBS introduced a leverage ratio buffer for G-SIBs as a part of the finalization of the Basel III framework announced in December 2017. The leverage ratio buffer is set at 50% of risk-weighted higher-loss absorbency requirements. Implementation of the final Basel III framework in Switzerland is expected to enter into force on 1 January 2025. We do not expect these changes to increase our additional CET1 capital buffer requirement.

We provide our G-SIB indicators as of 31 December 2021 under “Pillar 3 disclosures” at ubs.com/investors. Our G-SIB indicators as of 31 December 2022 will be published in July 2023 under “Pillar 3 disclosures” at ubs.com/investors. ▲

Significant regulated subsidiaries and sub-groups

Section 1 Introduction

Scope of disclosures in this section

The sections below include capital and other regulatory information as of 31 December 2022 for UBS AG standalone, UBS Switzerland AG standalone, UBS Europe SE consolidated and UBS Americas Holding LLC consolidated. Capital information in the following sections is based on Pillar 1 capital requirements. Entities may be subject to significant additional Pillar 2 requirements, which represent additional amounts of capital considered necessary and are agreed with regulators based on the risk profile of the respective entity.

UBS Americas Holding LLC consolidated

Dodd–Frank Act Stress Test

In June 2022, the Federal Reserve Board released the results of its 2022 Dodd–Frank Act Stress Test (DFAST). UBS's US intermediate holding company, UBS Americas Holding LLC, exceeded the minimum capital requirements under the severely adverse scenario.

Stress capital buffer in the US

Following the completion of the annual 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%.

Community Reinvestment Act

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.

This proposal represents a significant regulatory agenda, which, if completed in the near future, would likely require significant resources to implement.

Section 2 UBS AG standalone

Key metrics of the fourth quarter of 2022

Quarterly | The table below is based on Basel Committee on Banking Supervision (BCBS) Basel III rules.

During the fourth quarter of 2022, common equity tier 1 (CET1) capital increased by USD 0.5bn to USD 54.0bn, mainly reflecting operating profit before tax, partly offset by additional accruals for capital returns to UBS Group AG. Tier 1 capital decreased by USD 1.3bn to USD 65.8bn, primarily driven by a USD 1.8bn decrease in additional tier 1 (AT1) capital, partly offset by the aforementioned increase in CET1 capital. The decrease in AT1 capital was 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. Total capital decreased by USD 1.3bn to USD 66.3bn, mainly reflecting the aforementioned decrease in tier 1 capital.

Phase-in risk-weighted assets (RWA) increased by USD 9.5bn to USD 332.9bn during the fourth quarter of 2022, primarily driven by increased participation RWA and, to a lesser extent, by increases across market risk, as well as credit and counterparty credit risk RWA, partly offset by a decrease in operational risk RWA.

Leverage ratio exposure increased by USD 22.2bn to USD 575.5bn, mainly driven by higher trading portfolio assets and purchases of high-quality liquid asset (HQLA) securities, partly offset by lower derivatives.

Correspondingly, the CET1 capital ratio of UBS AG decreased to 16.2% from 16.5%, reflecting the increase in RWA, partly offset by the increase in the CET1 capital. The firm's Basel III leverage ratio decreased to 11.4% from 12.1%, reflecting the higher leverage ratio exposure and the decrease in tier 1 capital.

The quarterly average liquidity coverage ratio (the LCR) increase was driven by a decrease in the average net cash outflows of USD 2.2bn to USD 53.6bn, mainly due to higher inflows from intercompany funding to other UBS entities. The effect of the reduction in the average net cash outflows was partially offset by a decrease in the average HQLA of USD 4.2bn to USD 101.6bn due to higher funding consumption from the business divisions.

As of 31 December 2022, the net stable funding ratio (the NSFR) decreased by 0.9 percentage points to 90.8%, remaining above the prudential requirement communicated by the Swiss Financial Market Supervisory Authority (FINMA). The movement in the NSFR was driven by an increase in required stable funding of USD 16.9bn to USD 280.2bn, mainly due to higher trading assets and loans to customers, partly offset by decreased derivative balances. Available stable funding increased by USD 12.9bn to USD 254.4bn, largely driven by higher customer deposits and debt securities issued.

KM1: Key metrics

USD m, except where indicated

	31.12.22	30.9.22	30.6.22	31.3.22	31.12.21
Available capital (amounts)					
1 Common Equity Tier 1 (CET1) ¹	53,995	53,480	54,146	52,218	52,818
1a Fully loaded ECL accounting model CET1	53,995	53,480	54,139	52,211	52,803
2 Tier 1 ¹	65,836	67,149	68,188	66,597	66,658
2a Fully loaded ECL accounting model Tier 1	65,836	67,149	68,180	66,589	66,643
3 Total capital ¹	66,321	67,634	68,682	67,599	68,054
3a Fully loaded ECL accounting model total capital	66,321	67,634	68,674	67,592	68,039
Risk-weighted assets (amounts)²					
4 Total risk-weighted assets (RWA)	332,864	323,364	327,846	330,401	317,913
4a Minimum capital requirement ³	26,629	25,869	26,228	26,432	25,433
4b Total risk-weighted assets (pre-floor)	332,864	323,364	327,846	330,401	317,913
Risk-based capital ratios as a percentage of RWA²					
5 CET1 ratio (%) ¹	16.22	16.54	16.52	15.80	16.61
5a Fully loaded ECL accounting model CET1 ratio (%)	16.22	16.54	16.51	15.80	16.61
6 Tier 1 ratio (%) ¹	19.78	20.77	20.80	20.16	20.97
6a Fully loaded ECL accounting model Tier 1 ratio (%)	19.78	20.77	20.80	20.15	20.96
7 Total capital ratio (%) ¹	19.92	20.92	20.95	20.46	21.41
7a Fully loaded ECL accounting model total capital ratio (%)	19.92	20.92	20.95	20.46	21.40
Additional CET1 buffer requirements as a percentage of RWA					
8 Capital conservation buffer requirement (%)	2.50	2.50	2.50	2.50	2.50
9 Countercyclical buffer requirement (%)	0.06	0.02	0.02	0.02	0.02
9a Additional countercyclical buffer for Swiss mortgage loans (%)	0.00	0.00			
10 Bank G-SIB and / or D-SIB additional requirements (%) ⁴					
11 Total of bank CET1 specific buffer requirements (%) ⁵	2.56	2.52	2.52	2.52	2.52
12 CET1 available after meeting the bank's minimum capital requirements (%)	11.72	12.04	12.02	11.30	12.11
Basel III leverage ratio					
13 Total Basel III leverage ratio exposure measure	575,461	553,215	569,794	594,893	593,868
14 Basel III leverage ratio (%) ¹	11.44	12.14	11.97	11.19	11.22
14a Fully loaded ECL accounting model Basel III leverage ratio (%)	11.44	12.14	11.97	11.19	11.22
Liquidity coverage ratio (LCR)⁶					
15 Total high-quality liquid assets (HQLA)	101,609	105,768	104,628	103,168	89,488
16 Total net cash outflow	53,616	55,770	55,405	55,039	52,229
16a of which: cash outflows	156,764	155,688	159,568	162,735	163,207
16b of which: cash inflows	103,148	99,919	104,163	107,696	110,978
17 LCR (%)	191.19	190.23	189.29	188.26	173.19
Net stable funding ratio (NSFR)⁷					
18 Total available stable funding	254,433	241,505	244,791	249,760	257,992
19 Total required stable funding	280,166	263,308	265,597	275,424	289,195
20 NSFR (%)	90.82	91.72	92.17	90.68	89.21

