31 December 2019 Pillar 3 report

UBS Europe SE

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Introduction and basis for preparation

Scope of Pillar 3 disclosures

UBS Europe SE is a fully authorized credit institution registered at the commercial register in Frankfurt and supervised by the European Central Bank (ECB). This report provides the disclosure information for UBS Europe SE as at 31 December 2019.

The capital adequacy framework consists of three pillars each of which focuses on a different aspect of adequacy. Pillar 1 provides a framework for measuring minimum capital requirements for credit, market, operational and non-counterparty related risks faced by banks. Pillar 2 addresses the principles of the supervisory review process emphasising the need for a qualitative approach to supervising banks. Pillar 3 aims to encourage market discipline by requiring banks to publish a range of disclosures, mainly on risk and capital.

This document is based upon the Directive (EU) 2013/36 and Regulation (EU) 575/2013 (Capital Requirements Regulation or "CRR"), the associated delegated and implementing acts and the related technical standards, as implemented within the Federal Republic of Germany by the Bundesbank. Further, these disclosures have been prepared in accordance with the European Banking Authority (EBA) guideline EBA/GL/2016/11 on Pillar 3.

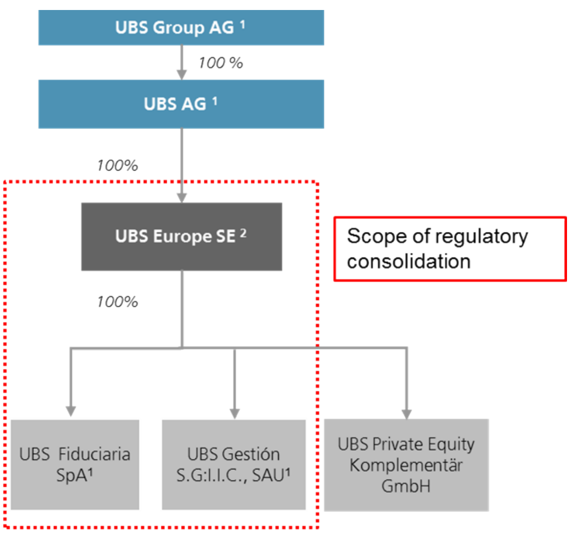
For disclosures according to Section 26a German Banking Act ("Kreditwesengesetz" or "KWG") please see the respective section in our Annual Financial Statements as of 31 December 2019. For our firm's sustainability approach and activities please see UBS Group AG Sustainability Report 2019.

Regulatory consolidation

UBS Europe SE is part of the UBS Group AG consolidated group and a direct, wholly owned subsidiary of UBS AG. The scope of regulatory reporting for UBS Europe SE includes the Italian subsidiary UBS Fiduciaria SpA as well as the Spanish subsidiary UBS Gestión S.G.I.IC, SA. As the relevant limits according to Article 19 of the CRR are not exceeded, the German subsidiary UBS Private Equity Komplementär GmbH is not included in the regulatory scope of consolidation.

In accordance with the principle of materiality specified in Article 432 of the CRR, this report provides Pillar 3 disclosures for UBS Europe SE on the consolidated basis, including all relevant subsidiaries. In this report, "UBS Europe SE" refers to UBS Europe SE and its consolidated subsidiaries, unless stated otherwise.

Scope of regulatory consolidation



1 Not established in Germany
2 Foreign branches included – Luxembourg, Austria, Sweden, Denmark, Italy, Spain and the Netherlands

Governance over Pillar 3 disclosures

The Management Board 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 Article 431 of the CRR we have a board-approved Pillar 3 disclosure governance policy in place. This Pillar 3 report has been approved in line with this policy.

Format of Pillar 3 disclosures

As defined by the EBA guidelines 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 EBA table/template reference. Naming conventions are based upon the EBA guidance and may not reflect UBS naming convention. Disclosures classified as non-material in this report have been indicated accordingly in the respective sections. The table on the following page provides an overview of the Pillar 3 disclosures.

CRR Article	Pillar 3 Requirement (Part Eight CRR)	EU Table & Template Reference	Location of Pillar 3 disclosure in this supplementary disclosure document
435 (1)	Risk management objectives and policies	EU OVA, EU CRA, EU CCRA, EU MRA EBA/GL/2017/01	Risk management objectives and policies Liquidity
435 (2)	Governance arrangements		Management body
436	Scope of application	EU LIA, EU LI1, EU LI2	Scope of regulatory application
437	Own Funds	EBA/GL/1423/2013	Own funds
438	Capital Requirements	EU OV1 EU CCR7	Capital requirements Counterparty credit risk
439	Exposure to counterparty credit risk	EU CCR1, EU CCR2, EU CCR8, EU CCR5-A, EU CCR5-B, EU CCR6	Counterparty credit risk
440	Capital buffers	EBA/GL/2015/1555	Countercyclical capital buffer
442	Credit risk adjustments	EU CRB-B, EU CRB-C, EU CRB-D, CRB-E EU CR2-A, EU CR2-B	Credit exposure Credit risk adjustments
443	Asset Encumbrance	EBA/GL/2017/03, EBA/GL/2017/2295	Asset encumbrance
444	Use of ECAIs	EU CRD EU CCR3 EU CR5	External credit assessment institutions Counterparty credit risk Credit exposure
445	Exposure to market risk	EU MR1	Capital requirements
446	Operational risk		Risk management objectives and policies Capital requirements
447	Exposure in equities not included in the trading book		Exposures in equities not included in the trading book
448	Exposure to interest rate risk on positions not included in the trading book		Interest rate risk in the banking book
449	Exposure to securitization positions		Securitization positions
450	Remuneration policy	Refer to the remuneration report on the homepage of UBS Europe SE	https://www.ubs.com/de/en/ubs-germany/financial-reports.html
451	Leverage Ratio	EBA/GL/2016/200	Leverage ratio
453	Credit risk mitigation techniques	EU CRC, EU CR3, EU CR4	Credit risk mitigation

Risk management objectives and policies

Risk management principles

Creating shareholder value is the overarching objective of UBS Europe SE. The focus on the shareholder implies a fundamentally long-term perspective. Consistently with any other corporate activity, UBS Europe SE derives the approach to risk management and control from a shareholder value creation perspective. It recognizes that taking risk is core to its financial business. The aim is to achieve an appropriate balance between risk and return. In order to reach this goal, UBS Europe SE has embedded the following five UBS Group Risk Management and Control Principles describing the foundation for a sound risk culture and robust risk management:

– Protection of financial strength
– Protection of reputation
– Business management accountability
– Independent controls
– Risk disclosure

Protection of financial strength on UBS Europe SE level is controlled by risk exposure and avoiding potential risk concentration at individual exposure levels, at specific portfolio levels and at an aggregate firm-wide level across all risk types. To protect the reputation of the firm, UBS Europe SE is obliged to abstain from any conduct or action and in particular from entering into any business that may put bank's reputation at immediate risk. Business Management is accountable for the risk assumed throughout the firm and is responsible for continuous and active management of all risk exposures to ensure that risk and return are balanced. Control processes are independent of the business functions and implemented commensurate with the nature and size of the risks to monitor the effectiveness of the risk management and oversee risk-taking activities. Finally, risk disclosure follows the aim to provide our management, investors and regulators with a holistic overview of UBS Europe SE's risk management and profile with an appropriate level of comprehensiveness and transparency.

Risk management organization and governance structure

The members of the UBS Europe SE's Management Board are ultimately responsible for adequate risk management and establishment of an integrated and institution-wide risk culture. This includes determining the firm's risk principles, risk appetite, portfolio limits and their allocation to the business divisions and Treasury. The Management Board implements the risk framework, controls the bank's risk profile and approves key UBS Europe SE risk policies. The oversight and control include all business conducted in the entity including its branches, the risks associated with the branch business and ensuring compliance with local legal and regulatory requirements. Each member of the Management Board is responsible for establishing adequate controls and monitoring processes in their respective area of responsibility. UBS Europe SE's Supervisory Board is informed about the risk appetite and is responsible to oversee and challenge the Management Board including the approval of medium-term planning as well as capital and liquidity objectives.

Three lines of defense model

UBS Europe SE's risk management organization is embedded into the broader risk governance framework of the UBS Group and operates along three lines of defense as outlined in the following organization chart, fulfilling the general risk management requirements according to Mindestanforderungen an das Risikomanagement (MaRisk) AT 4.

Risk management organization and governance structure

Supervisory Board		
Management Board (MB) UBS Europe SE		
CEO CFO COO	CRO	MB-member assigned to Internal Audit
1st Line of Defense	2nd Line of Defense	3rd Line of Defense
Businesses | Treasury | Finance	Risk	Internal Audit
– Business Heads – Business / Process Owner – Treasury and Finance Function **Central control and expert functions:** – Business Risk Organization – Information Security Officer – Recovery & Resolution Planning Officer – Provider Management – Central Outsourcing Management	– Risk Control – Compliance & Operational Risk Control – Credit Risk Control – Market & Treasury Risk Control – New Business Governance **Independent function with regard to model risk** - Model Risk Management & Control	– Independent assessment of risk management, internal control systems and governance processes – Assurance on design and operating effectiveness of 1st and 2nd line of defense control processes

The first line of defense consists of UBS Europe SE's Business departments, Treasury and Finance departments. The businesses own their risk exposures and are required to maintain effective processes and systems to manage their risks, including robust and comprehensive internal controls and documented procedures. Business management must also have in place appropriate supervisory controls and review processes to highlight control weaknesses, inadequate processes and unexpected events. They are supported by the following dedicated central control functions:

– Business Risk Organization: Primary responsibility of the Business Risk Organization is to support the Business in managing all of the operational risks assumed throughout the firm. The department is also responsible for investigating, monitoring and escalating of all operational risk exposures to ensure a timely remediation.
– Information Security Officer: Information security covers all information processes, physical and electronic and addresses information protection, confidentiality, availability and integrity throughout the life cycle of the information and its use within the organization.
– The Recover & Resolution Planning Officer has the responsibility to manage the overall process and updates for the recovery plan.
– Provider Management: The main objective of the Provider Management is cost-, quality-, performance and demand management with all internal (outsourcing) suppliers as well as coordination of the centralized contract inventory including overview and reporting of Key Performance Indicator (KPI) measurement and incidents recordings for material outsourcings.
– Central Outsourcing Management: The central outsourcing management is responsible for ensuring regulatory requirements are met and implemented in the global outsourcing framework. Also Central Outsourcing Management is responsible for overseeing the classification of contracts and for performing reviews of risk analyses performed and shares results of quality completeness in monthly Service Operating Committee.

The Treasury department is responsible for the UBS Europe SE's balance sheet, capital, liquidity and funding management in line with the risk appetite of the bank and reports to the Chief Financial Officer (CFO). The CFO, supported by the Finance department, is responsible for ensuring that disclosure of the firm's financial performance meets regulatory requirements and corporate governance standards with clarity and transparency. The CFO is also responsible for the management and control of the firm's tax affairs, treasury and capital, including management and control of funding and liquidity risk and the firm's regulatory capital ratios.

The Risk Control functions act as the second line of defense, providing independent oversight of primary and consequential risks, implementation of an appropriate independent control framework, risk appetite framework, risk measurement and reporting. This includes setting risk limits and protecting against non-compliance with applicable laws and regulations. The Chief Risk Officer (CRO) is responsible for providing an objective assessment on UBS Europe SE's risk-taking activities as part of the overall responsibility for the implementation and enforcement of the UBS Risk Management and Control Principles. The CRO has the authority to approve transactions, positions, exposures, limits, provisions, and to further delegate these responsibilities. The CRO is not only independent from the business heads but also from the COO and CFO. The Risk department supporting the CRO comprises the following functions:

– Risk Control (RC) is responsible to provide oversight for the enterprise-wide risk management framework to ensure all risks are identified, owned and managed. The function coordinates the risk inventory process, risk measurement and stress testing for Internal Capital Adequacy Assessment Process (ICAAP) as well as risk strategy, risk appetite, additional stress test programs (e.g. reverse stress test) and other enterprise-wide risk activities.
– Compliance and Operational Risk Control (C&ORC) is responsible to advice and provide oversight regarding compliance regulations and compliance risks. In addition, the department must ensure that all operational risks are understood, owned and managed to the firm's risk appetite and provide independent oversight and control over the operational risks arising from UBS Europe SE business activities. The function specifically controls outsourcing activities, Information Security, Technology Risk and ensures appropriate design and effective operation of required risk frameworks.
– Credit Risk Control (CRC) is responsible to ensure that credit risks are appropriately identified, measured, monitored, controlled and reported. This includes setting and monitoring of credit limits as well as reviewing and monitoring of credit requests.
– Market & Treasury Risk Control (MTRC) independently controls the market and treasury risks, i.e. the risk of loss resulting from adverse movements in market variables such as interest rates, foreign exchange rates, and equity prices, as well as the risks arising from structural (balance sheet) exposures, including the risk of insufficient funding or liquidity. The function is responsible to propose, monitor and escalate limit and trigger breaches for market and treasury risks.
– New Business Governance (NBG) ensures cross-divisionally an efficient and consistent process to facilitate the implementation of New Business Initiatives, changes to existing business and Complex Transactions.
– Model Risk Management & Control (MRMC) operates as an independent function within the Risk department and is responsible for initial validations and regulator re-validations of models. By performing validations, MRMC identifies model issues which the model owner is required to remediate. The function also ensures that the model inventory is up-to-date

and model risk is monitored at the level of the institution according to the model risk appetite framework.

Internal Audit forms the third line of defense and is mandated to provide independent, objective and risk-based audit services designed to optimize business processes in respect of effectiveness, security and efficiency. Internal Audit supports the Management Board through assessing in a systematic and focused way that the risk management, internal control systems and governance processes are designed and operate sustainably and effectively.

Committees and information flow on risk to the management body

In line with the Schedule of Responsibilities risk topics are reported in bilateral sessions to the respective management board member. The Management Board has established the following permanent committees to ensure direct oversight over and challenge of the overall risk management process:

– The Risk Control Committee (RCC) is responsible for the overall risk governance and the effectiveness of risk management and control, i.e. to assess and monitor the implementation and adherence of the risk strategy, controls and limits. The committee meets monthly, is chaired by the CEO and the voting members are all Management Board members of UBS Europe SE, whereby the CRO cannot be outvoted for credit decisions. A majority of the RCC voting members are required to be present at the RCC meeting. Additional non-voting members are the business heads, head of Business Risk Organization, head of Regulatory Affairs, head of Legal, heads of the Risk Control functions and head of Internal Audit.
– The Asset & Liability Committee (ALCO) is mandated by the Management Board and has the responsibility to monitor treasury, liquidity & funding and balance sheet management and is the approval body for ICAAP and Internal Liquidity Adequacy Assessment Process (ILAAP) related topics. The committee meets monthly, is chaired by the CFO and the voting members are the members of the Management Board and the head of Regional Treasury UBS Europe SE. Permanent guests are the head of Market & Treasury Risk Control, head of Risk Control, head of Regulatory Reporting, head of Regional Controlling & Accounting, local Recovery and Resolution Planning Officer, EMEA Treasurer and representatives from the Business, Regulatory Affairs and Internal Audit.
– The Model Governance Board (MGB) is the senior oversight and escalation body for all models, stress testing scenarios and methodologies used in UBS Europe SE. The MGB has the final approval-for-use authority for models and model changes. The committee meets at least quarterly or more frequently as determined by the co-chairs, including possible ad-hoc meetings. The committee is chaired by the CRO and CFO and the permanent voting members are the CRO, CFO and the head of Model Risk Management and Control. Depending on the topic additionally required voting members are the heads of the Risk Control functions, head of Regulatory Reporting, head of UBS Europe SE Treasury, head of UBS Investment Banking (IB) or other voting members as appointed by the chairs. Internal audit representatives are permanent attendees.
– The Recovery and Resolution Planning (RRP) – Steering Committee provides direction for RRP production, including escalation of delays, final reviews, and decides on content and recommends RRP deliverables for sign-off to the Management Board. The committee meets monthly, is chaired by the UBS Europe SE COO and the voting members are the COO, CRO, CFO, RRP Officer, head of Treasury, head of Operations, head of Risk Control, head of Regulatory Reporting, head of Regulatory Relations, General Counsel, IB representative, deputy head of Global RRP and head UK Recovery and Resolution planning.
– In addition, UBS Europe SE has established an escalation framework with respective information via email and a standardized reporting template on ad-hoc basis. The process ensures timely information flow of risk issues to the management body if required. Depended on the topic and urgency, dedicated board task forces are established on an ad-hoc basis. The Supervisory Board is informed via the Risk Committee of the Supervisory Board that is described in section "Management body".

