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FORM 6-K

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THE SECURITIES EXCHANGE ACT OF 1934

Date: March 15, 2019

UBS Group AG

Commission File Number: 1-36764

UBS AG

Commission File Number: 1-15060

(Registrants' Name)

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Aeschenvorstadt 1, Basel, Switzerland

(Address of principal executive offices)

Indicate by check mark whether the registrants file or will file annual reports under cover of Form 20 F or Form 40-F.

Form 20-F x Form 40-F o

This Form 6-K consists of the 31 December 2018 Pillar 3 report of UBS Group AG and significant regulated subsidiaries and sub-groups, which appears immediately following this page.

31 December 2018 Pillar 3 report

UBS Group and significant regulated subsidiaries and sub-groups

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Introduction and basis for preparation

Scope and location of Basel III Pillar 3 disclosures

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

This report provides Pillar 3 disclosures for UBS Group AG and UBS AG on a consolidated basis, as well as prudential key figures and regulatory information for our significant regulated subsidiaries and sub-groups. Information provided in our Annual Report 2018 or other publications may also serve to address Pillar 3 disclosure requirements. Where this is the case, a reference has been provided in this report to the UBS publication where the information can be located. These Pillar 3 disclosures are supplemented by specific additional requirements of the Swiss Financial Market Supervisory Authority (FINMA) and voluntary disclosures on our part.

As UBS is considered a systemically relevant bank (SRB) under Swiss banking law, UBS Group AG and UBS AG are required to comply with regulations based on the Basel III framework as applicable to Swiss SRBs on a consolidated basis. Capital and other regulatory information as of 31 December 2018 for UBS Group AG consolidated is provided in the “Capital management” section of our Annual Report 2018.

Capital and other regulatory information as of 31 December 2018 for UBS AG consolidated is provided in the UBS Group AG and UBS AG Annual Report 2018, and additionally, in the “KM1: Key metrics“ table for UBS AG consolidated on page 110 in this report. We are also required to disclose certain regulatory information for UBS AG standalone, UBS Switzerland AG standalone and UBS Limited standalone, as well as UBS Americas Holding LLC consolidated. This information is provided in the “Significant regulated subsidiaries and sub-groups” sections of this report.

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

Refer to the overview on our external reporting approach under “Annual Reporting“ at *www.ubs.com/investors*. Our quarterly reports are available under “Quarterly Reporting“.

Significant regulatory and disclosure requirements and changes effective in 2018

Significant BCBS and FINMA capital adequacy, liquidity and funding and related disclosure requirements

This Pillar 3 report has been prepared in accordance with FINMA Pillar 3 disclosure requirements (FINMA circular 2016 / 01 “Disclosure – banks”) issued on 16 July 2018, the underlying Basel Committee on Banking Supervision (BCBS) guidance “Revised Pillar 3 disclosure requirements” issued in January 2015, the “Frequently asked questions on the revised Pillar 3 disclosure requirements” issued in August 2016, and the “Pillar 3 disclosure requirements – consolidated and enhanced framework” issued in March 2017.

The legal entities UBS AG and UBS Switzerland AG are subject to standalone capital adequacy, liquidity and funding, and disclosure requirements defined by FINMA. This information is provided in the “Significant regulated subsidiaries and sub-groups” section of this report.

Changes to Pillar 1 requirements

Revised Basel III securitization framework

Effective 1 January 2018, we became subject to the revised Basel III securitization framework for securitization exposures in the banking book, which had an immaterial effect on our risk-weighted assets (RWA). Related changes to Pillar 3 disclosure requirements are described on the next page.

Revised methodology for structured margin lending transactions

We revised the methodology applied for structured margin lending transactions, as agreed with FINMA. This revision resulted in an increase of USD 3.3 billion in counterparty credit risk RWA in the third quarter of 2018.