¹ As of 1 July 2022, our capital amounts exclude the transitional relief of recognizing ECL allowances and provisions in CET1 capital in accordance with FINMA Circular 2013/1 "Eligible capital – banks." ² Based on phase-in rules for RWA. Refer to "Swiss SRB going and gone concern requirements and information" below for more information. ³ Calculated as 8% of total RWA, based on total capital minimum requirements, excluding CET1 buffer requirements. ⁴ Swiss SRB going and gone concern requirements and information for UBS AG standalone are provided below in this section. ⁵ Excludes non-BCBS capital buffer requirements for risk-weighted positions that are directly or indirectly backed by residential properties in Switzerland. ⁶ Calculated after the application of haircuts and inflow and outflow rates, as well as, where applicable, caps on Level 2 assets and cash inflows. Calculated based on an average of 63 data points in the fourth quarter of 2022 and 66 data points in the third quarter of 2022. For the prior-quarter data points, refer to the respective Pillar 3 Report, available under "Pillar 3 disclosures" at ubs.com/investors, for more information. ⁷ 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.

Swiss SRB going and gone concern requirements and information

UBS AG standalone is considered a systemically relevant bank (an SRB) under Swiss banking law and is subject to capital regulations on a standalone basis.

The capital requirements based on RWA include a minimum CET1 capital requirement of 10.06%, including a countercyclical buffer of 0.06%, and a total going concern capital requirement of 14.36%, including a countercyclical buffer of 0.06%. The capital requirements based on the leverage ratio denominator (the LRD) include a minimum CET1 capital requirement of 3.5% and a total going concern leverage ratio requirement of 5.0%.

CET1 and high-trigger AT1 capital instruments are eligible as going concern capital. As of 31 December 2022, one remaining outstanding low-trigger AT1 capital instrument, amounting to USD 1.2bn, that was on lent from UBS Group AG to UBS AG qualifies as going concern capital, as agreed with FINMA.

Currently, UBS AG standalone is subject to a gone concern capital requirement based on the sum of: (i) the capital requirements resulting from third-party exposure on a standalone basis; (ii) a buffer requirement equal to 30% of the Group's gone concern capital requirement on UBS AG's consolidated exposure; and (iii) the nominal value of the gone concern instruments issued by UBS entities and held by the parent bank. A transitional period until 2024 has been granted for the buffer requirement. The gone concern capital coverage ratio reflects how much gone concern capital is available to meet the gone concern requirement. Outstanding high- and low-trigger loss-absorbing tier 2 capital instruments, non-Basel III-compliant tier 2 capital instruments and total loss-absorbing capacity-eligible senior unsecured debt instruments are eligible to meet gone concern requirements until one year before maturity.

› Refer to “Significant regulatory developments, disclosure requirements and other changes to be adopted after 2022” in the “Introduction and basis for preparation” section of this report for more information about Revisions to the Swiss Banking Ordinance

For direct and indirect investments, including the holding of regulatory capital instruments of UBS AG by subsidiaries that are active in banking and finance, a FINMA decree introduced a risk-weighting approach, with a phase-in period until 1 January 2028. Starting from 1 July 2017, these investments were risk-weighted at 200%. From 1 January 2019 onward, the risk weights are being gradually raised by 5 percentage points per year for Switzerland-domiciled investments and by 20 percentage points per year for foreign-domiciled investments until the fully applied risk weights are 250% and 400%, respectively. As of 31 December 2022, the applicable phase-in risk weights are 220% for Switzerland-domiciled investments and 280% for foreign-domiciled investments.

› Refer to “Additional information” in the “Capital, liquidity and funding, and balance sheet” section of our Annual Report 2022 for more information about the joint liability of UBS AG and UBS Switzerland AG

Quarterly | The tables below provide details of the Swiss SRB RWA- and LRD-based going and gone concern requirements and information as required by FINMA; details regarding eligible gone concern instruments are provided below.

Swiss SRB going and gone concern requirements and information

As of 31.12.22	RWA, phase-in		RWA, fully applied as of 1.1.28		LRD	
<i>USD m, except where indicated</i>	in %		in %		in %	
Required going concern capital						
Total going concern capital	14.36 ¹	47,800	14.36 ¹	56,023	5.00 ¹	28,773
Common equity tier 1 capital	10.06	33,486	10.06	39,247	3.50	20,141
of which: minimum capital	4.50	14,979	4.50	17,556	1.50	8,632
of which: buffer capital	5.50	18,307	5.50	21,457	2.00	11,509
of which: countercyclical buffer	0.06	200	0.06	234		
Maximum additional tier 1 capital	4.30	14,313	4.30	16,776	1.50	8,632
of which: additional tier 1 capital	3.50	11,650	3.50	13,654	1.50	8,632
of which: additional tier 1 buffer capital	0.80	2,663	0.80	3,121		
Eligible going concern capital						
Total going concern capital	19.78	65,836	16.88	65,836	11.44	65,836
Common equity tier 1 capital	16.22	53,995	13.84	53,995	9.38	53,995
Total loss-absorbing additional tier 1 capital	3.56	11,841	3.04	11,841	2.06	11,841
of which: high-trigger loss-absorbing additional tier 1 capital	3.20	10,654	2.73	10,654	1.85	10,654
of which: low-trigger loss-absorbing additional tier 1 capital	0.36	1,187	0.30	1,187	0.21	1,187
Risk-weighted assets / leverage ratio denominator						
Risk-weighted assets		332,864		390,128		
Leverage ratio denominator						575,461
Required gone concern capital²						
Total gone concern loss-absorbing capacity		Higher of RWA- or LRD-based				40,106
Eligible gone concern capital						
Total gone concern loss-absorbing capacity						46,982
Gone concern capital coverage ratio						117.15

¹ Includes applicable add-ons of 1.44% for RWA and 0.50% for LRD. ² 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.