Outsourcing arrangements

As part of UBS Group AG, UBS Europe SE has inter-entity outsourcing arrangements for certain risk management topics with UBS Business Solutions AG. UBS Business Solutions AG is the service company created as subsidiary of UBS Group AG in 2015 to safeguard critical shared services and to ensure their operational continuity in case of resolution. Part of the outsourcing arrangement are to leverage UBS' strategic risk platforms, capabilities for the development and maintenance of majority of UBS Europe SE's risk models, the risk calculation for the normative and economic view as well as the reporting for specific risk reports. The overall responsibility remains with UBS Europe SE which is responsible for managing the capital resources and control of the entity including capital & liquidity adequacy, financial and risk matters.

The outsourcing arrangements are subject to robust risk assessment and control processes under UBS Group's global outsourcing policy and framework. Furthermore, UBS Europe SE has implemented a local policy and control framework to cover specific local standards. These include operating level agreements with specific UBS Business Solution AG service lines and UBS Europe SE specific KPIs for the service provided that are tracked by UBS Europe SE. To ensure an efficient escalation, UBS Europe SE has established an outsourcing department that coordinates the outsourcing arrangement and directly reports into UBS Europe SE's COO.

Risk profile

UBS Europe SE's business strategy is centered on its leading Wealth Management (WM) and Investment Banking (IB) businesses in Europe, with a unique franchise, enhanced by its Asset Management (AM) capabilities and supported by UBS Europe SE Group Functions. The WM product offering ranges from investment management solutions (discretionary as well as advisory) through consulting services and wealth planning to Asset Servicing. The credit business in form of Lombard and mortgage loans is an integral part of this offering. The IB business provides client coverage, financing and Merger&Acquisition (M&A) advisory, debt and equity capital market solutions and financing solutions for corporate, financial institution, financial sponsor clients and clients of UBS's wealth management businesses across the globe. In addition the IB business provides solutions for trading strategies and execution to managing risk and providing liquidity in FX, rates, credit, and precious metals. UBS Europe SE distributes, trades, finances and clears cash equity and equity-linked products as well as structures and originates new equity and equity-linked issues. To support the sustainable growth of the businesses, Regional Treasury, as part of the UBS Europe SE's Group Functions, efficiently manages the firm's financial resources. For this purpose Treasury provides governance, planning and advisory services and consolidates and manages structural balance sheet risks.

At least annually UBS Europe SE performs a risk inventory process and determines an overall risk profile. The process includes the involvement of the first and second line of defense and is reviewed and challenged by senior management. The process is completed by a sign off by the Management Board. The risk profile is confirmed by the Management Board on a quarterly basis and updated ad-hoc if required.

The risk inventory systematically provides an overview of risks impacting UBS Europe SE business' and infrastructure's operations by a view on current activities as well as incorporating a forward-looking perspective. Based on the risk inventory process, the materiality of identified risks is assessed with respect to their severity and likelihood under expected and stressed conditions.

Risks, which may significantly affect the financial position (including capital), the financial performance or the liquidity position (covered in ILAAP) of the institution, are classified as material. UBS Europe SE assesses materiality based on:

– Gross basis before consideration of any mitigating measures unless contractually embedded in business and risk management practice
– Residual basis taking into account the effectiveness of all non-capital mitigation

Both materiality assessments rely primarily on qualitative considerations due to the diversity of risk types and the perspective before consideration of any explicit mitigating measures. Where appropriate, quantitative measures are used to validate the qualitative materiality assessment. In general, the risks that are considered material on a residual basis are to be capitalized in ICAAP (except for liquidity risk as part of the ILAAP), subject to final decision by the Management Board. Immaterial risks are reviewed by UBS Europe SE at least annually within the risk inventory process.

Risk identification

According to UBS Europe SE business model the entity-wide risk inventory process per December 2019 identified the following main risk categories as material for the firm:

Credit risk

Credit risk is the risk of loss as a result of a failure by a counterparty (including issuers) to meet its contractual obligations and comprises counterparty risk, issuer risk, settlement risk, credit concentration and correlation risk. In UBS Europe SE credit risk arises primarily from traded products, including over-the-counter (OTC) derivative transactions and exchange-traded derivatives, as well as securities financing transactions such as repurchase agreements (repos and reverse repos), securities borrowing and lending transactions. Credit risk from banking products (such as loans, loan commitments and guarantees) relates primarily to unfunded loan commitments which are sub-participated to the Company's parent, UBS AG, or third parties, and amounts due from banks. Credit risk also includes country risk resulting from country-specific events. It includes transfer risk, whereby a country's authorities prevent or restrict the payment of an obligation, as well as systemic risk events arising from country-specific political or macroeconomic developments. In addition, credit risk also covers group risk describing the risk that the financial position of UBS Europe SE may be adversely affected by its relationships with other entities in the UBS group, or by risk which may affect the financial position of the whole group including financial contagion.

Market risk

Market risk in UBS Europe SE arises from both trading and non-trading business activities. Trading market risks arise mainly in connection with securities and derivatives trading for market-making within the Investment Bank. In addition, credit and funding valuation adjustment risks of the derivatives portfolio managed by Regional Treasury, also give rise to market risk in the entity. Non-trading market risk arises predominantly in the form of interest rate risk in connection with lending & deposit taking in the WM business and from intercompany funding transactions (including AT1 and MREL), from asset portfolio such as High-Quality Liquid Assets (HQLA), and from management of excess cash in Regional Treasury. Interest Rate Risk in Banking Book (IRRBB) is part of market risk and described in section "Interest rate risk in the banking book". The net interest income earnings risk is part of business risk described below.

Operational risk

Operational risk arises naturally out of all areas of UBS activities and is defined as the risk resulting from inadequate or failed internal processes, people and systems, or from external causes (deliberate, accidental or natural) which have an impact (either financial or non-financial) to UBS, its clients or the markets in which it operates. Events may be direct financial losses or indirect in the form of revenue forgone as a result of business suspension. Operational risk also comprises legal risk and reputational risk. Legal risk results from a contract or any rights under or connected to the contract such as a right of set-off or a right conferred by security arrangements not being enforceable or the inability or failure to assert non-contractual rights such as intellectual property rights. Reputational risk is the risk of damage to the reputation of UBS Europe SE from the point of view of its stakeholders, such as clients, shareholders, staff and general public. It mostly materializes via drawback in the business, respectively in reduced earnings or liquidity.

Liquidity risk

Liquidity risk describes the risk that UBS Europe SE will not be able to effectively meet both expected and unexpected current and forecasted cash flows and collateral needs without negatively affecting either daily operations or the financial condition of the firm.

Funding risk

Funding risk describes the risk that UBS Europe SE is unable, on an ongoing basis, to borrow funds in the market on an unsecured (or even secured) basis at an acceptable price to fund actual or proposed commitments, i.e. the risk that UBS Europe SE's funding capacity is not sufficient to support its current business and desired strategy. In the management of the risk UBS Europe SE distinguishes between capital/ICAAP-related funding risk aspects, namely funding cost risk, and the ILAAP related funding risk.

Business risk

Business risk is the potential negative impact on earnings from lower than expected business volumes or margins, to the extent not offset by a decrease in expenses. The net interest income earning risk is also part of the business risk.

Pension risk

Pension risk is the risk of a negative impact on our capital as a result of deteriorating funded status from changes in the value of defined benefit pension obligations to changes in the actuarial assumptions (e.g. discount rate, life expectancy, rate of pension increase) and / or changes to plan designs.

Model risk

UBS Europe SE uses models in the conduct of its business, for purposes including own-funds calculation, capital adequacy & liquidity risk assessments, stress testing, valuation of positions, and the assessment and management of primary and consequential risks. Model risk is the risk of adverse consequences (e.g. financial loss, legal loss, operational loss, biased business decisions or reputational damage), resulting from decisions based on incorrect or misused model outputs and reports. Model risk may result from several sources: inputs, methodology, implementation, use.

As of year-end 2019, UBS Europe SE has no material concentration risk. However risk concentrations are subject to increased monitoring by the Risk Control functions and are assessed to determine whether they should be reduced or mitigated depending on the available means to do so. For further details please refer to section "Risk Monitoring".

Risk performance

The table below shows UBS Europe SE's overall risk position as of year-end 2019 measured by the economic risk exposure for all material risks. Model risk is considered in each risk model through prudent approach, i.e. via add-ons or conservative parametrization. Liquidity risk is covered through the ILAAP.

Overview of economic risk exposure for UBS Europe SE

EUR million	31.12.2019	30.06.2019
Credit/Issuer Risk incl. Country Risk	396	284
Market Risk	195	132
Operational Risk incl. Legal Risk	875	875
Funding Cost Risk incl. FVA	141	168
Business Risk	230	228
Pension Risk	109	107
Aggregated Risk Exposure	**1,945**	**1,794**

Due to UBS Europe SE's business model, its risk profile is mainly exposed to operational, credit and business Risk. UBS Europe SE is aware of the existence of diversification effects, but choses a conservative approach by disregarding these effects when aggregating the individual risk amounts across risk types. UBS Europe SE's excess capital amount to 689 EUR million demonstrating UBS Europe SE's strong capital position. Key ratios for the normative perspective are reported in the sections "Key ratios" and "Own funds".

Liquidity risk and funding risk is governed and managed as part of the liquidity and funding (L&F) framework and UBS Europe SE's ILAAP. The regulatory liquidity and funding risk metrics, Liquidity Coverage Ratio (LCR) and Net stable funding ratio (NSFR), are calculated in accordance with the regulatory requirements. The LCR assesses whether UBS Europe SE has sufficient HQLA to survive a significant stress scenario over a period of 30 days. The LCR is reported in compliance with the Regulation (EU) 2015/61, to complement the disclosure of liquidity risk management under Article 435 of the CRR. UBS Europe SE calculates the NSFR in line with the regulatory provisions, even though a regulatory minimum requirement is not in place yet. UBS Europe SE´s NSFR exceeded 100% per quarterly reporting throughout 2019. Key liquidity and funding ratios are reported in the section "Liquidity".

All individual risks as well as UBS Europe SE's overall risk and capital position are properly managed, mitigated and monitored as outlined in the following chapters.

Risk strategy and risk appetite

UBS Europe SE's Risk Strategy consists of the Risk Governance (see section "Risk management organization and governance structure") and Risk Appetite Statement (RAS). The Management Board is responsible for developing our Risk Appetite Statement and regular updates thereto. The Management Board approves the Risk Strategy at least on a yearly basis and ad-hoc in case of major changes. Thereafter, the Risk Strategy is brought to the attention of and discussed with the Supervisory Board, at least on an annual basis or adhoc in case of major changes.

UBS Europe SE's Risk Appetite Statement is designed to ensure that risk-taking is in line with the entity's strategic priorities, values, business activities and capital and liquidity plans. This is achieved by:

– Embedding a sound risk culture in the entity, that is supported by appropriate risk governance, principles for risk management and control, a comprehensive code of business conduct and ethics and a set of compensation principles.
– Establishing explicit risk appetite objectives to relate risk exposure to the risk capacity.

UBS Europe SE's risk appetite is defined as the aggregated level of risk that the firm is willing to accept. The Risk Appetite objectives are defined on a consolidated level as well as by risk category. In addition a complementary set of qualitative and quantitative objectives are established in the RAS.

Qualitative risk appetite objectives contain qualitative metrics for risk types which are not based on calculations directly affecting capital or PnL. These metrics are defined to strengthen the qualitative risk appetite statement in line with regulatory requirements and aim to ensure UBS Europe SE maintains the desired risk culture. Quantitative risk appetite objectives contain quantitative metrics which are based on calculations directly affecting capital or PnL. These metrics are defined to guide the entity risk taking for capital, liquidity and funding in baseline and stress conditions. In addition risk appetite is defined for specific risk types. The objectives aim to ensure that the company maintains sufficient capital, liquidity and funding such that it can continue to meet regulatory requirements and operate as a going concern following severe adverse economic or geopolitical events. The framework is comprehensive in aggregating all material risks across the company.

The Risk Appetite Statement and objectives are reviewed and approved at least annually by the Management Board. The risk appetite is translated into limits, triggers and targets (LTT) and operating instructions in form of policies and guidelines as outlined in section "Risk Monitoring". Our risk appetite objectives are evaluated and reported to the Risk Committee monthly.

Risk measurement, monitoring and management for ICAAP

UBS Europe SE has a well-established framework for the ICAAP comprising the key elements: risk identification, risk strategy and appetite, the current and future risk quantification in the normative and economic view as well as additional stress testing activities. The ICAAP framework is complemented by the ILAAP outlined in chapter "Risk Measurement, Monitoring and Management for ILAAP". The governance is consistent between the ICAAP and ILAAP framework with clearly defined roles and responsibilities.

Risk quantification and stress testing

Within the ICAAP UBS Europe SE ensures that all material risks that need to be capitalized according to the Risk Profile (see section "Risk Profile") are adequately quantified within the economic and normative perspective. The two approaches are complementary and mutually inform each other to ensure that all relevant information and risks regarding business are appropriately covered.

The economic perspective emphasizes the objective to capture the economic situation that is explicitly not based on accounting or regulatory provisions but taking into account fair value considerations for current assets, liabilities and risks. UBS Europe SE's capital adequacy under the economic perspective is assessed by contrasting the internal capital with the aggregated risk exposure to calculate the excess capital (see section "Risk Performance"). The internal capital uses the regulatory own funds as anchor point adjusted by hidden losses and planned capital transactions within the 1Y horizon. The internal capital is of high quality and follows a going-concern view. The aggregated risk exposure is defined as stress losses derived from internal statistical models per risk type with a confidence level of 99.9% and over a 1Y horizon. UBS Europe SE has developed the following statistical models for the different risk types:

Overview of quantification methods for the economic perspective

Credit Risk	Merton-style structural Credit Risk models
Market Risk	Monte Carlo simulation
Operational Risk	Advanced Measurement Approach (AMA)
Funding cost Risk and FVA	Historical analysis of incremental funding spread changes under considerations of severe spread changes
Pension Risk	Loss estimation on other comprehensive income
Business Risk	Loss income distribution applied to plan figures and haircut adjustments

The individual economic risks are aggregated to an overall risk exposure amount. UBS Europe SE is aware of the existence of diversification effects, but choses a conservative approach by disregarding any diversification when aggregating the individual risk amounts across risk types. The risk quantification in the economic perspective is complemented by an additional stress testing program to reveal whether the economic internal perspective would become a shortage under additional stress assumptions. In case of an insufficient capitalization in the stress scenario, procedures and management actions are triggered to ensure capital adequacy even under additional stress assumptions.

The objective of the normative perspective is the assessment of the institution's ability to fulfil all its capital-related regulatory and supervisory requirements on an ongoing basis over the medium term. The normative view is quantified with the capital plan (development of own funds and pillar 1 capital requirements) over a 3-year horizon derived from the strategic business plan. Approaches for pillar 1 capital requirements are described in section "Capital requirements". The sustainability of the capital plan is challenged by specific adverse stress test scenarios over the same time horizon. Stress testing is used to estimate the loss that could result from extreme yet plausible macroeconomic and geopolitical stress events, enabling identification, better understanding and management of potential vulnerabilities and risk concentrations. The chosen scenarios include prolonged periods of adverse developments that imply a significant capital depletion considering all material risks affecting own funds and risk-weighted assets (RWA) over the planning period. The relevant scenarios are chosen and approved by the RCC at least annually and confirmed quarterly. The scenarios are designed and selected based on UBS Europe SE risk profile and cover the key vulnerabilities of the firm on a variety of adverse but realistic developments.

Furthermore, UBS Europe SE performs an Additional Stress Testing (AST) program including (i) a comprehensive range of portfolio- and risk-type-specific stress tests and (ii) reverse stress testing. Portfolio specific stress tests, which are tailored to the risks of specific portfolios, may be subject to limits to explicitly control risk taking, or may be monitored without limits to identify vulnerabilities. Reverse stress testing starts from a defined stress outcome and works backwards to identify the economic or financial scenarios that could result in such an outcome. As such, reverse stress testing is intended to complement forward stress tests by assuming "what if" outcomes that extend beyond the range normally considered, and thereby potentially challenge assumptions regarding severity and plausibility. The aim of the AST is to identify idiosyncratic or portfolio specific vulnerabilities and assess impacts of extremely severe and improbable events. The AST program is designed to inform or trigger the adaption of the ICAAP calculation in case any implausibility is identified.