Changes to presentation currency affecting Pillar 1 and Pillar 3 disclosures

In October 2018, the presentation currency of UBS Group AG’s and UBS AG’s consolidated and standalone financial statements changed from Swiss francs to US dollars. In line with these accounting changes, the presentation currency of UBS Group AG’s consolidated and UBS AG’s consolidated and standalone Pillar 3 disclosures in this report have changed from Swiss francs to US dollars. Prior periods were translated to US dollars at the respective spot rates prevailing for the relevant periods unless specified otherwise. We have restated the composition of cash collaterals in domestic currency and other currencies in “CCR5: Composition of collateral for CCR exposure” table as if the US dollar was our domestic currency for all periods.

We continue to report Pillar 1 and other regulatory submissions to FINMA and to the Swiss National Bank in Swiss francs.

→ **Refer to the “Significant accounting and financial reporting changes” section in our Annual Report 2018 for more information**

Changes to accounting affecting Pillar 1 and/or Pillar 3 disclosure requirements

Effective 1 January 2018, we adopted IFRS 9, *Financial Instruments.* The implementation of IFRS 9 resulted in a reduction of Basel III common equity tier 1 (CET1) capital as of 1 January 2018 by approximately USD 0.3 billion and an increase of RWA by approximately USD 0.7 billion.

The related FINMA guidance for the regulatory treatment of accounting provisions was issued on 16 July 2018, with an effective date of 1 January 2019. Effective from 31 December 2018, UBS opted to phase in the effects from IFRS 9 ECL on CET1 capital, if any, over a five-year transitional period.

In addition, the implementation of IFRS 9 resulted in the following structural and calculation changes to our semi-annual and annual Pillar 3 disclosures, which are also outlined in footnotes or narrative text for the relevant tables:

(a) Allowances and impairments included in “CR1: Credit quality of assets,” “CRB: Breakdown of impaired exposures by industry,” “CRB: Impaired financial instruments by geographical region,” “CRB: Breakdown of restructured exposures between impaired and non-impaired,” and provisions included in “CR6: IRB – Credit risk exposures by portfolio and PD range” as of 30 June 2018 and 31 December 2018 reflect ECL allowances and provisions related to stages 1–3. Comparative numbers as of 31 December 2017 are based on the incurred loss model of IAS 39, *Financial Instruments: Recognition and Measurement,* and are largely comparable to the IFRS 9 stage 3 allowances and provisions.

(b) The definitions of the FINMA-defined Pillar 3 credit risk exposure categories “Loans” and “Debt securities” have been updated to reflect the new IFRS balance sheet structure under IFRS 9.

(c) RWA included in “CR10: IRB (equities under the simple risk weight method)” increased primarily due to the transition effect of IFRS 9, as a result of the reclassification of equity instruments from the IAS 39 category financial assets available for sale to the IFRS 9 category fair value through profit or loss, as unrealized gains on such instruments (previously deducted from Basel III CET1 capital) were added back to the exposure at default for the purpose of the RWA calculation.

(d) The templates “LI1: Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories,” “CRB: Breakdown of exposures by industry,” “CRB: Breakdown of exposures by geographical area” and “CRB: Breakdown of exposures by residual maturity” have been aligned with the IFRS 9-related changes to our balance sheet presentation.

Changes to Pillar 3 disclosure requirements

– In the first quarter of 2018, the “OV1: Overview of RWA” table was enhanced to adopt the revised template introduced with the second phase of revised Pillar 3 disclosure requirements to reflect changes as a result of the aforementioned revised securitization framework.

– The tables “SEC3: Securitization exposures in the banking book and associated regulatory capital requirements – bank acting as originator or as sponsor” and “SEC4: Securitization exposures in the banking book and associated regulatory capital requirements – bank acting as investor” have been modified to reflect changes in line with the revised securitization framework.

– In March 2017, the BCBS issued the “Pillar 3 disclosure requirements – consolidated and enhanced framework,” which represents the second phase of the BCBS review of the Pillar 3 disclosure framework and builds on the revisions to the Pillar 3 disclosure requirements published in January 2015. On 16 July 2018, FINMA issued a revised Circular 2016 / 01 “Disclosure – banks” including the aforementioned second phase revisions, which requires banks to gradually implement the requirements from 31 December 2018 onward.