Swiss SRB going and gone concern information

USD m, except where indicated	31.12.22	30.9.22	31.12.21
Eligible going concern capital			
Total going concern capital	65,836	67,149	66,658
Total tier 1 capital	65,836	67,149	66,658
Common equity tier 1 capital	53,995	53,480	52,818
Total loss-absorbing additional tier 1 capital	11,841	13,669	13,840
of which: high-trigger loss-absorbing additional tier 1 capital	10,654	12,481	11,414
of which: low-trigger loss-absorbing additional tier 1 capital	1,187	1,188	2,426
Eligible gone concern capital			
Total gone concern loss-absorbing capacity	46,982	45,375	44,250
Total tier 2 capital	2,949	2,949	3,129
of which: low-trigger loss-absorbing tier 2 capital	2,421	2,426	2,594
of which: non-Basel III-compliant tier 2 capital	528	523	535
TLAC-eligible senior unsecured debt	44,033	42,426	41,120
Total loss-absorbing capacity	112,818	112,524	110,908
Denominators for going and gone concern ratios			
Risk-weighted assets phase-in	332,864	323,364	317,913
of which: investments in Switzerland-domiciled subsidiaries ¹	39,589	37,427	38,935
of which: investments in foreign-domiciled subsidiaries ¹	121,021	115,512	108,982
Risk-weighted assets fully applied as of 1.1.28	390,128	377,973	382,934
of which: investments in Switzerland-domiciled subsidiaries ¹	44,988	42,530	45,273
of which: investments in foreign-domiciled subsidiaries ¹	172,887	165,018	167,664
Leverage ratio denominator	575,461	553,215	593,868
Capital and loss-absorbing capacity ratios (%)			
Going concern capital ratio, phase-in	19.8	20.8	21.0
of which: common equity tier 1 capital ratio, phase-in	16.2	16.5	16.6
Going concern capital ratio, fully applied as of 1.1.28	16.9	17.8	17.4
of which: common equity tier 1 capital ratio, fully applied as of 1.1.28	13.8	14.1	13.8
Leverage ratios (%)			
Going concern leverage ratio	11.4	12.1	11.2
of which: common equity tier 1 leverage ratio	9.4	9.7	8.9
Capital coverage ratio (%)			
Gone concern capital coverage ratio	117.1	117.8	112.0

¹ Net exposures for direct and indirect investments including holding of regulatory capital instruments in Switzerland-domiciled subsidiaries and for direct and indirect investments including holding of regulatory capital instruments in foreign-domiciled subsidiaries are risk-weighted at 220% and 280%, respectively, for the current year. Risk weights will gradually increase by 5 percentage points per year for Switzerland-domiciled investments and 20 percentage points per year for foreign-domiciled investments until the fully applied risk weights of 250% and 400%, respectively, are applied.

Leverage ratio information

Swiss SRB leverage ratio denominator

USD bn	31.12.22	30.9.22	31.12.21
Leverage ratio denominator			
Swiss GAAP total assets	504.8	486.1	509.9
Difference between Swiss GAAP and IFRS total assets	156.1	196.4	125.0
Less derivatives and SFTs ¹	(254.7)	(310.8)	(216.4)
Less funding provided to significant regulated subsidiaries eligible as gone concern capital	(21.9)	(20.8)	(21.8)
On-balance sheet exposures (excluding derivatives and SFTs)	384.3	350.9	396.7
Derivatives	88.3	101.7	89.7
Securities financing transactions	80.7	79.4	85.4
Off-balance sheet items	23.7	22.6	23.7
Items deducted from Swiss SRB tier 1 capital	(1.7)	(1.4)	(1.6)
Total exposures (leverage ratio denominator)	575.5	553.2	593.9

¹ The exposures consist of derivative financial instruments, cash collateral receivables on derivative instruments, receivables from SFTs, and margin loans, as well as prime brokerage receivables and financial assets at fair value not held for trading, both related to SFTs. These exposures are presented separately under Derivatives and Securities financing transactions in this table.

Section 3 UBS Switzerland AG standalone

Key metrics of the fourth quarter of 2022

Quarterly | The table below is based on Basel Committee on Banking Supervision (BCBS) Basel III rules and International Financial Reporting Standards (IFRS).

During the fourth quarter of 2022, common equity tier 1 (CET1) capital increased by CHF 0.1bn to CHF 12.6bn, mainly driven by operating profit, largely offset by additional accruals for dividends.

Total risk-weighted assets (RWA) decreased by CHF 2.0bn to CHF 107.2bn, reflecting a decrease of CHF 0.6bn from pre-floor RWA and a decrease of CHF 1.4bn from the floor adjustment, mainly due to decreases from Lombard lending, securities financing transactions (SFTs), and derivatives.

Leverage ratio exposure decreased by CHF 2.5bn to CHF 332.3bn, mainly due to lower derivatives and SFTs.

The quarterly average liquidity coverage ratio (the LCR) increased by 1.3 percentage points to 142.4%, remaining above the prudential requirement communicated by the Swiss Financial Market Supervisory Authority (FINMA). The average LCR increase was driven by lower average net cash outflows of CHF 0.6bn to CHF 62.4bn due to lower net outflows from SFTs. Average high-quality liquid assets slightly decreased by CHF 0.1bn to CHF 88.9bn.

As of 31 December 2022, the net stable funding ratio (the NSFR) decreased by 4.5 percentage points to 136.6%, remaining above the prudential requirement communicated by FINMA. The movement in the NSFR was driven by an increase in required stable funding of CHF 3.5bn to CHF 162.3bn, mainly due to higher loans to customers, and a decrease in available stable funding of CHF 2.5bn to CHF 221.7bn, mainly driven by lower customer deposits.