Risk monitoring

The risk appetite as described in section "Risk Strategy and Risk Appetite" is translated into comprehensive risk appetite objectives as well as limits, triggers and targets (LTT) and operating instructions in form of policies and guidelines. A limit is a hard control and a breach is only permitted in case of a pre-approval by the limit owner. A trigger sets a boundary within UBS Europe SE is expected to operate in. When a trigger is reached, the trigger owner must ensure that the respective parties take predetermined course of action, e.g. liquidation of positions, portfolio analysis or review of the business plan. A target is a boundary that is desirable for UBS Europe SE to operate in. Targets are soft controls and actions for target breaches are assessed on a case-by-case basis. The status of key risk limits is reported on a frequency appropriate for each individual metric, and utilization against portfolio limits is formally reported to the Risk Committee quarterly. The risk appetite objectives and limits are reviewed at least annually by the Management Board or the appropriate authority and adjusted where necessary to be consistent with business plans and confirmed risk appetite. The taking of risks that are not covered by an approved limit is not permitted, unless otherwise pre-approved by the respective Risk Control function. The Business (i.e. Front Office) is required to pre-clear any limit breaches. All excesses must be reported in accordance with the instructions to the Risk Authorities policy and the IB Market Risk Limits and Loss Advisory Controls policy. Limit excesses and trader violations are monitored by the Risk Control functions on a daily basis and escalated for remediation action where appropriate to Risk Officers. Unauthorized breaches of any risk limits may result in disciplinary action being taken against individuals responsible. The CRO must be informed of all disciplinary actions. The status of risk limits are reported at a frequency appropriate for each individual metric.

In addition, UBS Europe SE monitors and reports risk concentrations across various dimensions including single name/counterparty, industry/sector, country and region. Actual and potential risk concentrations of the direct or indirect credit risk exposures of UBS are subject to the Risk Concentrations policy, outlining respective responsibilities as well as identification, monitoring, and reporting requirements. This policy covers requirements to address risk correlation and Wrong-Way risk. Risk concentrations of credit exposures for UBS Europe SE include all counterparties, including third party clients as well as UBS affiliate companies in general, and UBS AG as parent bank in particular.

Risk management

The risks are managed within the business and monitored by the control functions according to the risk appetite. Besides continuous monitoring, limit framework and escalation the following sections describes the risk mitigation techniques per risk type.

Credit risk

Credit risk is actively mitigated in a number of ways depending on the type of risk: collateralization of Lombard, mortgages and derivatives, sub-participation of IB banking book loans, continuous monitoring and comprehensive limit framework.

Credit risk in the WM business activities is dominated by the client Lombard and mortgage business. Collateralization is an inseparable element of this credit business outlined as follows:

– UBS Europe SE's Lombard activities are subject to strict collateralization rules requiring pledged available collateral for which haircuts to the market values are applied. The haircuts depend on liquidity, intra-portfolio concentration and stability/ volatility of the collateral. Single concentration risk of clients' exposure is closely monitored on a daily basis and limited by management.
– UBS Europe SE's mortgage lending is linked (via mortgage deed) to individual real estate properties for which clients receive dedicated loans. UBS Europe SE reduces risks by applying a set of comprehensive criteria that have to be fulfilled by clients in order to be eligible for a loan including debt service capacity.
– Additional credit risk arises from nostro and intra-bank accounts used for facilitating client services including the settlement of client transactions. Third party banks act as sub-custodians or as clearers for the assets of clients. The associated settlement risk is mitigated by various methods including payment netting, continuous net cash settlement, and covered settlement like account-account settlement or Delivery Versus Payment (DVP).

Credit risk from the IB business activities is dominated by the derivatives and SFT business. Mitigants such as collateralization or margining are an inseparable element of many IB credit activities such as securities financing (repos), and many OTC derivatives. Settlement risk is mitigated by strict control framework, limits, netting and bilateral confirmation. All lending commitments out of the banking book, which are entered into by UBS Europe SE, are fully sub-participated to UBS AG once drawn under the terms of a Master Sub Participation Agreement (MSPA). Counterparty derivative risk exposure from IB is subject to UBS Europe SE's limit framework which sets counterparty-specific limits based on risk appetite, counterparty creditworthiness and the scope of business. The management of counterparty credit risk is further described in section "Counterparty credit risk".

Market risk

Market risks are measured and controlled using Limits & Triggers proposed by Market and Treasury Risk Control. The Management Board approves the risk appetite for the entity and the portfolio limits, including their allocation to the business divisions and UBS Europe SE Group Functions units. Limits are then also allocated at granular levels within the various business lines reflecting the nature and magnitude of the market risks.

UBS Europe SE primary portfolio measures of market risk are liquidity adjusted stress (LAS) loss and value at risk (VaR). These measures are complemented by concentration and granular limits for general and specific market risk factors. In addition, Market and Treasury Risk Control applies a holistic risk framework which sets the appetite for treasury-related risk taking activities across the entity. A key element of this framework is an overarching economic value sensitivity (EVS) limit. In addition, the sensitivity of net interest income (NII) to changes in interest rates is monitored in order to analyze the outlook and volatility of net interest income based on market-expected interest rates.

Market risk is actively mitigated to UBS AG using automated micro-hedges or employing hedging capabilities with external counterparties to reduce the remaining risk for the portfolio. The use of internal and external hedges mitigates market risk significantly. The management and mitigating strategies for interest rate risk in the banking book is described in section "Interest rate risk in the banking book".

Operational risk

Operational risk is controlled by continuous development and implementation of the Operational Risk Framework in all three lines of defense and in line with the Group Operational Risk Framework and policies. Furthermore, UBS AG provides an indemnity agreement against specific operational losses to the Luxembourg Branch, which is carried over to UBS Europe SE, limiting and mitigating the company's exposure to operational risks.

Besides, UBS Europe SE conducts regular reporting using operational risk taxonomies, which allows identifying trends, monitoring developments closely and initiating mitigating actions in a timely manner. The taxonomy dividing operational risk in categories has been approved by the C&ORC function and is regularly reviewed against the development of the business model. Internal controls are embedded in the business activities and processes, which are subject to an independent approval process by C&ORC controllers. The controls include policies, procedures, systems, governance, training and culture besides others approaches to mitigate operational risks. In line with the UBS Group´s Key Procedural Control Instance Assessment Guidance, UBS Europe SE conducts a self-assessment at least semi-annually and reports the results to the appropriate risk committee. In addition, key risk assessments are performed annually within the firm, which are designed to evaluate inherent risk, control mechanism and the residual risk from reputational & media, regulatory, financial, market impact and client risk.

Business risk

Business risk is derived from a negative impact on earnings from lower than expected business volumes or margins, which are not offset by a decrease in expenses. Business risk is mitigated by frequent monitoring of key indicators against objectives to ensure the possibility to take short-term actions if necessary. UBS Europe SE regularly monitors and reports the income and expenses by divisions in order to track earnings generated by fees and interest margins. To mitigate risk further the business strategy does not focus on providing specific niche products, but rather exhibits a broad diversification of revenue sources among WM, AM, IB, P&C Banking as well as UBS Europe SE Business Functions and Treasury functions.

Pension risk

UBS Europe SE pension risk applies to all unfunded defined benefit obligations (DBO) and its resulting sensitivity to changes in interest rates. UBS Europe SE reviewed existing pension schemes and implemented changes transferring the pension risk of newly established pension schemes to external companies or covering the risk with indemnity agreements, where possible.

Pension risk is monitored by measuring liabilities by actuarial revaluation and the development is closely monitored in the normative and economic perspective against the risk appetite.

Model risk

Model risk is mitigated by a comprehensive model governance framework ensuring the independence of the validation function. A single model inventory registers all models used in the institution. Model risk is considered in each risk model through prudent approach, i.e. via add-ons or conservative parametrization.

Funding cost risk

This section only presents the capital/ICAAP-related funding risk aspects, namely funding cost risk. The ILAAP related liquidity and funding risks are reported as part of section "Risk Measurement, Monitoring and Management for ILAAP".

Funding cost risk (in terms of risk to capital) may result in higher-than-expected funding costs due to wider-than- expected UBS credit spreads when existing funding positions mature and need to be rolled over or replaced by other, more expensive funding sources.

To mitigate funding cost risk, UBS Europe SE adheres to the Group Treasury Framework including the following elements:

- Modelled IR duration: Limit applied at business unit levels, monitored by Treasury Risk on a monthly basis. It covers interest rate modelled duration of non-contractual maturity client liabilities (replication portfolios).
- UBS Europe SE monitors this risk also under stress, by estimating the incremental funding costs due to a projected increase in funding spreads and to shifts in funding sources in a stress economic scenario.
- Regional Treasury measures, monitors and manages liquidity and funding positions on a day-to-day basis using internal and regulatory models and tools.
- Funding cost risk arising from uncollateralized OTC derivatives based on differences between UBS Europe SE's own funding curve and the risk-free curve are hedged.

As of year-end 2019, UBS Europe SE has a funding excess and keeps overall funding requirements mostly flat using reverse repos. Significant amount of client deposits is not invested in long-term assets but is held on a Bundesbank overnight account.

Risk measurement, monitoring and management for ILAAP

UBS Europe SE has a well-established framework for ILAAP. Our liquidity and funding risk is monitored, efficiently structured and managed on an entity specific basis and as an integral part of the Group's liquidity and funding strategy.

UBS Europe SE measures and monitors liquidity risk using a set of internal and regulatory models/metrics and tools, which cover different scenarios. Stress scenarios consider not only existing balance sheet positions but also take into account off-balance sheet and contingent funding requirements. The key internal models address both near term liquidity risk as well as longer term structural liquidity and funding risk. The models assess whether the bank has sufficient liquidity to survive a combined severe idiosyncratic and market-wide stress event up to 3 months and whether the bank has sufficient long-term funding to maintain franchise assets at a constant level under stressed market conditions for up to one year.

Our liquidity objective is to ensure sufficient liquidity or access to funding sources, to survive a severe 3-months idiosyncratic and market-wide liquidity stress event; allowing for discrete management actions instructed by Group Treasury in addition to monetizing the bank's liquidity reserves. Our funding objective is to ensure the firm has sufficient long-term funding to maintain franchise assets at a constant level under stressed market conditions for up to one year.

The strategy, as set out in UBS Europe SE's Risk Strategy, is supported through the UBS Europe SE liquidity and funding policy framework.

The risk appetite and assumptions of the internal liquidity and funding models are reviewed and approved by the Management Board and the ALCO at least annually as part of the ILAAP.

UBS Europe SE is further subject to prudential regulations to maintain appropriate liquidity metrics, specifically the LCR. Throughout 2019, UBS Europe SE's internal liquidity & funding metrics as well as the LCR, were at all times above the limits set by the Management Board. UBS Europe SE's average monthly LCR for the ten months period after the cross-border merger on 1st March 2019 was at 147%, the year-end LCR stands at 151%. Future changes in the regulatory regime will be adopted as the requirements evolve, e.g. the NSFR minimum requirements.

As part of UBS Europe SE's 3-year strategic planning, Treasury plans and manages the size of the firm's Liquidity Portfolio and Funding Plan. UBS Europe SE is funded on a diversified manner, with customer deposits and its stable going & gone concern capital as main funding sources. UBS Europe SE is a deposit taking bank with WM clients; this diversified deposit base represents a sticky funding source for the bank. UBS Europe SE is not and has no plans to start issuing, neither in business-as-usual nor in stress, any unsecured or secured Certificate of deposit/Commercial Paper/Bond, Securitization papers or structured notes.

UBS Europe SE further maintains a Contingency Funding Plan (CFP), which provides a clear plan to ensure UBS Europe SE is prepared to respond to a liquidity crisis scenario. It summarizes management actions and defines roles and responsibilities in supporting the liquidity of the entity in a liquidity stress event. The establishment, regular testing and annual updating of the CFP ensures a robust, reliable and cost-effective response to potential liquidity events. Liquidity crisis scenario analysis and contingency funding planning support the liquidity management process, which ensures that immediate corrective measures to absorb potential sudden liquidity shortfalls can be put into effect.

Risk Reporting, systems and control framework

UBS Europe SE ensures that risks are reported for internal control purposes at a frequency and to a level of detail commensurate with the extent and variability of the risk and needs of senior management. It is the responsibility of the business units creating and managing the risk to ensure that control functions are provided with appropriate data at sufficient levels of granularity to compile reports. UBS Europe SE's risk management framework contains a regular and comprehensive reporting landscape to ensure monitoring of adequate liquidity, capital and risk exposure levels. The internal reporting is used for the escalation of risk indicators and the initiation of appropriate mitigating actions. The external reporting is used to comply with risk reporting requirements by the regulators.

The Risk reporting for internal and external requirements is supported by UBS Europe SE's risk measurement systems. The system infrastructure incorporates the relevant legal entities and business divisions and provides the basis for reporting on risk positions and limit utilization to the relevant functions on a regular and ad-hoc basis. Our risk management systems are reviewed by Internal Audit following a risk-based audit approach.

To ensure accurate, complete and timely reporting of data, UBS Europe SE has defined and implemented a data management and control framework. The data management governance applies to internal and regulatory models built and follows the principle to use single data sources for the same information, reconciled data with an audit trail as well as data sourcing process workflows. Our control framework is designed in line with the UBS Group Operational Risk Framework ensuring a strong control process is in place to identify and manage identified weaknesses, while also ensuring compensating measures like additional controls or conservative assumptions are in place.

The following overview presents the most import internal risk reports to monitor UBS Europe SE's risk management process:

- Daily Summary Report: The report is owned by Regulatory Reporting and distributed to the CRO and respective functions. The report contains collateral calls per product category, excess / deficits to collateral held, RWA including limit utilization, capital held and capital ratios compared to regulatory limits and internal triggers. The reports are escalated to additional Management Board members, when significant developments within the Limit, Triggers and Targets are observable.
- Daily Liquidity Monitoring Report: The report is owned by Treasury and distributed to the CFO, CRO and respective functions. The report contains an overview of internal liquidity and funding metrics, LCR and supplementary metrics and their respective utilization.
- Monthly Risk Report: The report is owned by Risk Control and distributed to the Supervisory Board, the Management Board, further RCC members and regulators. The report is the independent 2nd level of defense report and receives approval from the CRO and is presented and discussed in the RCC meetings. It gives a consolidated risk overview of all exposures and metrics across risk categories and all divisions. The report includes firm wide risk metrics, stress test results, recovery indicators as well as liquidity metrics, large exposures and an operational risk, market & treasury risk as well as credit risk overview.
- ICAAP Report: The report is owned by Finance and distributed to the Supervisory Board, the Management Board, the ALCO and regulators. The purpose of the ICAAP report is to inform of the results of the internal assessment of risks and related capital impact at UBS Europe SE including its material subsidiaries and branches. The report and related assessment are done and produced on a quarterly basis and ad hoc if required. Annually a comprehensive ICAAP package including a Capital Adequacy Statement is provided to the regulator.
- ILAAP Report: The ILAAP documentation incl. Liquidity & Funding reports are owned by Treasury and distributed to the Supervisory Board, the Management Board, the ALCO and regulators. The purpose of this reporting is to inform the Management Board and the supervisors on the results of the internal assessment of risks to liquidity and related impact at UBS Europe SE including its material subsidiaries and branches. Annually a comprehensive ILAAP package including a Liquidity Adequacy Statement is provided to the regulator. The key liquidity and funding results are reported on a daily basis in the daily liquidity monitoring report and more extensively as part of the monthly Treasury report.
- Monthly Outsourcing Monitoring Report: The report is owned by Provider Management and distributed to respective line manager, responsible officers for material outsourcings, working circle outsourcing and the Service Operating Committee. The purpose of the report is to inform about the quality and completeness of material outsourcings. It contains the status of the material outsourcings, the number of service deviations, critical areas and KPIs.
- Annual Outsourcing Report: The report is owned by Central Outsourcing Management and distributed to the Supervisory Board, the Management Board and the regulator. The report provides an overview about the inter-entity and third-party inventory of all outsourcings as well as planned initiatives throughout the year. The risk inherent in all outsourcings is assessed both on macro as well as on micro level, including concentration analysis. Furthermore, important past and planned activities are described. The report provides a status and an outlook for the management of all risk exposures related to outsourcing.
- Audit Report: The report is owned by Internal Audit and distributed to the Supervisory Board and Management Board. The report is distributed at appropriate intervals but at least quarterly and includes an overview of the audit mandates executed during the quarter and financial year, including the material deficiencies identified, the measures taken to remedy them and the issue remediation status. It also explains the status of and performance against the audit plan.
- Annual Strategic Capital Plan: The report is owned by UBS Europe SE Treasury and distributed to the Supervisory Board and ALCO. The report provides an overview about the 3-year strategic capital plan including balance sheet and RWA forecast, proposed capital measures, the management buffer and the 3-year funding plan.