– We either disclosed or amended the following tables and / or narratives for the first time in or alongside this report:

– KM1: Key metrics

– PV1: Prudential valuation adjustments

– CC1: Composition of regulatory capital, replacing the “Composition of capital” table

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

– LIQA: Liquidity risk management

– CCA: Main features of regulatory capital and other TLAC instruments.

Significant BCBS and FINMA requirements to be adopted in 2019 or later

Final guidance

Revised capital adequacy ordinance (CAO) and banking ordinance (BO)

The revised CAO and BO became effective from 1 January 2019, and included guidance on the treatment of bail-in bonds from other international SRBs held by UBS, amendments to gone concern requirements and the treatment of material group entities, subject to the regulatory scope of consolidation, all of which are not expected to have a material effect on UBS.

Revised FINMA circulars on credit risk and leverage ratio

On 16 July 2018, FINMA issued revised circulars mainly on:

– leverage ratio (FINMA Circular 2015 / 03 “Leverage ratio – banks”) to allow early adoption before 1 January 2020 of modified standardized approach for counterparty credit risk (SA-CCR) rules in line with the BCBS Basel III finalization of the capital framework issued in December 2017;

– credit risk (FINMA Circular 2017 / 07 “Credit risk – banks”) to incorporate frequently asked questions on the standardized approach for SA-CCR that will be effective from 1 July 2019 for banks applying SA-CCR, with early adoption permitted. In addition, other amendments related to the eligibility of short-term debt instruments as financial collateral and the recognition of unrestricted life insurance policies as guarantees, which have become effective from 1 January 2019, were also included in the same circular.

Basel III finalization and adjustments to market risk framework

In December 2017, the BCBS finalized the Basel III capital framework, which will take effect from 1 January 2022, with a five-year phase-in period for the aggregate output floor. The most significant changes include:

– placing floors on certain model inputs under the IRB approach to calculate credit risk RWA;

– requiring the use of standardized approaches for calculation of credit valuation adjustment and for operational risk RWA;

– placing an aggregate output floor on the Group RWA equal to 72.5% of the RWA calculated using a revised standardized approach; and

– revising the leverage ratio denominator (LRD) calculation and introducing a leverage ratio surcharge for global systematically important banks.

In January 2019, BCBS also issued final revisions of the market risk framework (Fundamental Review of the Trading Book (FRTB)). The revisions include adjustments to the risk sensitivity of the standardized approach, the calibration of certain elements of the framework and adjustments of the internal models approach. This revised standard comes into effect on 1 January 2022 along with the overall revised Basel III capital framework.

Regulatory interpretation is ongoing and the implementation of the Basel III capital framework and the market risk framework into national law has not yet been announced.

Pillar 3 disclosure requirements

In March 2017, the BCBS issued the “Pillar 3 disclosure requirements – consolidated and enhanced framework.”

In July 2018, FINMA issued the revised circular 2016 / 01 “Disclosure – banks”, which requires banks to gradually implement the requirements from 31 December 2018 onward. Refer to the previous page for requirements implemented as of 31 December 2018.

The following disclosure will be adopted or revised in first half of 2019, according to the applicable effective dates:

– KM2: Key metrics – TLAC requirements (at resolution group level) as of 31 March 2019

– CR1: Credit quality of assets as of 30 June 2019

– TLAC1: TLAC composition for global systemically relevant banks (G-SIBs) at resolution group level as of 30 June 2019

– TLAC2: Material subgroup entity – creditor ranking at legal entity level as of 30 June 2019

– TLAC3: Resolution entity – creditor ranking at legal entity level as of 30 June 2019

– IRRBBA: Interest rate risk in the banking book (IRRBB) – risk management objective and policies – qualitative requirements as of 30 June 2019