KM1: Key metrics

CHF m, except where indicated

	31.12.22	30.9.22	30.6.22	31.3.22	31.12.21
Available capital (amounts)					
1 Common Equity Tier 1 (CET1) ¹	12,586	12,520	12,718	12,786	12,609
1a Fully loaded ECL accounting model CET1	12,586	12,520	12,717	12,785	12,608
2 Tier 1 ¹	17,978	17,939	18,124	18,178	17,996
2a Fully loaded ECL accounting model Tier 1	17,978	17,939	18,123	18,178	17,995
3 Total capital ¹	17,978	17,939	18,124	18,178	17,996
3a Fully loaded ECL accounting model total capital	17,978	17,939	18,123	18,178	17,995
Risk-weighted assets (amounts)					
4 Total risk-weighted assets (RWA)	107,208	109,163	107,344	108,071	106,399
4a Minimum capital requirement ²	8,577	8,733	8,588	8,646	8,512
4b Total risk-weighted assets (pre-floor)	97,662	98,242	96,583	95,858	93,437
Risk-based capital ratios as a percentage of RWA					
5 CET1 ratio (%) ¹	11.74	11.47	11.85	11.83	11.85
5a Fully loaded ECL accounting model CET1 ratio (%)	11.74	11.47	11.85	11.83	11.85
6 Tier 1 ratio (%) ¹	16.77	16.43	16.88	16.82	16.91
6a Fully loaded ECL accounting model Tier 1 ratio (%)	16.77	16.43	16.88	16.82	16.91
7 Total capital ratio (%) ¹	16.77	16.43	16.88	16.82	16.91
7a Fully loaded ECL accounting model total capital ratio (%)	16.77	16.43	16.88	16.82	16.91
Additional CET1 buffer requirements as a percentage of RWA					
8 Capital conservation buffer requirement (%)	2.50	2.50	2.50	2.50	2.50
9 Countercyclical buffer requirement (%)	0.02	0.02	0.02	0.02	0.02
9a Additional countercyclical buffer for Swiss mortgage loans (%)	0.75	0.74			
10 Bank G-SIB and / or D-SIB additional requirements (%) ³					
11 Total of bank CET1 specific buffer requirements (%) ⁴	2.52	2.52	2.52	2.52	2.52
12 CET1 available after meeting the bank's minimum capital requirements (%)	7.24	6.97	7.35	7.33	7.35
Basel III leverage ratio					
13 Total Basel III leverage ratio exposure measure	332,280	334,765	340,969	346,097	339,788
14 Basel III leverage ratio (%) ¹	5.41	5.36	5.32	5.25	5.30
14a Fully loaded ECL accounting model Basel III leverage ratio (%)	5.41	5.36	5.32	5.25	5.30
Liquidity coverage ratio (LCR)⁵					
15 Total high-quality liquid assets (HQLA)	88,889	89,016	93,651	94,850	91,304
16 Total net cash outflow	62,437	63,082	66,248	66,962	64,084
16a of which: cash outflows	84,826	85,858	90,247	91,396	88,771
16b of which: cash inflows	22,389	22,776	23,999	24,434	24,687
17 LCR (%)	142.41	141.15	141.42	141.72	142.57
Net stable funding ratio (NSFR)⁶					
18 Total available stable funding	221,689	224,149	225,178	228,789	225,239
19 Total required stable funding	162,306	158,853	156,232	159,876	158,072
20 NSFR (%)	136.59	141.10	144.13	143.10	142.49

¹ As of 1 July 2022, our capital amounts exclude the transitional relief of recognizing ECL allowances and provisions in CET1 capital in accordance with FINMA Circular 2013/1 "Eligible capital – banks." ² Calculated as 8% of total RWA, based on total capital minimum requirements, excluding CET1 buffer requirements. ³ Swiss SRB going and gone concern requirements and information for UBS Switzerland AG are provided below. ⁴ Excludes non-BCBS capital buffer requirements for risk-weighted positions that are directly or indirectly backed by residential properties in Switzerland. ⁵ Calculated after the application of haircuts and inflow and outflow rates, as well as, where applicable, caps on Level 2 assets and cash inflows. Calculated based on an average of 63 data points in the fourth quarter of 2022 and 66 data points in the third quarter of 2022. For the prior-quarter data points, refer to the respective Pillar 3 Report, available under "Pillar 3 disclosures" at ubs.com/investors, for more information. ⁶ UBS Switzerland AG is required to maintain a minimum NSFR of at least 100% on an ongoing basis as defined by Art. 17h para. 1 of the Liquidity Ordinance. A portion of the excess funding is needed to fulfill the NSFR requirement of UBS AG.



Swiss SRB going and gone concern requirements and information

Quarterly | UBS Switzerland AG is considered a systemically relevant bank (an SRB) under Swiss banking law and is subject to capital regulations on a standalone basis. As of 31 December 2022, the going concern capital and leverage ratio requirements for UBS Switzerland AG standalone were 15.07% (including a countercyclical buffer of 0.77%) and 5.00%, respectively.

The Swiss SRB framework and requirements applicable to UBS Switzerland AG standalone are the same as those applicable to UBS Group AG consolidated, with the exception of a lower gone concern requirement, corresponding to 62% of the Group's gone concern requirement (before applicable reductions).

The gone concern requirements were 8.87% for the RWA-based requirement and 3.10% for the leverage ratio denominator-based requirement.

› Refer to "Additional information" in the "Capital, liquidity and funding, and balance sheet" section of our Annual Report 2022 for more information about the joint liability of UBS AG and UBS Switzerland AG

Swiss SRB going and gone concern requirements and information

As of 31.12.22	RWA		LRD	
CHF m, except where indicated	in %		in %	
Required going concern capital				
Total going concern capital	15.07 ¹	16,161	5.00 ¹	16,614
Common equity tier 1 capital	10.77	11,551	3.50	11,630
of which: minimum capital	4.50	4,824	1.50	4,984
of which: buffer capital	5.50	5,896	2.00	6,646
of which: countercyclical buffer	0.77	830		
Maximum additional tier 1 capital	4.30	4,610	1.50	4,984
of which: additional tier 1 capital	3.50	3,752	1.50	4,984
of which: additional tier 1 buffer capital	0.80	858		
Eligible going concern capital				
Total going concern capital	16.77	17,978	5.41	17,978
Common equity tier 1 capital	11.74	12,586	3.79	12,586
Total loss-absorbing additional tier 1 capital	5.03	5,393	1.62	5,393
of which: high-trigger loss-absorbing additional tier 1 capital	5.03	5,393	1.62	5,393
Required gone concern capital²				
Total gone concern loss-absorbing capacity	8.87	9,505	3.10	10,301
of which: base requirement	7.97	8,548	2.79	9,271
of which: additional requirement for market share and LRD	0.89	957	0.31	1,030
Eligible gone concern capital				
Total gone concern loss-absorbing capacity	10.51	11,267	3.39	11,267
TLAC-eligible senior unsecured debt	10.51	11,267	3.39	11,267
Total loss-absorbing capacity				
Required total loss-absorbing capacity	23.94	25,666	8.10	26,915
Eligible total loss-absorbing capacity	27.28	29,245	8.80	29,245
Risk-weighted assets / leverage ratio denominator				
Risk-weighted assets		107,208		
Leverage ratio denominator				332,280

¹ Includes applicable add-ons of 1.44% for RWA and 0.50% for LRD. ² 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.