- Annual Compliance Report: The report is owned by the C&ORC function and distributed to the Management Board and Supervisory Board. In line with the MaRisk BT 1.2.2 Mindestanforderungen an die Compliance Funktion (MaComp) the report provide C&ORC's view on the adequacy and effectiveness of the applied framework, measures and procedures. Apart from periodic and ad hoc reports throughout the year, the annual reporting obligation is being discharged by issuing this annual compliance report. The report itself is generated under the consideration of the best practice guidelines on Securities-Compliance issued by Bundesverband Deutscher Banken as well as Sec. 6 Wertpapierdienstleistungs-Prüfungsverordnung and covers UBS Europe SE.
- Risk analysis money laundering, financing of terrorism & other criminal offences: The report is owned by the C&ORC function and distributed to the Management Board. The report provides the required risk assessment completed by UBS Europe SE, in line with Article 8 of Directive (EU) 2015/849 and Section 5 of the German Money Laundering Act (GwG). It includes an assessment of UBS Europe SE risks connected to money laundering and terrorist financing and additionally a specific risk analysis dedicated to criminal offences. The assessment is compiled by the UBS Europe SE Money Laundering Reporting Officer (MLRO) who provides an update on the anti-money laundering (AML) and counter terrorist financing (CTF) preventive measures and in particular on the governance, policies and controls related to the AML/CTF framework as well as the framework for the prevention criminal offences. The document needs to be approved by the CRO as the responsible board member in terms of section 4 GwG. Additionally, the Management Board needs to be informed about the results of the performed analyses. The risk analysis takes into account relevant risk factors including those relating to clients, products and services, transactions and distribution channels and connected countries and geographic areas. Functions, divisions and branches have tailored risk reports in place to enable the functional, divisional and market heads to perform their supervision duties. In addition to the regular reports, independent ad-hoc reports are triggered based on the risk appetite monitoring. The report owner and corresponding head is responsible to escalate any significant risk development and/or event to the RCC directly or to the Risk Control function depending on the urgency of the relevant topic.

Key ratios

The following is a summary of the key ratios of UBS Europe SE.

EUR million	31.12.19	30.06.19
Total Credit Exposure	28,700	27,964
Total RWA	15,146	13,603
Of which credit risk (including CVA Risk)	*11,227*	*9,823*
Of which market risk	*834*	*695*
Of which operational risk	*3,085*	*3,085*
Total Own Funds	3,318	3,836
Of which Common Equity Tier 1 capital	*3,028*	*3,546*
Of which Additional Tier 1 capital	*290*	*290*
Capital Ratio - CET1	19.99%	26.07%
Capital Ratio - Tier 1	21.91%	28.20%
Capital Ratio - Total Capital	21.91%	28.20%
Total Leverage Ratio exposures	41,924	52,619
Leverage Ratio	7.91%	7.29%
Liquidity Coverage Ratio [1]	147%	165%
Eligible liability instruments	1,840	1,850
Total own funds and Eligible liabilities	5,158	5,686
Total own funds and Eligible liabilities as a percentage of RWA	34.06%	41.80%
Total own funds and Eligible liabilities as a percentage of Leverage exposure	12.30%	10.81%

[1] Revised calculation excludes inflows from overdrafts which we cannot demand repayment of within 30 days. Comparative figures and ratios for 30 June 2019 have been adjusted accordingly

Explanations of the Management Board on the risk profile and risk management process

UBS Europe SE has a well-established risk management governance and framework. At least annually, UBS Europe SE performs a risk inventory process and determines a risk profile on enterprise level based on the current and planned business activities. The most significant risks are operational risk, credit risk as well as business risk. UBS Europe SE's risk strategy and risk appetite is derived from the risk identification process in alignment with the strategic business plan. The risk appetite is operationalized in the risk management process by defining limits, triggers and targets as well as comprehensive risk appetite objectives. In general, all material risk categories are capitalized and covered in the ICAAP normative or economic view. Liquidity risk is not capitalized as holding capital is not an effective mitigant. Liquidity risk is efficiently steered and monitored in the ILAAP framework. An adequate quarterly management reporting process ensures timely monitoring of the key capital and liquidity risk metrics. UBS Europe SE's capital and liquidity adequacy was ensured throughout the year. Key ratios are outlined in chapters "Risk Performance", "Key ratios" and "Liquidity".

The Management Board has assessed the adequacy of UBS Europe SE's risk management process. Based on this assessment, the Management Board is confident that the risk management systems put in place are adequate with regard to the profile and strategy of UBS Europe SE. The Management Board of UBS Europe SE has approved the following statement in accordance with Article 435(1) (e) of the CRR:

The risk management processes of UBS Europe SE comply with the common standards and they proportionally reflect the respective extent, complexity and risk exposure of business activities and operations. The described processes, measures and monitoring tools are suitable to sustainably ensure the capital and liquidity adequacy of UBS Europe SE. The risk strategy goals are measurable, transparent and steerable based on the utilized processes. The risk management processes are in line with the risk profile and strategy of UBS Europe SE.

Management body

Number of directorship held by members of the management body

In line with legal requirements of a financial institution with the headquarter in Germany, UBS Europe SE's management body is organized in a two-tier board structure consisting of the Management Board and the Supervisory Board (in consistence with German corporate law). The table below provides the numbers of directorships held by members of the management body according to Article 435 (2) of the CRR as of 31 December 2019, excluding the mandates at UBS Europe SE.

Recruitment of members of the management body

The recruitment of the members of the management body takes into account a shortlist of internal and external candidates containing a preselection of suitable candidates taking into account the selection criteria on their (i) sufficiently good reputation, (ii) possession of sufficient knowledge, skills and experience to perform their duties; (iii) ability to act with honesty, integrity and independence of mind to effectively assess and challenge the decisions of the management body in its management function and other relevant management decisions where necessary and to effectively oversee and monitor management decision-making; as well as (iv) ability to commit sufficient time to perform their functions in the institution and, where the institution is significant, whether or not the limitation of directorships under Article 91 (3) of the Directive (EU) 2013/36 is being complied with.

The Supervisory Board (assisted by its Nomination Committee) is responsible for the recruitment process of the Management Board as part of the management body taking into account the requirements according to Section 25c KWG. Supervisory Board members are elected by the Annual General Meeting taking into account the requirements according to Section 25d KWG, six of them without being bound to election proposals, and three members (employee representatives) are to be elected and appointed upon proposals from the employee-side.

UBS Europe SE management body – number of directorships

Supervisory Board	Total number of Directorships held at 31 Dec 2019	Directorships under Sec. 25d (3) German Banking Act (KWG) that do not count for the limits under Sec. 25d (3), s.1, no.3 KWG	Remaining directorships adjusted by Sec. 25d (3), s.1, no.3 KWG (E=Executive; NE=Non-Executive)
Roland Koch	5	1	4 (4 x NE)
Miriam González Durántez	3	2	1 (1 x NE)
Sabine Keller-Busse	5	2	3 (1 x E; 2 x NE)
Jonathan (Bobby) Magee	–	–	–
Beatriz Martin	5	3	2 (1 x E, 1 x NE)
Martin Wittig	5	3	2 (2 x NE)
Silke Alberts	–	–	–
Jean-Marc Lehnertz	–	–	–
Francesco Stumpo	–	–	–
Total	23	11	12 (2 x E; 10 x NE)

Management Board	Total number of directorships held at 31 Dec 2019	Directorships under sec. 25c (2) KWG that do not count for the limits under sec. 25c (2), no.2 KWG	Remaining directorships adjusted by sec. 25c (2), no.2 KWG (E=Executive; NE= Non-Executive)
Christine Novakovic	2	1	1 (1 x E)
Birgit Dietl-Benzin	3	1	2 (1 x E; 1 x NE)
Georgia Paphiti	6	5	1 (1 x E)
Andreas Przewloka	6	3	3 (2 x E; 1 x NE)
Tobias Vogel	5	3	2 (2 x E)
Total	22	13	9 (7 x E; 2 X NE)

Diversity in relation to selection of the management body

UBS Europe SE is committed to and actively works to foster an inclusive corporate culture and the institution provides equal employment and advancement opportunities for all individuals regardless of race or ethnicity, gender, religion or belief, disability, age or sexual identity. These principles also apply for the composition of the members of the management body. The Nomination Committee discusses and agrees at least annually all objectives for achieving diversity in the management bodies and recommends relevant adoption. Furthermore, the Nomination Committee is responsible for facilitating and monitoring progress towards the achievement of the objectives.

In 2018, the Management Board of UBS Europe SE reaffirmed the target of 27 % of women in the first management level below Management Board and 20% for the second management level. The target has been fulfilled for 2019. As of 31 December 2019, the ratio of women to men in the UBS Europe SE Supervisory Board was 4:5, exceeding the minimum female representation threshold of 30% for Supervisory Boards (UBS Europe SE is at 44%). The female representation in the Management Board increased to 60% by the end of 2019, with a female-to-male ratio of 3:2.

Risk Committee of the Supervisory Board

According to its Rules of Procedure, the Supervisory Board has established a permanent Risk Committee addressing the specific concerns of risk management. In 2019, five regular and one extraordinary committee meetings took place.

Scope of regulatory application

This section outlines the scope of the application of the regulatory regime to UBS Europe SE in accordance with Article 436 of the CRR. As opposed to the consolidation scope under International Financial Reporting Standards (IFRS), the scope of consolidation for the purpose of calculating regulatory capital does not include the German subsidiary UBS Private Equity Komplementär GmbH. The financial figures presented below are disclosed and audited as part of the group quarterly publications.

EU LI1 - Differences between accounting and regulatory scopes of consolidation and the mapping of financial disclosures categories with regulatory risk categories

31.12.19		Carrying values under scope of regulatory consolidation				
EUR million	Carrying values as reported in published financial disclosures	Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital
Assets						
Cash and balances with central banks	6,693	6,693	–	–	–	–
Due from banks	2,937	2,937	–	–	–	–
Receiveables from Securities financing transactions	4,964	–	4,964	–	4,964	–
Cash collateral receivable on derivative instruments	4,284	–	4,284	–	–	–
Loans & advances to customers	6,307	6,307	–	–	–	–
Positive replacement values	280	280	–	–	–	–
Trading portfolio assets	2,925	–	–	–	2,925	–
Positive replacement values	10,471	–	10,471	–	10,471	–
Financial assets designated at fair value	6,754	4,954	1,800	–	1,800	–
Properties, equipment and software	115	115	0	–	0	–
Goodwill and intangible assets	354	0	–	–	0	354
Deferred tax assets	14	5	–	–	0	9
Other assets	149	149	–	–	0	–
Total assets	**46,247**	**21,440**	**21,519**	**–**	**20,160**	**363**

Liabilities						
Due to banks	3,577	–	–	–	–	3,577
Payables from securities financing transactions	327	–	327	–	327	–
Cash collateral payables on derivative instruments	4,357	–	4,357	–		–
Amounts due to customers	19,121	–	–	–	–	19,121
Other financial liabilities measured at amortized cost	310	–	–	–	–	310
Financial liabilities at fair value held for trading	903	–	–	–	903	–
Negative replacement values	10,776	–	10,776	–	10,776	–
Other Financial liabilities	58	–	–	–	–	58
Debt issued designated at fair value	145	–	–	–	–	145
Other financial liabilities designated at fair value	1,646	–	1,646	–	1,646	–
Provisions	28	–	–	–	–	28
Other Liabilities	508	–	–	–	–	508
Total liabilities	**41,756**	**–**	**17,106**	**–**	**13,652**	**23,747**

The following table provides an overview of the main sources of differences between the financial disclosure carrying value amounts and the exposure amounts used for regulatory purposes.

EU LI2 - Main sources of differences between regulatory exposure and carrying values in financial disclosures

31.12.19		Items subject to			
EUR million	Total	Credit risk framework	CCR framework	Securitisation framework	Market risk framework
Assets carrying value amount under the scope of regulatory consolidation (as per template EU LI1)	46,247	21,440	21,519	–	20,160
Liabilities carrying value amount under the regulatory scope of consolidation (as per template EU LI1)	41,755	–	17,106	–	13,652
Total net amount under the regulatory scope of consolidation	4,492	21,440	4,413	–	6,508
Off-balance-sheet amounts (post CCF, e.g. guarantees, commitments)	*10,495*	*10,495*			
Derivatives : PFE and collateral mitigation	*9,408*	*–*	*9,408*		
SFTs: Collateral mitigation	*(1,075)*	*–*	*(1,075)*		
Other differences [2]	*20,122*	*(930)*	*(308)*		
Volatility adjustment to exposure	*160*	*–*	*160*		
Exposure amounts considered for regulatory purposes [1]	43,602	31,005	12,598		0[1]

[1] Exposure is before the allocation of credit conversion factor, credit risk mitigation and after the application of volatility adjustment
No value is shown for market risk because its focus is around capital requirements and not exposure value
[2] Other differences is largely due to 'Amounts due to customers' under the balance sheet liabilities which are excluded from the regulatory framework

The table EU LI3 has not been included due to the immaterial difference between the financial and regulatory scope. Only the German subsidiary UBS Private Equity Komplementär GmbH is excluded from the regulatory scope.

Own funds

This section provides disclosure information on own funds of UBS Europe SE in accordance with Article 437 of the CRR. The following table provides a reconciliation of total equity per the balance sheet to the total regulatory capital in accordance with 437 (1) (a) of the CRR and Annex I of Regulation (EU) 1423/2013.

Reconciliation of balance sheet total equity to regulatory capital

EUR million	31.12.19	30.06.19
Balance sheet total equity [1]	4,032	4,410
Add:		
Tier 2 instruments classified as other liabilities	–	–
Less:		
Prudential Valuation adjustment	(26)	(28)
Deferred tax assets	(9)	(9)
Intangibles assets	(399)	(369)
Gains or losses on balance sheet amounts valued at fair value resulting from changes in own credit standing	(25)	(25)
Unaudited current year profits	(223)	(103)
Other comprehensive income and reserves	(32)	(41)
Total Own Funds	3,318	3,836

[1] Taken from published results for UBS Europe SE as set out in UBS Group AG Annual Report 2019

The total own funds has reduced over the period due to the declaration of the dividend to be paid.

The table below depicts the main features and terms and conditions of capital instruments issued by UBS Europe SE in accordance with Article 437 of the CRR.

Capital instruments main features

	Common Equity Tier 1	Additional Tier 1
Issuer	UBS Europe SE	UBS Europe SE
Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	N/A	N/A
Governing law(s) of the instrument	German	German
Regulatory treatment		
Transitional CRR rules	Common Equity Tier 1	Additional Tier 1
Post-transitional CRR rules	Common Equity Tier 1	Additional Tier 1
Eligible at solo/(sub-)consolidated/ solo & (sub-)consolidated	Solo and Consolidated	Solo and Consolidated
Instrument type (types to be specified by each jurisdiction)	CET1 Instrument	Additional Tier 1
Amount recognised in regulatory capital (currency in million, as of most recent reporting date)	EUR 770 million	EUR 290 million
Nominal amount of instrument	1.00	EUR 290 million
Issue price	Various	1.00
Redemption price	Par	Par
Accounting classification	Shareholders Equity	Shareholders Equity
Original date of issuance	Various	11.06.2018
Perpetual or dated	Perpetual	Perpetual
Original maturity date	No Maturity	No Maturity
Issuer call subject to prior supervisory approval	N/A	Yes
Optional call date, contingent call dates and redemption amount	N/A	11.06.2023, or earlier upon occurrence of tax or regulatory event at par value
Subsequent call dates, if applicable	N/A	N/A
Coupons l dividends		
Fixed or floating dividend/coupon	Floating	Floating
Coupon rate and any related index	N/A	3m LIBOR plus 466 bps
Existence of a dividend stopper	No	No
Fully discretionary, partially discretionary or mandatory (in terms of timing)	Fully discretionary	Fully discretionary
Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully discretionary	Fully discretionary
Existence of step up or other incentive to redeem	No	No
Noncumulative or cumulative	Non cumulative	Non cumulative
Convertible or non-convertible	Non convertible	Non convertible
If convertible, conversion trigger(s)	N/A	N/A
If convertible, fully or partially	N/A	N/A
If convertible, conversion rate	N/A	N/A
If convertible, mandatory or optional conversion	N/A	N/A
If convertible, specify instrument type convertible into	N/A	N/A
If convertible, specify issuer of instrument it converts into	N/A	N/A
Write-down features	No	Yes
If write-down, write-down trigger(s)	N/A	CET1 ratio falls below 5.125%
If write-down, full or partial	N/A	Full
If write-down, permanent or temporary	N/A	Permanent
If temporary write-down, description of write-up mechanism	N/A	N/A
Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	AT1	N/A
Non-compliant transitioned features	No	No
If yes, specify non-compliant features	N/A	N/A

The following table provides an overview of nature and amounts of capital deductions from the own funds for UBS Europe SE.