– IRRBBA1: IRRBB – risk management objective and policies – quantitative requirements as of 30 June 2019

– IRRBB1: Quantitative information on IRRBB as of 30 June 2019

In December 2018, the BCBS published its updated Pillar 3 disclosure requirements, completing revisions to the disclosure framework started earlier. This revision reflects the final Basel III standards issued in December 2017, and sets out new disclosure requirements on asset encumbrance and, if required by national supervisors at the jurisdictional level, on capital distribution constraints. The implementation deadline for the disclosure requirements related to Basel III is 1 January 2022. The effective date for the disclosure requirements for asset encumbrance, capital distribution constraints and the prudential treatment of problem assets is the end of 2020.

Significant BCBS and FINMA consultation papers

Leverage ratio treatment of client cleared derivatives

In October 2018, the BCBS issued a consultation paper to seek public feedback by mid-January 2019 on whether or not the leverage ratio’s treatment of client cleared derivatives under the Basel III finalization of the capital framework issued in December 2017 should be amended to allow cash and non-cash initial margin received from a client to offset the potential future exposure, or to align existing treatment with the standardized approach for measuring counterparty credit risk exposures. In line with the current exposure measure applied in the current leverage ratio calculation, the leverage ratio’s treatment under the Basel III finalization of the capital framework issued in December 2017 only allows variation margin in the form of cash to offset replacement cost.

Revisions to leverage ratio disclosure requirements

In response to particular concerns regarding "window-dressing", BCBS issued a consultation paper in December 2018 on mandating the additional disclosure of leverage ratio exposure amounts of securities financing transactions, of derivative replacement costs and of central bank reserves, all to be calculated using daily averages over the reporting quarter. Comments on this consultation paper are due by mid-March 2019.

Frequency and comparability of Pillar 3 disclosures

FINMA has specified the reporting frequency for each disclosure, as outlined in the table below. We generally provide quantitative comparative information as of 31 December 2017 for all disclosures, except reconciliations. Depending on the FINMA-specified disclosure frequency, we provide additional quantitative prior-period information:

– For quarterly disclosures on movements related to RWA for credit risk, counterparty credit risk and market risk, we provide additional comparative information for the third, second and first quarters of 2018.

– For the overview of RWA, we provide additional comparative information as of 30 September 2018, 30 June 2018 and 31 March 2018.

– For all other quarterly disclosures, we provide additional comparative information as of 30 September 2018 only.

– For semiannual disclosures, we provide additional comparative information as of 30 June 2018.

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

→ Refer to our first, second and third quarter Pillar 3 reports under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on previously published quarterly movement commentary

→ Refer to our second quarter Pillar 3 report under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on previously published semiannual movement commentary

Annual disclosure requirements

OVA	Bank risk management approach	CR9	IRB – backtesting of probability of default (PD) per portfolio
LI1		CCRA	

	Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories		Qualitative disclosure related to counterparty credit risk management
LI2	Main sources of differences between regulatory exposure amounts and carrying values in financial statements (under the regulatory scope of consolidation)	SECA	Qualitative disclosure requirements related to securitization exposures
LIA	Explanations of differences between accounting and regulatory exposure amounts (under the regulatory scope of consolidation)	MRA	Qualitative disclosure requirements related to market risk
PV1	Prudent valuation adjustments (PVA)	MRB	Qualitative disclosures for banks using the internal models approach (IMA)
CRA	General information about credit risk	IRRBBA, IRRBBA1[1],	Interest rate risk in the banking book (IRRBB) risk management objective and policies – qualitative and quantitative information[1]
CRB	Additional disclosures related to the credit quality of assets	IRRBB1[1]	Quantitative information on IRRBB[1]
CRC	Qualitative disclosure requirements related to credit risk mitigation	ORA	Operational risk
CRD	Qualitative disclosures on banks' use of external credit ratings under the standardized approach for credit risk	LIQA	Liquidity risk management
CRE	Qualitative disclosures related to internal ratings-based (IRB) models	N/A	Remuneration
G-SIB1	Disclosure of G-SIB indicators		