Swiss SRB loss-absorbing capacity

Quarterly I

Swiss SRB going and gone concern information

<i>CHF m, except where indicated</i>	31.12.22	30.9.22	31.12.21
Eligible going concern capital			
Total going concern capital	17,978	17,939	17,996
Total tier 1 capital	17,978	17,939	17,996
Common equity tier 1 capital	12,586	12,520	12,609
Total loss-absorbing additional tier 1 capital	5,393	5,419	5,387
<i>of which: high-trigger loss-absorbing additional tier 1 capital</i>	5,393	5,419	5,387
Eligible gone concern capital			
Total gone concern loss-absorbing capacity	11,267	11,336	10,853
TLAC-eligible senior unsecured debt	11,267	11,336	10,853
Total loss-absorbing capacity			
Total loss-absorbing capacity	29,245	29,275	28,849
Risk-weighted assets / leverage ratio denominator			
Risk-weighted assets	107,208	109,163	106,399
Leverage ratio denominator	332,280	334,765	339,788
Capital and loss-absorbing capacity ratios (%)			
Going concern capital ratio	16.8	16.4	16.9
<i>of which: common equity tier 1 capital ratio</i>	11.7	11.5	11.9
Gone concern loss-absorbing capacity ratio	10.5	10.4	10.2
Total loss-absorbing capacity ratio	27.3	26.8	27.1
Leverage ratios (%)			
Going concern leverage ratio	5.4	5.4	5.3
<i>of which: common equity tier 1 leverage ratio</i>	3.8	3.7	3.7
Gone concern leverage ratio	3.4	3.4	3.2
Total loss-absorbing capacity leverage ratio	8.8	8.7	8.5

Leverage ratio information

Swiss SRB leverage ratio denominator

<i>CHF bn</i>	31.12.22	30.9.22	31.12.21
Leverage ratio denominator			
Swiss GAAP total assets	315.7	318.0	320.7
Difference between Swiss GAAP and IFRS total assets	4.6	6.0	2.9
Less derivatives and SFTs ¹	(7.5)	(12.2)	(9.6)
On-balance sheet exposures (excluding derivatives and SFTs)	312.7	311.8	313.9
Derivatives	3.6	5.7	4.3
Securities financing transactions	1.0	2.5	5.4
Off-balance sheet items	15.1	15.0	16.5
Items deducted from Swiss SRB tier 1 capital	(0.2)	(0.2)	(0.3)
Total exposures (leverage ratio denominator)	332.3	334.8	339.8

¹ The exposures consist of derivative financial instruments, cash collateral receivables on derivative instruments, receivables from SFTs, and margin loans, as well as prime brokerage receivables and financial assets at fair value not held for trading, both related to SFTs. These exposures are presented separately under Derivatives and Securities financing transactions in this table.



Capital instruments

Quarterly I

Capital instruments of UBS Switzerland AG – key features

Presented according to issuance date.

		Share capital	Additional tier 1 capital							
1	Issuer	UBS Switzerland AG, Switzerland	UBS Switzerland AG, Switzerland	UBS Switzerland AG, Switzerland	UBS Switzerland AG, Switzerland	UBS Switzerland AG, Switzerland	UBS Switzerland AG, Switzerland	UBS Switzerland AG, Switzerland	UBS Switzerland AG, Switzerland	UBS Switzerland AG, Switzerland
2	Unique identifier (e.g., CUSIP, ISIN or Bloomberg identifier for private placement)	–	–							
3	Governing law(s) of the instrument	Swiss	Swiss							
3a	Means by which enforceability requirement of Section 13 of the TLAC Term Sheet is achieved (for other TLAC-eligible instruments governed by foreign law)	n/a	n/a							
Regulatory treatment										
4	Transitional Basel III rules ¹	CET1 – going concern capital	Additional tier 1 capital							
5	Post-transitional Basel III rules ²	CET1 – going concern capital	Additional tier 1 capital							
6	Eligible at solo / group / group and solo	UBS Switzerland AG consolidated and standalone	UBS Switzerland AG consolidated and standalone							
7	Instrument type (types to be specified by each jurisdiction)	Ordinary shares	Loan ³							
8	Amount recognized in regulatory capital (currency in millions, as of most recent reporting date) ¹	CHF 10.0	CHF 1,000	CHF 825	USD 425	CHF 475	CHF 500	CHF 700	CHF 675	CHF 825
9	Par value of instrument (currency in millions)	CHF 10.0	CHF 1,000	CHF 825	USD 425	CHF 475	CHF 500	CHF 700	CHF 675	CHF 825
10	Accounting classification ⁴	Equity attributable to UBS Switzerland AG shareholders	Due to banks held at amortized cost							
11	Original date of issuance	–	18 December 2017	12 December 2018	12 December 2018	11 December 2019	29 October 2020	11 March 2021	2 June 2021	2 June 2021
12	Perpetual or dated	–	Perpetual							
13	Original maturity date	–	–							
14	Issuer call subject to prior supervisory approval	–	Yes							

Capital instruments of UBS Switzerland AG – key features (continued)

Presented according to issuance date.

	Share capital	Additional tier 1 capital								
15	Optional call date, contingent call dates and redemption amount	–	First optional repayment date: 18 December 2022	First optional repayment date: 12 December 2023	First optional repayment date: 12 December 2023	First optional repayment date: 11 December 2024	First optional repayment date: 29 October 2025	First optional repayment date: 11 March 2026	First optional repayment date: 2 June 2026	First optional repayment date: 2 June 2028
			Repayable at any time after the first optional repayment date. Repayment subject to FINMA approval. Optional repayment amount: principal amount, together with any accrued and unpaid interest thereon.					Repayable on the first optional repayment date or on any of every second interest payment date thereafter. Repayment subject to FINMA approval. Optional repayment amount: principal amount, together with any accrued and unpaid interest thereon.	Repayable on the first optional repayment date or on any interest payment date thereafter. Repayment subject to FINMA approval. Optional repayment amount: principal amount, together with any accrued and unpaid interest thereon.	
16	Subsequent call dates, if applicable	–	Early repayment possible due to a tax or regulatory event. Repayment due to a tax event subject to FINMA approval. Repayment amount: principal amount, together with accrued and unpaid interest.							