Nature and amounts of capital deductions from own funds

EUR million	31.12.19	30.06.19
Common Equity Tier 1 capital instruments and the related share premium accounts	3,487	3,976
of which:		
Paid up Capital Instruments	446	446
Share Premium	324	324
Retained earnings	37	37
Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards)	2,680	3,169
Common Equity Tier 1 (CET1) capital before regulatory adjustments	3,487	3,976
Prudential valuation adjustment	(26)	(28)
Intangible assets	(399)	(369)
Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38(3) are met)	(9)	(9)
Gains or losses on balance sheet amounts valued at fair value resulting from changes in own credit standing	(25)	(25)
Total Common Equity Tier 1 capital	3,028	3,546
Additional Tier 1 capital instruments and the related share premium accounts	290	290
of which:		
classified as equity under applicable accounting standards	290	290
Total Additional Tier 1 capital	290	290
Total Tier 1 capital	3,318	3,836
Tier 2 capital instruments and the related share premium accounts	–	–
Total Tier 2 capital	–	–
Total Own Funds	3,318	3,836

Capital requirements

Pillar 1 capital requirements

For Pillar 1, regulatory capital exposures are calculated using supervisory standardised approaches except for:

Credit risk determined by internal credit model

– Exposures arising from OTC derivatives are calculated using an IMM credit model. Exposures on OTC transactions that are not approved to be calculated in this model are determined using the supervisory mark-to-market approach.
– Exposures arising from securities financing transactions (SFT) are calculated using an IMA credit model. Exposures on SFT transactions not approved to be calculated in this model are determined using the supervisory volatility adjustments approach for master netting agreements.

Market risk

– Exposures relating to interest rate swaps are calculated using sensitivity models except for trades booked within Group Treasury which follow standardised approaches.

UBS Europe SE applies standardised risk weightings where applicable using external credit ratings of the rating agencies Moody's, Standard & Poors and Fitch in accordance with Article 113 of the CRR.

Assessing capital requirements

UBS Europe SE assesses the adequacy of its capital resources in terms of both amount and type through a number of processes governed by the Management Board, the UBS Europe SE Risk Committee and ALCO.

A Capital Management Framework has been established with the objective of ensuring that the company complies at all times with relevant regulation and its internal capital risk appetite.

As part of the business planning process, each operating business forecasts its capital needs over a three year horizon. The resulting plan is subject to stress testing to determine whether the bank's capital resources are sufficient should severe market conditions or other events arise. Furthermore, UBS Europe SE considers whether the regulatory capital measures specified in the CRR are sufficient given the risk profile of the bank. The results of these processes form part of the UBS Europe SE ICAAP document which is submitted annually to the ECB. The ICAAP is then assessed by the ECB and used as part of their Supervisory Review and Evaluation Process (SREP) to set a minimum capital requirement for the bank. The Board considers all these factors in establishing the total amount of capital required and the nature of the capital instruments that should be issued.

The Board sets capital limits, thresholds and triggers as well as a management buffer which allows UBS Europe SE to sustainably follow its business model. Procedures are in place to monitor the businesses capital consumption against these metrics and escalate any issues arising through the governance fora.

Quarterly stress testing is undertaken to ensure that capital remains sufficient to enable the firm to continue to meet the Board's metrics should a stress event occur. The results are discussed by the ALCO and reported to the Management Board.

UBS Europe SE's business plan forms part of the overall UBS Group planning process which is approved by the UBS Group AG Executive Board.

The following table outlines an overview of the RWAs and capital requirement for UBS Europe SE.

EU - OV1 - Overview of RWAs

	31.12.19		30.06.19	
EUR million	RWA	Capital Requirements	RWA	Capital Requirements
Credit Risk (excluding CCR)	4,805	385	4,869	389
of which the standardised approach	*4,805*	*385*	*4,869*	*389*
of which the foundation IRB (FIRB) approach	-	-	–	–
of which the advanced IRB (AIRB) approach	-	-	–	–
of which the equity IRB under the simple risk weighted approach or the IMA	-	-	–	–
CCR	6,368	509	4,843	387
of which mark to market and financial collateral comprehensive method [1]	*2,367*	*189*	*1,880*	*150*
of which original exposure	-	-	–	–
of which the standardised approach	-	-	–	–
of which the internal model method (IMM) and internal model approach (IMA) [2]	*2,644*	*212*	*2,125*	*170*
of which risk exposure amount for contributions to the default fund of a CCP	*41*	*3*	*46*	*4*
of which CVA	*1,315*	*105*	*792*	*63*
Settlement risk	54	4	111	9
Securitisation exposures in the banking book (after the cap)	-	-	–	–
of which IRB approach	-	-	–	–
of which IRB supervisory formula approach (SFA)	-	-	–	–
of which internal assessment approach (IAA)	-	-	–	–
of which standardised approach	-	-	–	–
Market risk	834	67	695	56
of which IMA	–	–	–	–
Large exposures	–	–	–	–
Operational risk	3,085	247	3,085	247
of which BIA approach	*3,085*	*247*	*3,085*	*247*
of which standardised approach	–	–	–	–
of which advanced measurement approach	–	–	–	–
Amounts above the threshold for deduction (subject to 250% risk weight)	–	–	–	–
Floor adjustment	–	–	–	–
Total	15,146	1,212	13,603	1,088

[1] Where not eligible for inclusion in a modelled approach, the mark to market method is used for over the counter (OTC) and exchange traded derivatives (ETD), and the financial collateral comprehensive method is used for securities financing transactions (SFT)
[2] Includes exposures to OTC derivatives under the IMM and exposures to SFTs under a Repo IMA model.

Over the period there was no particular driver for the increase in total RWA. The nature of CRR can be volatile due to daily settlement and revaluation effects and these movements are deemed within normal levels.

The following table outlines the breakdown of market risk within UBS Europe SE by the main categories, showing RWAs and capital requirements. As UBS Europe SE does not utilize advanced methodologies these disclosures are derived under the standardised approach.

EU MR1: Market Risk under the standardised approach

	31.12.19		30.06.19	
EUR million	RWAs	Capital requirements	RWAs	Capital requirements
Outright products				
Interest rate risk (general and specific)	536	43	489	39
Equity Risk (general and specific)	23	2	10	1
Foreign exchange risk	250	20	161	13
Commodity risk	–	–	–	–
Options				
Simplified approach	–	–	–	–
Delta-plus method	25	2	35	3
Scenario approach	–	–	–	–
Securitisation (specific risk)	–	–	–	–
Total	834	67	695	56

Counterparty credit risk

Methodology used to assign internal capital and credit limits for counterparty credit exposures

For all counterparty credit exposure, credit risk is measured to allow risk management and control. Models and methodologies are developed and applied for measuring credit risk. All models are approved and reviewed in accordance with the Group policy on Governance of Models. The models and methodologies for measuring credit risk are owned by Risk Methodology. A key measure for credit risk is the Expected Loss (EL) at counterparty level. EL is a statistically based measure estimating the credit loss that is expected to arise from a credit exposure within a one year time horizon.

Credit risk to individual counterparties is measured based on three generally accepted parameters: (i) probability of default (PD) - reflected by assigning a rating to a transaction or a counterparty; (ii) exposure at default (EaD) - depends on the underlying product type and exposure segment; (iii) loss given default (LGD) - reflect debtor and exposure specific factor.

Credit risk is measured at counterparty/transaction level and where appropriate at portfolio level.

As a general rule, where a credit engagement is contemplated, credit analysis is performed, where applicable a counterparty rating set and limits established in line with the risk being undertaken (i.e. a derivative limit, lending limit etc.).

Investment Bank (IB) limits include: (i) Securities Financing Transactions - risk and volume limits; (ii) loans are subject to limits to constrain take and hold and temporary exposure; (iii) settlement risk limits in notional size measured daily (iv) traded products – OTC are given closeout limits for collateralised trading and potential future exposure limit for uncollateralized trades; (v) tenor restrictions may also be set in certain circumstances.

Global Wealth Management (GWM) limits include: (i) Lombard credit facilities, normally uncommitted and valid until further notice. Loan facilities can be used for overdrafts or fixed term advances within the parameters defined for Lombard exposures (ii) UBS Europe SE's maximum risk appetite for a client is defined by the lower of the total (client specific) lending value of a client's collateral portfolio or the approved credit limits; (iii) mortgages is a legacy product in UBS Europe SE.

Limits are subject to periodic review.

Policies for securing collateral

All credit engagements and collateral arrangements must be covered by appropriate documentation. Documentation may be in the form of general terms and conditions and / or product or transaction specific documentation. Standard documentation is used where available and appropriate. In all cases, all documentation must be approved, either generally or individually, by Legal and must be in accordance with applicable divisional risk policies.

Within GWM credit transactions are secured by Lombard eligible collateral duly pledged to UBS Europe SE to allow liquidation in a close out.

For all Lombard credit facilities, appropriate and duly executed legal documentation is mandatory to provide the intended risk mitigation and ensure enforceability of the security interest in the collateral. The credit documentation grants the bank the right to call for additional collateral or margin in line with the defined margin call process, and allow for timely liquidation of collateral and close-out of transactions, when necessary. The documentation includes the right to apply the enforcement proceeds towards discharging all exposures in a close-out situation.

Documentation is in line with local laws, rules and regulations and signed-off by Legal. Standard Lombard documentation must be defined by Legal for each booking centre in UBS Europe SE. Required standards are a function of: (i) jurisdiction of UBS booking center and UBS Europe SE Legal Entity acting as lender; (ii) domicile of borrower / credit counterparty; (iii) legal form of borrower / credit counterparty and/or pledger; (iv) type of exposure (loans, guarantees, OTC derivatives, ETD, etc.) and collateral; (v) custody structure and trading place of the collateral (where applicable).

Within IB approved ISDA Master Agreement plus ISDA Credit Support Annex should be used where trading is to be collateralized. As a general rule, UBS pursues reciprocity in collateral documentation (whilst recognizing the potential difference in ratings or intrinsic strength or regulation between the counterparties).

The agreement allows for daily MTM (as of the previous business day) and collateral calls, as well as the immediate liquidation of collateral (subject to any grace period) and close-out of all relevant transactions in the event of default by the counterparty, including failure by the counterparty to meet collateral calls.

Policies with respect to Wrong-Way risk exposures

UBS Europe SE quantifies Wrong-Way risk exposures when there is a 'structural' relationship between exposure and default or where otherwise a qualitative assessment (by a Credit Officer) determines that the relationship between exposure and counterparty is tantamount or equivalent to a 'structural' relationship (not withstanding the presence or absence of a legal connection).

UBS Europe SE considers two types of Wrong-Way risk:

- Specific Wrong-Way risk: Situations where a counterparty engages in transactions referencing securities issued by itself or an affiliate, or other transactions that are determined to be equivalent in terms of the relationship between the exposure and the counterparty
- General Wrong-Way risk: All other cases of adverse correlation between default and exposure, e.g. CDS on sovereign debt from a counterparty domiciled in that country

Processes are established to identify existing specific wrong / right way transactions in the UBS Europe SE portfolio across the OTC, SFT and ETD portfolios and these are reported monthly.

Ordinarily in the measurement of credit risk for the trading book, the creditworthiness of the counterparty and the exposure of a transaction are measured and modeled independently.

In a transaction where Wrong-Way risk may occur, UBS Europe SE needs to adjust to capture these Wrong-Way scenarios. For specific Wrong-Way risk UBS Europe SE has a good view as to what exposure is at default, e.g. a company's stock will trade at zero upon default and the value of all derivatives contracts should be valued as such.

For general Wrong-Way risk not all scenarios where the country/counterparty defaults are coupled with a Wrong-Way exposure. The country/counterparty exposure calculations cover a wide range of potential states of the world including severe moves in the underlying risk factors. UBS Europe SE is specifically interested in the exposure in the states of the world where the country/counterparty defaults and the current framework misses specific events which drive both exposure and default.

Wrong-Way risk quantification

The 'extra Wrong-Way' exposure is quantified as an event risk not captured in our statistical exposure measures. UBS Europe SE continues to calculate the exposure estimate based on the established risk measures, which covers a wide range of scenarios including some severe moves in underlying risk factors, and add to that the event based exposure.

- Specific Wrong Way Risk – applies the relevant CRR articles for regulatory capital requirement calculation.
- Specific Wrong Way Risk – relevant for counterparties that are non-central banks.

Capital allocation / Allocation of loan limits to counterparties

UBS Europe SE does not provide for any separate capital allocation as well as limitation of default risks towards counterparties with derivative items. Both are effected within the framework of the uniformly applicable limitation process for counterparty risks. The methods of the regulatory as well as internal control of large credits apply.

The following tables provides a view of the methods utilized to calculate CCR regulatory requirements together with the main parameters utilized for each methodology including market values (MV), potential future credit exposures (PFCE), effective expected positive exposure (EEPE), exposure at default (EAD) and credit risk mitigation (CRM) effects.

EU CCR1 - Analysis of CCR exposure by approach

31.12.19 EUR million	Notional	Replacement cost/current MV	PFCE	EEPE	Multiplier	EAD post CRM	RWA
Mark to market		743	3,673			4,034	1,583
Original Exposure	–					–	–
Standardised approach		–				–	–
IMM for derivatives and SFTs				3,689	1.6	3,660	2,066
of which SFTs				–	–	–	–
of which derivatives and long settlement transactions				3,689	1.6	3,660	2,066
of which from contractual cross product netting				–	–	–	–
Financial collateral simple method (for SFTs)						–	–
Financial collateral comprehensive method (for SFTs)						1,785	784
IMA for SFTs						1,644	578
Total							5,011

30.06.19 EUR million	Notional	Replacement cost/current MV	PFCE	EEPE	Multiplier	EAD post CRM	RWA
Mark to market		773	5,599			3,817	1,283
Original Exposure	–					–	–
Standardised approach		–			–	–	–
IMM for derivatives and SFTs				3,580	1.6	3,390	1,808
of which SFTs				–	–	–	–
of which derivatives and long settlement transactions				3,580	1.6	3,390	1,808
of which from contractual cross product netting				–	–	–	–
Financial collateral simple method (for SFTs)						–	–
Financial collateral comprehensive method (for SFTs)						1,656	598
IMA for SFTs						1,955	316
Total							4,005

The following table provides the breakdown of the CVA capital charge by approach, UBS Europe SE currently only utilizes the standardized approach for CVA charge calculation.

EU CCR2 - CVA Capital charge

	31.12.19		30.06.19	
EUR million	Exposure value	RWA	Exposure value	RWA
Total portfolios subject to the advanced method	–	–	–	–
(i) VaR component (including the 3× multiplier)		–		–
(ii) SVaR component (including the 3× multiplier)		–		–
All portfolios subject to the standardised method	2,489	1,315	2,224	792
Based on the original exposure method			–	–
Total subject to the CVA charge	2,489	1,315	2,224	792

The main driver of the RWA increase of €0.5bn is with UBS AG resulting from reduced collateral received from the parent entity.

The following tables provide a breakdown of CCR exposures by type of portfolio and risk weight.

EU CCR3 - Standardised approach - CCR exposures by regulatory portfolio and risk[1]

31.12.19	Risk Weight											Total	Of which unrated
EUR million	0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Other		
Exposure classes													
Central governments and central banks	229	–	–	–	2	4	–	–	–	–	–	235	108
Regional governments and local authorities	–	–	–	–	11	–	–	–	43	–	–	54	36
Public sector entities	–	–	–	–	7	16	–	–	34	–	–	56	37
Multilateral development banks	–	–	–	–	–	–	–	–	–	–	–	–	–
International Organisations	–	–	–	–	–	–	–	–	–	–	–	–	–
Institutions	–	2,593	–	–	1,642	2,840	–	–	299	2	–	7,376	960
Corporates	–	–	–	–	609	136	–	–	2,628	–	–	3,373	2,592
Retail	–	–	–	–	–	–	–	–	–	–	–	–	–
Institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	–	–	–	–	–	–	–
Other items	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	229	2,593	–	–	2,271	2,996	–	–	3,004	2	–	11,094	3,733

30.06.19	Risk Weight											Total	Of which unrated
EUR million	0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Other		
Exposure classes													
Central governments and central banks	470	–	–	–	1	–	–	–	–	–	–	471	267
Regional governments and local authorities	–	–	–	–	1	2	–	–	52	–	–	55	33
Public sector entities	–	–	–	–	16	–	–	–	52	–	–	67	59
Multilateral development banks	1	–	–	–	–	–	–	–	–	–	–	1	–
International Organisations	–	–	–	–	–	–	–	–	–	–	–	–	–
Institutions	–	3,169	–	–	1,624	2,277	–	–	141	5	–	7,215	798
Corporates	–	–	–	–	734	109	–	–	2,020	–	–	2,864	1,953
Retail	–	–	–	–	–	–	–	–	–	–	–	–	–
Institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	–	–	–	–	–	–	–
Other items	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	471	3,169	–	–	2,375	2,388	–	–	2,265	5	–	10,673	3,310

Over the period there was no particular driver for the movements within the type of exposure and risk weight. The nature of CRR can be volatile due to daily settlement and revaluation effects and these movements are deemed within normal levels.

The following tables outline the impact of netting and collateral held on CCR exposures, including exposures arising from transactions cleared through a CCP.

EU CCR5-A - Impact of netting and collateral held on exposures

31.12.19

EUR million	Gross positive fair value[1]	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
Derivatives	11,423	3,159	8,263	1,563	6,701
SFTs	15,242	–	15,242	11,812	3,429
Total	26,664	3,159	23,505	13,375	10,130

30.06.19

EUR million	Gross positive fair value[1]	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
Derivatives	17,460	6,390	11,070	3,863	7,207
SFTs	24,520	–	24,520	20,909	3,611
Total	41,980	6,390	35,590	24,772	10,818

[1] Derivatives gross positive fair value is materially the sum of gross positive replacement value together with the gross PFCE of the trades treated under the mark to market methodology and the EEPE exposure calculated using the company's approved credit model. SFT gross positive fair value is materially the asset value, from both the on- and off- balance sheet, of cash and securities lent out and the company's approved model for calculating SFT exposure.

The following tables provide a breakdown of all types of collateral posted or received to support CCR exposures on derivatives and SFTs.

EU CCR5-B - Composition of collateral for exposures to CCR

31.12.19	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of collateral posted			
EUR million	Segregated	Unsegregated	Segregated	Unsegregated	Fair value of collateral received	Fair value of collateral posted
Cash	–	10,308	–	9,297	15,210	19,795
Non-cash	886	874	454	339	23,479	19,044
Total	886	11,182	454	9,636	38,688	38,839

30.06.19	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of collateral posted			
EUR million	Segregated	Unsegregated	Segregated	Unsegregated	Fair value of collateral received[1]	Fair value of collateral posted[1]
Cash	–	10,335	–	7,099	9,945	16,228
Non-cash	2,448	3,553	472	3,296	40,370	30,964
Total	2,448	13,887	472	10,395	50,315	47,192

[1]The 30.06.19 cash and non-cash for the collateral used in SFTs have been reclassified. The total of SFT collateral received and posted has not changed.

The following table provide an overview of the credit derivative portfolio of UBS Europe SE by product group using notional amounts. UBS Europe SE does not utilize credit derivatives within its banking book.

EU CCR6 - Credit derivative exposures

	31.12.19			30.06.19		
EUR million	Protection bought	Protection sold	Other	Protection bought	Protection sold	Other
Notionals						
Single name credit default swaps	1,138	810	–	1,277	814	–
Multi name credit default swaps	843	842	–	917	916	–
Total Notionals	1,981	1,652	–	2,194	1,730	–
Fair values						
Positive fair value (asset)	5	37	–	22	25	–
Negative fair value (liability)	47	3	–	35	19	–

The following table provides a view of the drivers behind the change in the RWA relating to OTC derivatives under the IMM over the period.

EU CCR7 - RWA flow statements of CCR exposures under the IMM

31.12.19 *EUR Million*	RWA Amounts	Capital Requirements
RWAs as at the end of the previous reporting period (30.06.19)	1,808	145
Asset size	261	21
Credit quality of counterparties	(8)	(1)
Model updates (IMM only)	–	–
Methodology and policy (IMM only)	–	–
Acquisitions and disposals	–	–
Foreign exchange movements	4	–
Other	–	–
RWAs as at the end of the current reporting period (31.12.19)	2,066	165

30.06.2019 *EUR Million*	RWA Amounts	Capital Requirements
RWAs as at the end of the previous reporting period (31.03.19)	2,289	183
Asset size	(477)	(38)
Credit quality of counterparties	–	–
Model updates (IMM only)	–	–
Methodology and policy (IMM only)	–	–
Acquisitions and disposals	–	–
Foreign exchange movements	(4)	–
Other	–	–
RWAs as at the end of the current reporting period (30.06.19)	1,808	145

EU CCR8 – Exposures to CCPs

The following table provides an overview of the CCR charge resulting from exposures to Central Clearing Counterparties (CCP). It sets out the types of exposures as well as their related capital charges.

EU - CCR8 - Exposure to CCPs

	31.12.19		30.06.19	
EUR million	Exposure value	RWA	Exposure value	RWA
Exposures to QCCPs (total)[1]		229		271
Exposures for trades at QCCPs; of which	3,254	187	3,918	225
(i) OTC derivatives	1,236	70	1,294	62
(ii) Exchange-traded derivatives	827	79	938	100
(iii) SFTs	1,188	34	1,684	50
(iv) Netting sets where cross-product netting has been approved	–	–	–	–
Segregated initial margin	–		–	
Non-segregated initial margin	–	–	–	–
Prefunded default fund contributions	74	41	69	46
Alternative calculation of own funds requirements for exposures		–		–
Exposures to non-QCCPs (total)		–		–
Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which	–	–	–	–
(i) OTC derivatives	–	–	–	–
(ii) Exchange-traded derivatives	–	–	–	–
(iii) SFTs	–	–	–	–
(iv) Netting sets where cross-product netting has been approved	–	–	–	–
Segregated initial margin	–		–	
Non-segregated initial margin	–	–	–	–
Prefunded default fund contributions	–	–	–	–
Unfunded default fund contributions	–	–	–	–

[1] Exposures associated with initial margin that have not been excluded under CRR Article 306(1)(c), have been subsumed within the exposure values disclosed under (i), (ii) and (iii) where appropriate

Countercyclical capital buffer

The following table sets out credit exposures as at 31 December 2019, split by geographical distribution, utilized in the calculation of the countercyclical capital buffer.

Geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer

31.12.19 *EUR million*	General credit exposures taken under the standardised approach	Trading book position exposures taken under the standardised approach	Securitisation exposures taken under the standardised approach	Own funds requirements: general credit exposures	Own funds requirements: trading book positions	Own funds requirements: securitisations	Total own funds requirements	Own funds requirements weights	Countercyclical capital buffer rate
Breakdown by country									
Andorra	*2*			*0*			*0*	*0.00*	*0.000%*
Argentina	*4*			*1*			*1*	*0.00*	*0.000%*
Australia	*2*			*0*			*0*	*0.00*	*0.000%*
Austria	*320*			*11*			*11*	*0.02*	*0.000%*
Barbados	*1*			*0*			*0*	*0.00*	*0.000%*
Bahamas	*136*			*11*			*11*	*0.02*	*0.000%*
Belgium	*19*			*1*			*1*	*0.00*	*0.000%*
Bolivia	*1*			*0*			*0*	*0.00*	*0.000%*
Brazil	*9*			*1*			*1*	*0.00*	*0.000%*
British Virgin Islands	*116*			*9*			*9*	*0.01*	*0.000%*
Canada	*20*			*2*			*2*	*0.00*	*0.000%*
Cayman Islands	*17*			*1*			*1*	*0.00*	*0.000%*
Chile	*13*			*1*			*1*	*0.00*	*0.000%*
China	*18*			*1*			*1*	*0.00*	*0.000%*
Costa Rica	*2*			*0*			*0*	*0.00*	*0.000%*
Cyprus	*4*			*0*			*0*	*0.00*	*0.000%*
Denmark	*117*			*9*			*9*	*0.01*	*0.013%*
Ecuador	*1*			*0*			*0*	*0.00*	*0.000%*
Finland	*149*			*11*			*11*	*0.02*	*0.000%*
France	*1,092*			*43*			*43*	*0.06*	*0.015%*
Guatemala	*2*			*0*			*0*	*0.00*	*0.000%*
Germany (Federal Republic of)	*1,453*			*112*			*112*	*0.16*	*0.000%*
Greece	*1*			*0*			*0*	*0.00*	*0.000%*
Guernsey	*1*			*0*			*0*	*0.00*	*0.000%*
Gibraltar	*13*			*1*			*1*	*0.00*	*0.000%*
Hong Kong	*50*			*4*			*4*	*0.01*	*0.014%*
Hungary	*1*			*0*			*0*	*0.00*	*0.000%*
Ireland (Republic of)	*56*			*4*			*4*	*0.01*	*0.006%*
Isle of Man	*24*			*3*			*3*	*0.00*	*0.000%*
Indonesia	*4*			*0*			*0*	*0.00*	*0.000%*
Italy	*1,928*			*156*			*156*	*0.22*	*0.000%*
Japan	*1*			*0*			*0*	*0.00*	*0.000%*
Jersey	*6*			*1*			*1*	*0.00*	*0.000%*
Kuwait	*2*			*0*			*0*	*0.00*	*0.000%*

Geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer (continued)

31.12.19 *EUR million*	General credit exposures taken under the standardised approach	Trading book position exposures taken under the standardised approach	Securitisation exposures taken under the standardised approach	Own funds requirements: general credit exposures	Own funds requirements: trading book positions	Own funds requirements: securitisations	Total own funds requirements	Own funds requirements weights	Countercyclical capital buffer rate
Breakdown by country (continued)									
Lebanese	*5*			*0*			*0*	*0.00*	*0.000%*
Liechtenstein	*9*			*1*			*1*	*0.01*	*0.000%*
Luxembourg	*857*			*69*			*69*	*0.10*	*0.000%*
Malta	*30*			*2*			*2*	*0.00*	*0.000%*
Mexico	*20*			*2*			*2*	*0.00*	*0.000%*
Netherlands Antilles	*1*			*0*			*0*	*0.00*	*0.000%*
Netherlands	*592*			*40*			*40*	*0.06*	*0.000%*
New Zealand	*2*			*0*			*0*	*0.00*	*0.000%*
Norway	*549*			*9*			*9*	*0.01*	*0.033%*
Panama	*42*			*3*			*3*	*0.01*	*0.000%*
Paraguay	*11*			*1*			*1*	*0.00*	*0.000%*
Peru	*1*			*0*			*0*	*0.00*	*0.000%*
Poland	*27*			*2*			*2*	*0.00*	*0.000%*
Portugal	*18*			*1*			*1*	*0.00*	*0.000%*
Qatar	*1*			*0*			*0*	*0.00*	*0.000%*
Russia	*1*			*0*			*0*	*0.00*	*0.000%*
Saudi Arabia	*8*			*1*			*1*	*0.00*	*0.000%*
Singapore	*15*			*1*			*1*	*0.00*	*0.000%*
South Africa	*2*			*0*			*0*	*0.00*	*0.000%*
Spain	*1,036*			*87*			*87*	*0.12*	*0.000%*
Sweden	*553*			*31*			*31*	*0.04*	*0.108%*
Switzerland	*63*			*5*			*5*	*0.01*	*0.000%*
Saint Kitts and Nevis	*4*			*0*			*0*	*0.00*	*0.000%*
Taiwan	*62*			*5*			*5*	*0.01*	*0.000%*
Thailand	*1*			*0*			*0*	*0.00*	*0.000%*
Turkey	*4*			*0*			*0*	*0.00*	*0.000%*
Ukraine	*2*			*0*			*0*	*0.00*	*0.000%*
United Arab Emirates	*156*			*12*			*12*	*0.02*	*0.000%*
United Kingdom	*1,133*	*1*		*44*			*44*	*0.06*	*0.061%*
United States	*61*	*2*		*5*			*5*	*0.01*	*0.000%*
Venzuela	*5*			*1*			*1*	*0.00*	*0.000%*
Other	*58*			*5*			*5*	*0.01*	*0.000%*
Total	10,907	4		713			713	1.00	0.251%

Countercyclical capital buffer

The table below sets out the calculation of the countercyclical capital buffer as at 31 December 2019.

Amount of institution-specific countercyclical capital buffer

EUR million	*31.12.19*
Total risk exposure amount	15,146
Institution-specific countercyclical buffer rate	0.251%
Institution-specific countercyclical capital buffer requirement	38

Credit exposure

The following table shows the average amount of net exposures over the period by exposure class.

EU CRB-B - Total and average net amount of exposures[1]

31.12.2019

	Net value of exposures at the end of the period	Average net exposures over the period
Central governments or central banks	8,584	9,594
Regional governments or local authorities	362	425
Public sector entities	667	809
Multilateral development banks	382	345
International organisations	255	156
Institutions	10,958	11,971
Corporates	20,725	18,902
Of which: SMEs	–	–
Exposures in default	50	28
Items associated with particularly high risk	–	9
Covered bonds	1,324	494
Equity exposures	1	1
Other exposures	133	199
Total standardised approach	43,442	42,932

[1] Exposure is taken before the application CCFs and CRM

The following table provides a breakdown of exposures by geographical areas and exposure classes.

EU - CRB-C - Geographical breakdown of exposures[1]

31.12.19

EUR million	Austria	France	Germany	Italy	Luxembourg	Nether-lands	Spain	Switzer-land	United Kingdom	Rest of Europe	Total Europe	Rest of the World	Total All regions
Central governments and central banks	79	337	5,841	358	664	7	49	–	–	121	7,456	1,128	8,584
Regional governments and local authorities	–	–	275	43	–	–	–	–	–	41	359	3	362
Public sector entities	–	3	471	50	–	139	–	–	–	–	663	4	667
Multilateral development banks	–	–	–	–	–	–	–	–	–	123	123	259	382
International organisations	–	–	–	–	–	–	–	–	–	255	255	–	255
Institutions	83	2,878	652	678	169	113	237	3,033	1,231	620	9,694	1,265	10,958
Corporates	2,331	1,257	1,216	2,145	5,232	1,306	1,707	279	926	2,262	18,663	2,062	20,725
Exposures in default	–	1	–	14	1	–	–	–	–	28	44	6	50
Items of high risk	–	–	–	–	–	–	–	–	–		–	–	–
Covered bonds	–	–	54	–	–	11	–	–	656	603	1,324	–	1,324
Equity exposures	–	–	–	–	–	–	–	–	–	–	–	1	1
Other items	–	–	130	–	–	–	–	–	3	–	133	–	133
Total	2,494	4,476	8,639	3,287	6,069	1,577	1,993	3,312	2,816	4,053	38,714	4,728	43,442

[1] - Exposure is taken before the application of CCFs and CRM
- In this table the level of materiality that has been applied is EUR 1bn.
- Countries for which a credit risk exposure exists but for which no individual disclosure has been made are as follows: Andorra, Argentina, Australia, Barbados, Bahamas, Belgium, Bolivia, Brazil, Canada, Cayman Islands, Chile, China, Costa Rica, Cyprus, Denmark, Ecuador, Finland, Guatemala, Greece, Hong Kong, Hungary, India, Indonesia, Ireland, Israel, Japan, Jersey, Kuwait, Liechtenstein, Lebanese, Malta, Mexico, New Zealand, Norway, Netherlands Antilles, Panama, Paraguay, Peru, Poland, Portugal, Qatar, Russia, Saudia Arabia, Sweden, Singapore, South Africa, Saint Kitts and Nevis,Taiwan, Thailand, Turkey, Ukraine, United Arab Emirates, United States of America, Venzuela, British Virgin Islands.

The following table provides a breakdown of the exposures by industry or counterpart types and exposure classes.