Capital instruments of UBS Switzerland AG – key features (continued)

Presented according to issuance date.

	Share capital	Additional tier 1 capital							
Coupons		Floating							
17 Fixed or floating dividend / coupon	–								
18 Coupon rate and any related index	–	3-month SARON Compound + 250 bps per annum quarterly	3-month SARON Compound + 489 bps per annum quarterly	3-month SOFR Compound + 561 bps per annum quarterly	3-month SARON Compound + 433 bps per annum quarterly	3-month SARON Compound + 397 bps per annum quarterly	3-month SARON Compound + 337 bps per annum quarterly	3-month SARON Compound + 307 bps per annum quarterly	3-month SARON Compound + 308 bps per annum quarterly
19 Existence of a dividend stopper	–	No							
20 Fully discretionary, partially discretionary or mandatory	Fully discretionary	Fully discretionary							
21 Existence of step-up or other incentive to redeem	–	No							
22 Non-cumulative or cumulative	Non-cumulative	Non-cumulative							
23 Convertible or non-convertible	–	Non-convertible							
24 If convertible, conversion trigger(s)	–	–							
25 If convertible, fully or partially	–	–							
26 If convertible, conversion rate	–	–							
27 If convertible, mandatory or optional conversion	–	–							
28 If convertible, specify instrument type convertible into	–	–							
29 If convertible, specify issuer of instrument it converts into	–	–							
30 Write-down feature	–	Yes							
31 If write-down, write-down trigger(s)	–	Trigger: CET1 ratio is less than 7% FINMA determines a write-down necessary to ensure UBS Switzerland AG's viability; or UBS Switzerland AG receives a commitment of governmental support that FINMA determines necessary to ensure UBS Switzerland AG's viability. Subject to applicable conditions.							
32 If write-down, fully or partially	–	Fully							
33 If write-down, permanent or temporary	–	Permanent							
34 If temporary write-down, description of write-up mechanism	–	–							
34a Type of subordination	Statutory	Contractual							
35 Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Unless otherwise stated in the articles of association, once debts are paid back, the assets of the liquidated company are divided between the shareholders pro rata based on their contributions and considering the preferences attached to certain categories of shares (Art. 745, Swiss Code of Obligations)	Subject to any obligations that are mandatorily preferred by law, each obligation of UBS Switzerland AG that is unsubordinated or is subordinated and not ranked junior (such as all classes of share capital) or at par (such as tier 1 instruments)							
36 Non-compliant transitioned features	–	–							
37 If yes, specify non-compliant features	–	–							

¹ Based on Swiss SRB (including transitional arrangement) requirements. ² Based on Swiss SRB requirements applicable as of 1 January 2020. ³ Loans granted by UBS AG, Switzerland. ⁴ As applied in UBS Switzerland AG's financial statements under Swiss GAAP.



Section 4 UBS Europe SE consolidated

Quarterly | The table below provides information about the regulatory capital components, capital ratios, leverage ratio and liquidity of UBS Europe SE consolidated based on Basel Committee on Banking Supervision Pillar 1 requirements and in accordance with EU regulatory rules and International Financial Reporting Standards.

During the fourth quarter of 2022, EUR 2.4bn common equity tier 1 and EUR 3.0bn total capital remained stable. Risk-weighted assets decreased by EUR 1.2bn to EUR 10.7bn, as a result of the decrease in credit risk, mainly driven by exchange-traded and over-the-counter derivatives. Leverage ratio exposure decreased by EUR 9.9bn to EUR 41.8bn, mainly reflecting a decrease in Securities Financing Transactions and cash with central banks.

The average liquidity coverage ratio remained well above the regulatory requirements of 100% at 158.7%. The ratio decreased 7.5 percentage points with a EUR 0.5bn increase in high-quality liquid assets and a EUR 0.9bn increase in total net cash outflows. The net stable funding ratio has increased by 23.7% to 174.6% with a EUR 1.3bn decrease in required stable funding, mainly driven by a decrease in required stable funding from loans.

KM1: Key metrics¹

EUR m, except where indicated

	31.12.22	30.9.22 ²	30.6.22 ²	31.3.22 ²	31.12.21
Available capital (amounts)					
1 Common Equity Tier 1 (CET1)	2,441	2,436	2,427	2,766	2,764
2 Tier 1	3,041	3,036	3,027	3,056	3,054
3 Total capital	3,041	3,036	3,027	3,056	3,054
Risk-weighted assets (amounts)					
4 Total risk-weighted assets (RWA)	10,726	11,924	11,412	12,276	12,328
4a Minimum capital requirement ³	858 ³	954	913	982	986
Risk-based capital ratios as a percentage of RWA					
5 CET1 ratio (%)	22.8	20.4	21.3	22.5	22.4
6 Tier 1 ratio (%)	28.3	25.5	26.5	24.9	24.8
7 Total capital ratio (%)	28.3	25.5	26.5	24.9	24.8
Additional CET1 buffer requirements as a percentage of RWA					
8 Capital conservation buffer requirement (%)	2.5	2.5	2.5	2.5	2.5
9 Countercyclical buffer requirement (%)	0.3	0.2	0.1	0.1	0.1
10 Bank G-SIB and / or D-SIB additional requirements (%)					
11 Total of bank CET1 specific buffer requirements (%)	2.8	2.7	2.6	2.6	2.6
12 CET1 available after meeting the bank's minimum capital requirements (%) ⁴	18.3 ⁴	15.9	16.8	16.9	16.8
Basel III leverage ratio					
13 Total Basel III leverage ratio exposure measure	41,818	51,736	47,364	52,250	46,660
14 Basel III leverage ratio (%) ⁵	7.3 ⁵	5.9	6.4	5.8	6.5
Liquidity coverage ratio (LCR)⁶					
15 Total high-quality liquid assets (HQLA)	20,597	20,056	19,060	17,948	17,143
16 Total net cash outflow	13,082	12,221	11,640	10,745	10,091
17 LCR (%)	158.7	166.2	165.8	167.9	170.3
Net stable funding ratio (NSFR)					
18 Total available stable funding	13,856	13,912	13,853	14,696	15,358
19 Total required stable funding	7,935	9,220	9,343	8,624	8,963
20 NSFR (%)	174.6	150.9	148.3	170.4	171.3