EU CRB-D - Concentration of exposures by industry or counterparty types [1]

31.12.19 *EUR million*	Administration and Support service activities	Financial and insurance activities	Manufact-uring	Private Households	Public administration and defence; Compulsory social security	Professional, scientific and technical activities	Real Estate	Transpor-tation and storage	Other	Total
Central governments and central banks	–	7,371	–	–	1,093	–	121	–	–	8,584
Regional governments and local authorities	–	180	–	–	182	–	–	–	–	362
Public sector entities	–	555	–	–	56	–	–	–	56	667
Multilateral development banks	–	382	–	–	–	–	–	–	–	382
International organisations	–	–	–	–	61	–	–	–	194	255
Institutions	–	10,879	–	–	11	–	–	–	68	10,958
Corporates	626	7,810	2,497	4,198	168	2,562	478	528	1,859	20,725
Exposures in default	–	–	–	38	2	–	4	–	6	50
Items of high risk	–	–	–	–	–	–	–	–	–	–
Covered bonds	–	1,324	–	–	–	–	–	–	–	1,324
Equity exposures	–	1	–	–	–	–	–	–	–	1
Other items	–	2	–	–	–	–	–	–	132	134
Total standardised approach	626	28,503	2,497	4,236	1,573	2,562	603	528	2,315	43,442

[1] - Exposure is taken before the application of CCFs and CRM
- In this table the level of materiality that has been applied is EUR 500M.

The following table provides a breakdown of net exposures by residual maturity and exposure classes.

EU CRB-E Maturity of exposures [1]

31.12.19 *EUR million*	On demand	Due in 1 year or less	Due between 1 year and 5 years	Due over 5 years	No stated maturity	Total
Central governments and central banks	1,368	6,494	645	58	20	8,584
Regional governments and local authorities	–	144	215	2	–	362
Public sector entities	–	247	409	12	–	667
Multilateral development banks	–	198	184	–	–	382
International organisations	–	190	64	–	–	255
Institutions	1,449	5,998	1,510	493	1,508	10,958
Corporates	120	11,897	4,097	696	3,916	20,725
Exposures in default	–	3	–	46	1	50
Items associated with particularly high risk	–	–	–	–	–	–
Covered bonds	–	478	836	10	–	1,324
Equity exposures	–	–	–	1	–	1
Other exposures	–	13	–	118	3	133
Total - standardised approach	2,937	25,663	7,960	1,434	5,448	43,442

[1] *Exposure is taken before the application CCFs and CRM*

The following table provides a view of the breakdown of credit exposures by risk weight and asset class under the standardized approach.

EU CR5 - Standardised approach [1]

31.12.19						*Risk Weight*									
EUR million	0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	250%	1250%	Others	Total	Of which unrated
Central governments and central banks	8,580	–	–	–	2	4	–	–	–	–	–	–	–	8,586	7,570
Regional governments and local authorities	274	–	–	–	45	–	–	–	43	–	–	–	–	362	35
Public sector entities	391	–	–	–	159	16	–	–	34	–	–	–	–	599	95
Multilateral development banks	382	–	–	–	–	–	–	–	–	–	–	–	–	382	–
International organisations	255	–	–	–	–	–	–	–	–	–	–	–	–	255	–
Institutions	377	2,593	–	–	3,154	3,275	–	–	308	2	–	2	–	9,710	1,281
Corporates	–	–	–	–	738	242	–	–	6,133	192	–	2	–	7,306	5,836
Retail	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Secured by Mortgages on immovable property	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Exposures in default	–	–	–	–	–	–	–	–	–	41	–	–	–	41	41
Items of high risk	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Covered bonds	–	–	–	1,324	–	–	–	–	–	–	–	–	–	1,324	–
Collective investment undertakings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Equity Exposures	–	–	–	–	–	–	–	–	–	–	1	–	–	1	1
Other Items	2	–	–	–	–	–	–	–	131	–	–	–	–	133	133
Grand Total	10,260	2,593	–	1,324	4,098	3,536	–	–	6,649	236	1	4	–	28,700	14,992

30.06.19						*Risk Weight*									
EUR million	0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	250%	1250%	Others	Total	Of which unrated
Central governments and central banks	9,551	–	–	–	1	–	–	–	–	–	–	–	–	9,552	8,804
Regional governments and local authorities	324	–	–	–	35	2	–	–	52	–	–	–	–	413	34
Public sector entities	535	–	–	–	328	–	–	–	52	–	–	–	–	914	110
Multilateral development banks	292	–	–	–	–	–	–	–	–	–	–	–	–	292	–
International organisations	51	–	–	–	–	–	–	–	–	–	–	–	–	51	–
Institutions	371	3,169	–	–	3,562	2,369	–	–	146	5	–	7	–	9,629	1,039
Corporates	–	–	–	–	800	132	–	–	5,876	117	–	2	–	6,926	5,519
Retail	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Secured by Mortgages on immovable property	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Exposures in default	–	–	–	–	–	–	–	–	–	17	–	–	–	17	17
Items of high risk	–	–	–	–	–	–	–	–	–	10	–	–	–	10	10
Covered bonds	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Collective investment undertakings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Equity Exposures	–	–	–	–	–	–	–	–	–	–	1	–	–	1	1
Other Items	2	–	–	–	–	–	–	–	160	–	–	–	–	161	161
Grand Total	11,125	3,169	–	–	4,726	2,503	–	–	6,286	148	1	9	–	27,964	15,695

[1] Exposure is stated after the application of CCFs and CRM and the addition of volatility adjustments to exposures

The template CRB-A is not deemed to be material due to the nature of the business conducted in UBS Europe SE and is not included for this reason.

Credit risk adjustments

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

In line with the regulatory definition, we report a claim as non-performing when: (i) it is more than 90 days past due; (ii) it is subject to restructuring proceedings, where preferential conditions concerning interest rates, subordination, tenor, etc. have been granted in order to avoid default of the counterparty (forbearance); or (iii) the counterparty is subject to bankruptcy / enforced liquidation proceedings in any form, even if there is sufficient collateral to cover the due payment or there is other evidence that payment obligations will not be fully met without recourse to collateral.

UBS Europe SE applies a single definition of default for classifying assets and determining the probability of default (PD) of its obligors for risk modeling purposes. The definition of default is based on quantitative and qualitative criteria. A counterparty is classified as defaulted at the latest when material payments of interest, principal or fees are overdue for more than 90 days. Counterparties are also classified as defaulted when: bankruptcy, insolvency proceedings or enforced liquidation have commenced; obligations have been restructured on preferential terms (forbearance); or there is other evidence that payment obligations will not be fully met without recourse to collateral. The latter may be the case even if, to date, all contractual payments have been made when due. If one claim against a counterparty is defaulted on, generally all claims against the counterparty are treated as defaulted.

An instrument is classified as credit-impaired if the counterparty is classified as defaulted, and/or the instrument is identified as purchased or originated credit-impaired (POCI). An instrument is POCI if it has been purchased at a deep discount to its carrying amount following a risk event of the issuer or originated with a defaulted counterparty. As of 31st December 2019 UBS Europe SE does not hold any POCI-instruments. Once a financial asset is classified as defaulted/credit-impaired (except POCI), it is reported as a stage 3 instrument and remains as such unless all past due amounts have been rectified, additional payments have been made on time, the position is not classified as credit restructured, and there is general evidence of credit recovery. A three-month probation period is applied before a transfer back to stages 1 or 2 can be triggered. However, most instruments remain in stage 3 for a longer period.

Definition of 'past due' and 'impaired' for the purpose of accounting

A financial asset must be classified as past due by Risk Control when the following occurs: (i) a counterparty fails to make a cash payment when contractually due on the financial asset; and (ii) the missing cash payment is not covered by an approved and advised limit.

An overdraft account must be generally classified as past due when the balance exceeds an approved and advised limit. An advised limit is a credit limit which is based on a contractual agreement with the client. This requires that the limit size, payment deadlines and all other relevant terms and conditions have been communicated to the client.

A legal counterparty is deemed to be impaired/in default if there is evidence that contractual payment obligations towards UBS Europe SE will not be met in full without enforcement of credit enhancements such as collateral or third party guarantees. This includes inability as well as unwillingness to pay.

The identification of default takes into account qualitative and quantitative aspects. Indications include:

Unlikeliness-to-pay indicators

A legal counterparty must be classified as in default, if not classified as such already, in the following situations: (i) the legal counterparty is subject to legal bankruptcy proceedings which comprise UBS Europe SE exposures or is forced into liquidation (e.g. debt moratorium, Chapter 11), even if there is sufficient collateral to cover payment obligations; (ii) for a financial asset of the legal counterparty causing material credit exposure and carried at amortized cost, the carrying amount exceeds the present value of the estimated future cash flows, i.e. interest payments, scheduled principal repayments, or other payments due, for example on guarantees, and including liquidation of collateral and third-party-guaranteed payments where available; (iii) the legal counterparty legally defaulted on a financial asset as a result of a covenant breach or a contractually specified termination event, and a close-out of the financial asset has been enforced for credit related reasons. This may exclude cases when a financial asset has been closed-out in the absence of a legal default event or in the regular course of the business with a timely payment of any arising claims.

Conclusive past due backstops

A legal counterparty must be classified as in default when it exceeds 90 days past due pursuant to the applicable counting rule.

Default with a third party

It is a rebuttable presumption that a legal counterparty is in default if (i) it has legally defaulted on credit positions granted by a third party as a result of a covenant breach or a contractually specified termination event and the financial asset has been irregularly closed-out; or (ii) distressed credit positions granted by a third party are under credit restructuring.

That is, a legal counterparty must be classified as in default if UBS Europe SE observes above circumstances unless evidence can be collected that UBS's credit exposure is not impacted.

Additional Indications for Default

Default may not initially be evident and so an effective classification process for default must take into account potential indicators which may not necessarily signify default. This includes the following examples: (1) repeated or Long-Lasting Delinquency; (ii) repeated material past due amounts or financial assets which have been past due for a long period (relative to commercially accepted grace periods) may be an indication of default, irrespective of whether the conclusive or rebuttable delinquency backstop have been triggered or not.

The EBA guideline specifies a number of templates (CR1 A-E) around credit and specific risk adjustments, write offs and impairments but due to the nature of the business conducted in UBS Europe SE these are not deemed to be material. The large majority of trades conducted on UBS Europe SE are fully collateralized and this is managed on a daily basis. The templates CR1 A-E are excluded from these Pillar 3 because of this reason. The templates CR2-A and CR2-B have been included to provide an overview of the movements during the period.

Table CR2-A shows the development of the total stock of Credit Risk Adjustment for loans and debt securities belonging to the IFRS category 'amortised cost' and Off-Balance Sheet positions which are defaulted or impaired during financial year 2019. Numbers are based on IFRS and the regulatory scope of consolidation is taken into consideration.

EU CR2-A Changes in the stock of general and specific risk adjustments

31.12.2019 *EUR million*	Accumulated specific credit risk adjustment	Accumulated general credit risk adjustment
Opening Balance	10	–
Increases due to amounts set aside for estimated loan losses during the period	4	–
Decreases due to amounts reversed for estimated loan losses during the period	–	–
Decreases due to amounts taken against accumulated credit risk adjustments	–	–
Transfers between credit risk adjustments	–	–
Impact of exchange rate differences	–	–
Business combinations, including acquisitions and disposals of subsidiaries	–	–
Other adjustments	–	–
Closing Balance	14	–
Recoveries on credit risk adjustments recorded directly to the statement of profit or loss	–	–
Specific credit risk adjustments directly recorded to the statement of profit or loss	4	–

Table CR2-B shows the changes in stock of defaulted loans and debt securities belonging to the IFRS category 'amortised cost' and Off-Balance Sheet positions during financial year 2019. Numbers are based on IFRS and the regulatory scope of consolidation is taken into consideration.

EU CR2-B Changes in the stock of defaulted and impaired loans and debt securities

31.12.2019 *EUR million*	Gross carrying value defaulted exposures
Opening Balance	23
Loans and debt securities that have defaulted or impaired since the last reporting period	29
Returned to non-defaulted status	–
Amounts written off	–
Other changes	–
Closing Balance	51

External credit assessment institutions

Use of external credit assessment institutions (ECAIs), Article 444 of the CRR

The standardised approach requires banks to use risk assessments prepared by external credit assessment institutions (ECAI) or export credit agencies to determine the risk weightings applied to rated counterparties. For this purpose UBS Europe SE uses three recognised ECAIs; Standard and Poor's Global Ratings, Moody's Investors Service and Fitch Ratings.

The mapping of external ratings to the standardised approach risk weights is determined by the EBA. UBS Europe SE applies risk weights determined in this way to all relevant exposure classes in both the trading and non-trading books.

Credit risk mitigation

UBS Europe SE uses specific credit risk mitigation (CRM) techniques for exposures against UBS AG and UBS Switzerland AG. For loans to external counterparties, UBS Europe SE uses various credit risk mitigation techniques. The security provided by customers for Lombard loans is offset within the framework of Articles 107 and 108 of the CRR and/or any cash collateral according to Article 399 of the CRR.
All financial security is taken into account using the comprehensive method according to Article 233 of the CRR. The largest exposure to credit institutions is with the parent UBS AG. This specific concentration risk is closely monitored by UBE Europe SE.

The following table outlines the extent of usage of CRM techniques. It shows the carrying values of all collateral, financial guarantees and credit derivatives used as CRM.

EU CR3 - CRM techniques overview

31.12.19 *EUR million*	Exposures unsecured - carrying amounts	Exposures secured - carrying amounts	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
Exposure carrying values under credit risk mitigation					
Total loans	11,968	3,585	3,585	–	–
Total debt securities	4,934	–	–	14	–
Total exposures	16,902	3,585	3,585	14	–
of which defaulted	–	–	–	–	–

30.06.19 *EUR million*	Exposures unsecured - carrying amounts	Exposures secured - carrying amounts	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
Exposure carrying values under credit risk mitigation					
Total loans	13,072	4,888	4,888	–	–
Total debt securities	3,531	–	–	13	–
Total exposures	16,603	4,888	4,888	13	–
of which defaulted	–	–	–	–	–

The following table outlines the effects of CRM excluding derivative, long settlement transactions, margin lending and SFT transactions and outlines exposures pre and post CRM and credit conversion factors (CCF).

EU CR4 - Standardised approach - Credit risk exposure and CRM effects

31.12.19	Exposures before CCF and CRM		Exposures post CCF and CRM		RWAs and RWA density	
EUR million	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWAs	RWA density
Exposure class						
Central governments or central banks	8,351	–	8,351	–	–	0%
Regional government or local authorities	309	–	309	–	7	2%
Public sector entities	585	25	543	–	30	6%
Multilateral development banks	382	–	382	–	–	0%
International organisations	255	–	255	–	–	0%
Institutions	2,773	0	2,334	0	550	24%
Corporates	6,347	10,469	3,230	704	3,891	99%
Exposures in default	50	–	41	–	62	150%
Covered bonds	1,324	–	1,324	–	132	10%
Equity	1	–	1	–	2	250%
Other items	133	–	133	–	131	98%
Total	20,510	10,495	16,902	704	4,805	27%

30.06.19	Exposures before CCF and CRM		Exposures post CCF and CRM		RWAs and RWA density	
EUR million	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWAs	RWA density
Exposure class						
Central governments and central banks	9,081	–	9,081	–	–	0%
Regional governments and local authorities	357	–	357	–	7	2%
Public sector entities	895	29	847	–	63	7%
Multilateral development banks	291	–	291	–	–	0%
International organisations	51	–	51	–	–	0%
Institutions	3,753	1	2,414	–	526	22%
Corporates	6,890	8,302	3,383	678	4,073	100%
Exposures in default	25		17		25	150%
Items associated with particularly high risk	–	20	–	10	15	150%
Equity	1	–	1	–	2	250%
Other items	161	–	161	–	160	99%
Total	21,505	8,352	16,603	689	4,869	28%

The templates EU CR1 A-E are not deemed to be material due to the nature of the business conducted in UBS Europe SE and are not included for that reason.

Exposures in equities not included in the trading book

Due to their size, equity positions in the banking book in accordance with Article 447 of the CRR are not deemed to be material.

Securitization positions

UBS Europe SE is not the originator or sponsor of securitization positions. UBS Europe SE enters into derivative contracts with securitization vehicles incidental to its normal trading business. The value of these contracts is not material as determined under the company's Pillar 3 policy.

Liquidity

The LCR Liquidity Coverage Ratio (LCR) assesses whether the entity has sufficient High-Quality Liquid Assets (HQLA) to survive a significant stress scenario over a period of 30 days.

The following table shows the components of UBS Europe SE's monthly average LCR for 2019. As a result of the cross-border merger of UBS Limited into UBS Europe SE effective 1 March 2019, UBS Europe SE became a significant regulated subsidiary of UBS Group AG. Figures as of 31 December 2019 are based on a ten-month average, as of 30 September 2019 on a seven-month average and as of 30 June 2019 on a four-month average, as data produced on the same basis is only available for the period since the cross-border merger. For 31 March 2019, month-end reporting date values are disclosed.