¹ Based on applicable EU regulatory rules. ² Comparative figures have been restated to align with the regulatory reports as submitted to the European Central Bank (the ECB). ³ Calculated as 8% of total RWA, based on total capital minimum requirements, excluding CET1 buffer requirements. ⁴ This represents the CET1 ratio that is available for meeting buffer requirements. It is calculated as the CET1 ratio minus 4.5% and after considering, where applicable, CET1 capital that has been used to meet tier 1 and / or total capital ratio requirements under Pillar 1. ⁵ On the basis of tier 1 capital. ⁶ Figures are calculated on a twelve-month average.

Section 5 UBS Americas Holding LLC consolidated

Quarterly | The table below provides information about the regulatory capital components and capital, liquidity and leverage ratios of UBS Americas Holding LLC consolidated, based on the Pillar 1 requirements and in accordance with US Basel III rules.

Effective 1 October 2022, and through 30 September 2023, UBS Americas Holding LLC is subject to a stress capital buffer (an SCB) of 4.8%, in addition to the minimum risk capital requirements. The SCB was determined by the Federal Reserve Board following the completion of the 2022 Comprehensive Capital Analysis and Review (the CCAR) based on Dodd-Frank Act Stress Test (DFAST) results and planned future dividends. The SCB, which replaces the static capital conservation buffer of 2.5%, is subject to change on an annual basis or as otherwise determined by the Federal Reserve Board.

During the fourth quarter of 2022, common equity tier 1 decreased by USD 1.2bn, primarily from payment of a dividend to UBS AG, partially offset by operating profit. Risk-weighted assets decreased by USD 2.3bn to USD 70.7bn, driven by decreases in market and credit risk. Leverage ratio exposure, calculated on an average basis, increased by USD 2.3bn to USD 194.0bn primarily due to increased cash at Federal Reserve Banks.

The average liquidity coverage ratio increased 3.2 percentage points, driven by a USD 3.2bn decrease in net cash outflows from a combination of higher secured and unsecured lending inflows, while cash outflows remained relatively constant, partly offset by a USD 4.0bn decrease in high-quality liquid assets.

KM1: Key metrics¹

USD m, except where indicated

	31.12.22	30.9.22	30.6.22	31.3.22	31.12.21
Available capital (amounts)					
1 Common Equity Tier 1 (CET1)	11,367	12,588	12,454	12,926	13,002
2 Tier 1	16,449	16,643	16,509	16,975	17,051
3 Total capital	16,580	16,786	16,661	17,108	17,176
Risk-weighted assets (amounts)					
4 Total risk-weighted assets (RWA)	70,739	73,043	74,651	72,646	72,979
4a Minimum capital requirement ²	5,659	5,843	5,972	5,812	5,838
Risk-based capital ratios as a percentage of RWA					
5 CET1 ratio (%)	16.1	17.2	16.7	17.8	17.8
6 Tier 1 ratio (%)	23.3	22.8	22.1	23.4	23.4
7 Total capital ratio (%)	23.4	23.0	22.3	23.6	23.5
Additional CET1 buffer requirements as a percentage of RWA					
8 BCBS capital conservation buffer requirement (%)	2.5	2.5	2.5	2.5	2.5
8a US stress capital buffer requirement (%)	4.8	7.1	7.1	7.1	7.1
9 Countercyclical buffer requirement (%)					
10 Bank G-SIB and / or D-SIB additional requirements (%)					
11 BCBS total of bank CET1 specific buffer requirements (%)	2.5	2.5	2.5	2.5	2.5
11a US total bank specific capital buffer requirements (%)	4.8	7.1	7.1	7.1	7.1
12 CET1 available after meeting the bank's minimum capital requirements (%) ³	11.6	12.7	12.2	13.3	13.3
Basel III leverage ratio					
13 Total Basel III leverage ratio exposure measure	194,003	191,695	198,332	197,541 ⁴	188,130 ⁴
14 Basel III leverage ratio (%) ⁵	8.5	8.7	8.3	8.6	9.1
14a Total Basel III supplementary leverage ratio exposure measure	214,709	214,292	224,259	223,482	212,167
14b Basel III supplementary leverage ratio (%) ⁵	7.7	7.8	7.4	7.6	8.0
Liquidity coverage ratio (LCR)⁶					
15 Total high-quality liquid assets (HQLA)	26,296	30,249	34,065	34,451	32,371
16 Total net cash outflow	18,323	21,557	23,596	24,873	21,995
17 LCR (%)	143.5	140.3	144.4	138.6	147.2

¹ The net stable funding ratio requirement became effective as of 1 July 2021 and related disclosures will come into effect in the second quarter of 2023. ² Calculated as 8% of total RWA, based on total minimum capital requirements, excluding CET1 buffer requirements. ³ This represents the CET1 ratio that is available for meeting buffer requirements. It is calculated as the CET1 ratio minus 4.5%. ⁴ The Total Basel III leverage ratio exposure measure as of 31 December 2021 has been aligned with UBS Americas Holding LLC's reported figure in the FR Y-9C report that was filed with the Board of Governors of the Federal Reserve.

⁵ On the basis of tier 1 capital. ⁶ Figures are calculated on a quarterly average.

Material sub-group entity – creditor ranking at legal entity level

Semi-annual I The TLAC 2 table below provides an overview of the creditor ranking structure of UBS Americas Holding LLC on a standalone basis.

As of 31 December 2022, UBS Americas Holding LLC had a total loss-absorbing capacity of USD 23.8bn after regulatory capital deductions and adjustments. This amount included tier 1 capital, excluding minority interest, of USD 16.4bn and USD 7.4bn of internal long-term debt that is eligible as internal TLAC issued to UBS AG, a wholly owned subsidiary of the UBS Group AG resolution entity.