Liquidity Coverage Ratio

Consolidated	Total unweighted value (average)				Total weighted value (average)			
31.12.19								
EUR million								
Quarter Ended on:	31/03/2019	30/06/2019	30/09/2019	31/12/2019	31/03/2019	30/06/2019	30/09/2019	31/12/2019
Number of data points used in calculation of average	1	4	7	10	1	4	7	10
High Quality Liquid Assets:								
Total high quality liquid assets (HQLA)					14,770	14,367	14,309	14,393
Retail deposits and deposits from small business customers of which:	5,740	5,683	5,530	5,425	1,148	1,137	1,106	1,085
Stable deposits	-	-	-	-	-	-	-	-
Less stable deposits	5,740	5,683	5,530	5,425	1,148	1,137	1,106	1,085
Unsecured wholesale funding	16,738	16,800	16,866	16,885	12,110	12,282	12,532	12,569
Operational deposits (all counterparts) and deposits in network of cooperative banks	4,157	4,051	3,888	3,883	1,039	1,013	972	971
Non-operational deposits (all counterparts)	12,581	12,749	12,979	13,003	11,071	11,269	11,560	11,598
Unsecured debt	-	-	-	-	-	-	-	-
Secured wholesale funding					439	734	625	522
Additional requirements	3,907	3,822	4,539	4,711	1,862	1,709	1,884	1,840
Outflows related to derivative exposures and other collateral requirements	2,647	2,574	2,583	2,329	1,665	1,534	1,636	1,551
Outflows related to loss of funding on debt products	-	-	-	-	-	-	-	-
Credit and liquidity facilities	1,260	1,247	1,956	2,382	197	175	248	288
Other contractual funding obligations	2,149	2,106	1,942	1,796	676	924	845	735
Other contingent funding obligations	3,997	4,661	5,661	5,973	-	118	334	412
Total Cash Outflows					16,235	16,903	17,326	17,162
Secured lending (e.g. reverse repos)	30,664	26,228	26,426	25,017	2,819	2,453	2,283	1,995
Inflows from fully performing exposures	5,388	5,153	4,960	4,835	4,819	4,547	4,357	4,228
Other cash inflows	1,132	1,130	1,062	963	1,132	1,130	1,062	963
Difference between total weighted in and outflows from third countries where there are transfer restrictions or non-convertible currencies					-	-	-	-
Excess inflows from a related specialised credit institution					-	-	-	-
Total Cash Inflows	37,183	32,511	32,449	30,815	8,769	8,130	7,702	7,186
Fully exempt inflows	-	-	-	-	-	-	-	-
Inflows subject to 90% cap	-	-	-	-	-	-	-	-
Inflows subject to 75% cap	*35,332*	*30,702*	*30,758*	*29,141*	*8,769*	*8,130*	*7,702*	*7,186*

Liquidity Coverage Ratio

Consolidated					
EUR million					
Quarter Ended on:		31/03/19	30/06/19	30/09/19	31/12/19
21	Liquidity Buffer	14,770	14,367	14,309	14,393
22	Total net cash outflows	7,465	8,773	9,624	9,976
23	**Liquidity coverage ratio(%) [1]**	198%	165%	151%	147%

[1] Revised calculation excludes inflows from overdrafts which we cannot demand repayment of within 30 days. Comparative figures and ratios for 30 September, 30 June and 31 March have been adjusted accordingly

Over 2019 the average LCR ratio was well above the Pillar 1 regulatory minimum with the rolling average ranging from 147% to 198%. UBS Europe SE's LCR ratio has decreased since the cross border merger in Q1 2019 due to management measures taken to reduce the entity's excess liquidity.

Currency mismatch in the LCR

The LCR is reported in all significant currencies (comprising at least 5 % of the total balance sheet). No risk appetite is currently set for single currency LCRs. UBE Europe SE manages its cross-currency liquidity risk through internal models and the respective limit framework.

Derivative exposures and potential collateral calls

The LCR is calculated by considering derivative cashflows, represented on a net basis in accordance with Article 21 of the Regulation (EU) 2015/61 (as amended). Other items that could lead to liquidity outflows include the historical look back approach, which considers the impact of an adverse market scenario on derivatives, and additional collateral requirements in the event of a deterioration in UBS Europe SE's credit rating.

Concentration of funding and liquidity sources

UBS Europe SE's funding sources mainly comprise its diversified deposit base and its going and gone concern capital.

Approach to centralized group liquidity management and individual legal entity liquidity management

UBS Europe SE's liquidity management approach is embedded in the Group's general liquidity management principles.

Asset encumbrance

The following tables set out the disclosures for asset encumbrance as required by the EBA in the CRR, supporting technical guidelines and the EBA disclosure guidelines. In accordance with CRR Article 443 and the supporting technical standards the tables below show the median value over 2019 of each amount disclosed.

Encumbered and unencumbered assets

31.12.2019	Carrying Amount of encumbered assets		Fair value of encumbered assets		Carrying amount of unencumbered assets		Fair value of unencumbered assets	
EUR million		of which notionally eligible EHQLA and HQLA		of which notionally eligible EHQLA and HQLA		of which EHQLA and HQLA		of which EHQLA and HQLA
Assets of reporting institution	8,353	–	–	–	49,273	11,326	–	–
Equity Instruments	–	–	–	–	2,088	–	2,088	–
Debt securities	417	–	417	–	3,670	3,572	3,670	3,572
of which: covered bonds	*–*	*–*	*–*	*–*	*614*	*480*	*614*	*480*
of which: asset-backed securities	*–*	*–*	*–*	*–*	*–*	*–*	*–*	*–*
of which: issued by general governments	*331*	*–*	*331*	*–*	*14,998*	*1,244*	*1,498*	*1,244*
of which: issued by financial corporations	*35*	*–*	*35*	*–*	*2,184*	*1,765*	*2,184*	*1,765*
of which: issued by non-financial corporations	*7*	*–*	*7*	*–*	*5*	*–*	*5*	*–*
Other assets	7,878	–	–	–	43,838	8,232	–	–

Collateral received

31.12.2019	Fair value of encumbered collateral received or own debt issued		Unencumbered Fair value of collateral received or own debt securities issued available for encumbrance	
EUR million		of which notionally eligible EHQLA and HQLA		of which EHQLA and HQLA
Collateral received by the reporting institution	33,405	1,102	11,074	2,926
Loans on demand	–	–	–	–
Equity instruments	669	–	1,577	–
Debt securities	32,591	1,102	9,496	2,926
of which: covered bonds	*491*	*–*	*415*	*59*
of which: asset-backed securities	*11*	*–*	*268*	*4*
of which: issued by general governments	*25,169*	*985*	*5,159*	*1,560*
of which: issued by financial corporations	*747*	*35*	*747*	*780*
of which: issued by non-financial corporations	*2,531*	*16*	*1,666*	*363*
Loans and advances other than loans on demand	–	–	–	–
Other collateral received	–	–	–	–
Own debt securitiesissued other than own covered bonds or asset-backed securities	–	–	–	–
Own coverered bonds and asset-backed securities issued and not yet pledged	–	–	–	–
Total Assets, collateral received and own debt securities issued	41,658	–	–	–

Median amounts of liabilities associated with encumbered assets and collateral received

Median of the month end balances during year EUR million	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and encumbered ABS
Carrying amount of selected financial liabilities	43,642	39,879

UBS Europe SE holds a median EUR 49bn of unencumbered assets compared with a median EUR 8bn of encumbered assets. The largest portion of the unencumbered assets is positive replacement values (PRV) incorporated in the other assets row. A significant portion of the median EUR 4bn of unencumbered debt securities is the liquidity portfolio maintained in the entity to protect against adverse liquidity shocks.

The main drivers of encumbered assets are securities financing activity and margins pledged against derivatives. There are no covered bond issuances or securitisation programs within UBS Europe SE. Asset encumbrance is one consideration in the funding and liquidity structure for UBS Europe SE. Trading inventory is of high quality and is largely funded through the securities financing markets. This secured financing creates an encumbrance on the assets held. These transactions are generally short-term and have a low volatility.

In addition to encumbrance of assets on the balance sheet, securities accepted as collateral, are re-hypothecated. In 2019 UBS Europe SE held a median total of EUR 44bn of collateral received of which a median of EUR 33bn was encumbered. A majority of this relates to reverse repurchase and collateral swap agreements that are in turn financed via repurchase and collateral swap agreements. The remainder primarily relates to securities used to settle trading portfolio liabilities, securities lending activity as well as collateral pledged to OTC counterparties and exchange traded derivative client margins.

The management of the UBS Europe SE's liquidity is the responsibility of the Group Treasury function. In its monthly meeting the UBS ESE Asset and Liability Committee reviews a summary of the unencumbered and encumbered collateral.

Leverage ratio

The following tables set out the leverage ratio and related disclosures in accordance with Article 451 of the CRR.

Leverage ratio disclosures

EUR million	31.12.19	30.06.19
On-balance sheet items (excluding derivatives, securities financing transactions but including collateral)	26,786	28,599
Asset amounts deducted in determining Tier 1 capital	(408)	(377)
Total on-balance sheet exposures	26,378	28,221
Replacement cost of derivative transactions	1,101	1,948
Add-on amounts for potential future exposure of derivative transactions	10,588	15,230
Receivable assets for cash variable margin for derivative transactions	(1,560)	(1,893)
Exempted CCP transactions	(3,672)	(7,065)
Adjusted notional of written credit derivatives	1,652	1,730
Adjusted effective notional offsets & add-on deductions for written credit derivatives	(1,652)	(1,730)
Total derivative exposures	6,456	8,219
Gross securities financing transaction assets	19,796	34,899
Netted amounts of cash payables and receivables of gross securities financing transaction assets	(13,310)	(20,941)
Counterparty credit risk exposure for securities financing transaction assets	1,186	833
Total securities financing transaction exposures	7,672	14,791
Off-balance sheet exposures at gross notional amounts	8,618	8,352
Adjustments for conversion to credit equivalent amounts	(7,200)	(6,965)
Total other off-balance sheet assets	1,418	1,387
Total leverage ratio exposure	41,924	52,619
Tier 1 Capital	3,318	3,836
Leverage Ratio	7.91%	7.29%

Total leverage ratio exposure has decreased by €10.7bn over the period largely driven by the reduction in securities financing transactions. This was due to a combination of a reduction in client demand, reduced levels of excess cash management and better use of netting agreements.

The following table reconciles the leverage ratio exposure amount to the balance sheet assets.

Reconciliation of accounting assets and leverage ratio exposures

EUR million	31.12.19	30.06.19
Total assets [1]	46,247	60,987
Adjustments for derivative instruments	(6,515)	(8,732)
Adjustments for securities financing transactions (SFTs)	1,182	(645)
Adjustments for off-balance sheet items	1,418	1,387
Other adjustments	(408)	(377)
Total	41,924	52,619

[1] Taken from published results for UBS Europe SE as set out in UBS Group AG Annual Report 2019

The table below sets out the split of balance sheet assets.

Split of balance sheet exposures

EUR million	31.12.19	30.06.19
Total on-balance sheet exposures (excluding derivatives, SFTs, exempted exposures)	25,225	26,705
Trading book exposures	4,086	4,672
Banking book exposures	21,139	22,033
of which:		
Sovereigns	*9,043*	*9,423*
Local and regional government, public sector and supranationals not treated as sovereigns	*839*	1,253
Institutions	*3,485*	4,327
Corporate	*6,259*	6,865
Exposures in default	*50*	25
Covered bonds	*1,324*	0
Other exposures	*139*	141

The company's capital management framework includes an integrated approach to manage capital and leverage including triggers, monitors, planning and reporting.
The leverage ratio is reported on a regular basis against Management Board established triggers. The leverage ratio, own funds and leverage denominator are reported to the ALCO and Management Board on a regular basis. Material movements in own funds or leverage ratio denominator are investigated and analysed.
These assist the ALCO and Management Board to assess whether any actions or mitigation plans should be put in place.

Interest rate risk in the banking book

The disclosures below take into account the EBA guideline EBA/GL/2018/02, which sets out minimum standards for the measurement, management, monitoring and control of interest rate risks in the banking book.

Sources of interest rate risk in the banking book

Interest rate risk in the banking book (IRRBB) arises primarily from client deposits and lending products in Global Wealth Management. The inherent interest rate risks are generally transferred from Global Wealth Management to Regional Treasury, to manage them centrally within Group Functions.

This allows for the netting of interest rate risks across different sources, while leaving the originating businesses with commercial margin and volume management. The residual interest rate risk is mainly hedged with interest rate swaps, some of which are in designated hedge accounting relationships. Short-term exposures and HQLA assets are hedged with derivatives accounted for on a mark-to-market basis.

Risk management and governance

IRRBB is measured using a number of metrics, the most relevant of which are the following:

– Interest rate sensitivities to parallel shifts in yield curves, calculated as changes in the present value of future cash flows irrespective of accounting treatment. These are also the key risk factors for statistical and stress-based measures, such as value-at-risk and stress scenarios (including Economic Value of Equity (EVE) sensitivity), and are measured and reported with a daily frequency.
– Net interest income (NII) sensitivity assesses the change in NII on a monthly basis over a set time horizon compared with the baseline NII, which is calculated assuming that interest rates in all currencies develop according to their market-implied forward rates and under the assumption of constant business volumes and no specific management actions.

UBS Europe SE actively manages IRRBB, with the objective of reducing the volatility of NII, while keeping the EVE sensitivity within set internal risk limits. The UBS Europe SE ALCO oversees the management of IRRBB within the given risk appetite.

Key modeling assumptions

The cash flows from client deposits and lending products used in the calculation of EVE sensitivity exclude commercial margins and other spread components, and are discounted using risk-free rates. Whereas UBS Europe SE's issuances (MREL, AT1) are discounted using UBS's fund transfer curve. Capital instruments are modelled to the first call date.

NII sensitivity is calculated over a three-year time horizon assuming constant balance sheet structure and volumes.

The average repricing maturity of non-maturing deposits and loans is determined via a replication portfolio strategy that protects product margin. The optimal replicating portfolio is determined at a granular currency- and product-specific level by simulating and applying a real-world market rate model to historically calibrated client rate and volume models.

Prepayment rights of fixed term loans granted by law and flooring of variable loans at zero were identified as a potential source of option risk in UBS Europe SE, but based on an annual assessment this option risk is classified as non-material and therefore not considered in EVE[1].

Economic value sensitivity

The interest rate risk sensitivity figures in the table below represent the banking book interest rate delta as well as the effect of a sudden and unexpected change in interest rates according to the EBA guideline on the theoretical present value of the banking book.

As of 31 December 2019, the most adverse interest rate scenario is the "Steepener" scenario, resulting in a change of the economic value of equity of negative EUR 5 million. In contrast to the regulatory reported EVE, this impact includes all currencies, no weighting of positive changes and the deposit duration resulting from the described replication portfolio strategy. The latter has been excluded for regulatory reporting to meet the requirement that non-maturing deposits from financial institutions should not be subject to behavioral modelling. UBS Europe SE's replication portfolios include non-maturing deposits from financial institutions mainly arising from asset servicing business with Luxembourg regulated funds.

The worst change in regulatory reported EVE in relation to Tier 1 capital was 4.5%, which is far below the regulatory threshold for an outlier bank.

1 Based on IRRBB optionality risk assessment 2019, potential costs from prepayments on fixed rate loans are estimated at EUR 0m currently and EUR 1m in a stressed scenario (-200bp / zero floor). Analysis of variable loans products showed that margin could decrease by EUR 6m in case negative interest rates rose to zero

Quantitative information on IRRBB[1]

EUR million

31.12.2019		+1 bp	Parallel Up (200 bps)	Parallel Down (200 bps)	Parallel Up	Parallel Down	Steepener	Flattener	Short Rates Shock up	Short Rates Shock down
Major	CHF	0.003	1	0	0	0	0		0	0
	EUR	0.043	9	(3)	9	(3)	(4)	8	11	(3)
	GBP	(0.002)	0	0	0	0	0	-	0	0
	USD	0.011	2	(2)	2	(2)	(2)	2	3	(3)
Minor		(0.003)	(1)	1	(1)	1	1	(1)	(1)	1
Total impact on interest rate-sensitive banking book positions:		0.052	11	(4)	11	(4)	(5)	10	13	(4)

[1] Economic value measures do not include UBS Europe SE's minor subsidiaries UBS Gestión S.G.I.IC, SA and UBS Fiduciaria SpA . The impact of both subsidiaries is deemed immaterial.

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Numbers presented throughout this report may not add up precisely to the totals provided in the tables and text due to rounding.

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