TLAC2: Material sub-group entity – creditor ranking at legal entity level

As of 31.12.22		Creditor ranking				Total
USD m		1	2	3	4	
1	Is the resolution entity the creditor / investor?	No	No	No	No	
2	Description of creditor ranking	Common Equity (most junior) ¹	Preferred Shares (Additional tier 1)	Subordinated debt	Unsecured loans and other pari passu liabilities (most senior)	
3	Total capital and liabilities net of credit risk mitigation	20,318	5,150		37,949	63,417
4	Subset of row 3 that are excluded liabilities				500	500
5	Total capital and liabilities less excluded liabilities (row 3 minus row 4)	20,318	5,150		37,449	62,917
6	Subset of row 5 that are eligible as TLAC	20,318	5,150		7,400	32,868
7	Subset of row 6 with 1 year ≤ residual maturity < 2 years				0	
8	Subset of row 6 with 2 years ≤ residual maturity < 5 years				4,300	4,300
9	Subset of row 6 with 5 years ≤ residual maturity < 10 years				3,100	3,100
10	Subset of row 6 with residual maturity ≥ 10 years, but excluded perpetual securities				0	
11	Subset of row 6 that is perpetual securities	20,318	5,150			25,468

¹ Equity attributable to shareholders, which includes share premium and reserves.



Abbreviations frequently used in our financial reports

A		CRM	credit risk mitigation (credit risk) or comprehensive risk measure (market risk)	FSB	Financial Stability Board
ABS	asset-backed securities			FTA	Swiss Federal Tax Administration
AG	Aktiengesellschaft				
AGM	Annual General Meeting of shareholders	CST	combined stress test	FVA	funding valuation adjustment
A-IRB	advanced internal ratings-based	CUSIP	Committee on Uniform Security Identification Procedures	FVOCI	fair value through other comprehensive income
AIV	alternative investment vehicle	CVA	credit valuation adjustment	FVTPL	fair value through profit or loss
ALCO	Asset and Liability Committee	D		FX	foreign exchange
AMA	advanced measurement approach	DBO	defined benefit obligation	G	
AML	anti-money laundering	DCCP	Deferred Contingent Capital Plan	GAAP	generally accepted accounting principles
AoA	Articles of Association	DE&I	diversity, equity and inclusion	GBP	pound sterling
APM	alternative performance measure	DFAST	Dodd–Frank act stress test	GCRG	Group Compliance, Regulatory & Governance
ARR	alternative reference rate	DM	discount margin	GDP	gross domestic product
ARS	auction rate securities	DOJ	US Department of Justice	GEB	Group Executive Board
ASF	available stable funding	DTA	deferred tax asset	GHG	greenhouse gas
AT1	additional tier 1	DVA	debit valuation adjustment	GIA	Group Internal Audit
AuM	assets under management	E		GRI	Global Reporting Initiative
B		EAD	exposure at default	G-SIB	global systemically important bank
BCBS	Basel Committee on Banking Supervision	EB	Executive Board		
BIS	Bank for International Settlements	EC	European Commission	H	
BoD	Board of Directors	ECB	European Central Bank	HQLA	high-quality liquid assets
C		ECL	expected credit loss	I	
CAO	Capital Adequacy Ordinance	EGM	Extraordinary General Meeting of shareholders	IAS	International Accounting Standards
CCAR	Comprehensive Capital Analysis and Review	EIR	effective interest rate	IASB	International Accounting Standards Board
CCF	credit conversion factor	EL	expected loss	IBOR	interbank offered rate
CCP	central counterparty	EMEA	Europe, Middle East and Africa	IFRIC	International Financial Reporting Interpretations Committee
CCR	counterparty credit risk	EOP	Equity Ownership Plan	IFRS	International Financial Reporting Standards
CCRC	Corporate Culture and Responsibility Committee	EPS	earnings per share	IRB	internal ratings-based
CDS	credit default swap	ESG	environmental, social and governance	IRRBB	interest rate risk in the banking book
CEA	Commodity Exchange Act	ESR	environmental and social risk	ISDA	International Swaps and Derivatives Association
CEO	Chief Executive Officer	ETD	exchange-traded derivatives	ISIN	International Securities Identification Number
CET1	common equity tier 1	ETF	exchange-traded fund		
CFO	Chief Financial Officer	EU	European Union		
CGU	cash-generating unit	EUR	euro		
CHF	Swiss franc	EURIBOR	Euro Interbank Offered Rate		
CIO	Chief Investment Office	EVE	economic value of equity		
C&ORC	Compliance & Operational Risk Control	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		

Abbreviations frequently used in our financial reports (continued)

K		R		T	
KRT	Key Risk Taker	RBC	risk-based capital	TBTF	too big to fail
		RbM	risk-based monitoring	TCFD	Task Force on Climate-related Financial Disclosures
L		REIT	real estate investment trust	TIBOR	Tokyo Interbank Offered Rate
LAS	liquidity-adjusted stress	RMBS	residential mortgage-backed securities	TLAC	total loss-absorbing capacity
LCR	liquidity coverage ratio	RniV	risks not in VaR	TTC	through the cycle
LGD	loss given default	RoCET1	return on CET1 capital		
LIBOR	London Interbank Offered Rate	RoU	right-of-use	U	
LLC	limited liability company	rTSR	relative total shareholder return	USD	US dollar
LoD	lines of defense	RWA	risk-weighted assets	V	
LRD	leverage ratio denominator	S		VaR	value-at-risk
LTIP	Long-Term Incentive Plan	SA	standardized approach or société anonyme	VAT	value added tax
LTV	loan-to-value	SA-CCR	standardized approach for counterparty credit risk		
M		SAR	Special Administrative Region of the People's Republic of China		
M&A	mergers and acquisitions	SDG	Sustainable Development Goal		
MRT	Material Risk Taker	SEC	US Securities and Exchange Commission		
N		SFT	securities financing transaction		
NII	net interest income	SI	sustainable investing or sustainable investment		
NSFR	net stable funding ratio	SIBOR	Singapore Interbank Offered Rate		
NYSE	New York Stock Exchange	SICR	significant increase in credit risk		
O		SIX	SIX Swiss Exchange		
OCA	own credit adjustment	SME	small and medium-sized entities		
OCI	other comprehensive income	SMF	Senior Management Function		
OECD	Organisation for Economic Co-operation and Development	SNB	Swiss National Bank		
OTC	over-the-counter	SOR	Singapore Swap Offer Rate		
P		SPPI	solely payments of principal and interest		
PD	probability of default	SRB	systemically relevant bank		
PIT	point in time	SRM	specific risk measure		
P&L	profit or loss	SVaR	stressed value-at-risk		
POCI	purchased or originated credit-impaired				
Q					
QCCP	Qualifying central counterparty				

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.

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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.

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