Semiannual disclosure requirements

CR1	Credit quality of assets	CCyB1	Geographical distribution of credit exposures used in the countercyclical buffer
CR2	Changes in stock of defaulted loans and debt securities	CCR4	IRB – CCR exposures by portfolio and PD scale
CR3	Credit risk mitigation techniques – overview	CCR5	Composition of collateral for CCR exposure
CR4	Standardized approach – credit risk exposure and credit risk mitigation (CRM) effects	CCR6	Credit derivatives exposures
CR5	Standardized approach – exposures by asset classes and risk weights	CCR8[1]	Exposures to central counterparties
CR6	IRB – credit risk exposures by portfolio and PD range	SEC1	Securitization exposures in the banking book
CR7	IRB – effect on risk-weighted assets (RWA) of credit derivatives used as CRM techniques	SEC2	Securitization exposures in the trading book
CR10	IRB (equities under the simple risk weight method)	SEC3	Securitization exposures in the banking book and associated regulatory capital requirements – bank acting as originator or as sponsor
CCR1	Analysis of counterparty credit risk (CCR) exposure by approach	SEC4	Securitization exposures in the banking book and associated regulatory capital requirements – bank acting as investor
CCR2	Credit valuation adjustment (CVA) capital charge	MR1	Market risk under standardized approach
CCR3	Standardized approach – CCR exposures by regulatory portfolio and risk weights	MR3	IMA values for trading portfolios
CC1	Composition of regulatory capital	MR4	Comparison of value-at-risk (VaR) estimates with gains / losses
CC2	Reconciliation of accounting balance sheet to balance sheet under the regulatory scope of consolidation (Reconciliation of regulatory capital to balance sheet)	CCA	Main features of regulatory capital instruments and other TLAC-eligible instruments

TLAC1[1]	TLAC composition for G-SIBs (at resolution group level)	TLAC2[1]	Material sub-group entity – creditor ranking at legal entity level[1]
TLAC3[1]	Resolution entity – creditor ranking at legal entity level	MRC[1]	The structure of desks for banks using the IMA
MR2[1]	Market risk IMA per risk type		
Quarterly disclosure requirements			
KM1	Key metrics (at consolidated group level)	LR1	Summary comparison of accounting assets vs leverage ratio exposure measure
KM2[1]	Key metrics – TLAC requirements at resolution group level	LR2	Leverage ratio common disclosure
OV1	Overview of RWA	N/A	Leverage ratio
CR8	RWA flow statements of credit risk exposures under IRB	LIQ1	Liquidity coverage ratio
CCR7	RWA flow statements of CCR exposures under the internal model method (IMM) and VaR	N/A	Eligible capital
MR2	RWA flow statements of market risk exposures under an IMA	MR3[1]	RWA flow statements of market risk exposures under IMA

1 Disclosure is not required as of 31 December 2018.

Format of Pillar 3 disclosures

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

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

– Central governments and central banks, consisting of exposures relating to governments at the level of the nation state and their central banks. The European Union is also treated as a central government.

– Banks and securities dealers, consisting of exposures to legal entities holding a banking license and securities firms subject to adequate supervisory and regulatory arrangements, including risk-based capital requirements. Securities firms can only be assigned to this asset class if they are subject to a supervision equivalent to that of banks.

– Public sector entities, multilateral development banks, consisting of exposures to institutions established on the basis of public law in different forms, such as administrative entities or public companies as well as regional governments, the BCBS, the International Monetary Fund, the European Central Bank and eligible multilateral development banks recognized by FINMA.

– Corporates: specialized lending, consisting of exposures relating to income-producing real estate and high-volatility commercial real estate, commodities finance, project finance and object finance.

– Corporates: other lending, consisting of all exposures to corporates that are not specialized lending. This asset class includes private commercial entities such as corporations, partnerships or proprietorships, insurance companies and funds (including managed funds).

– Retail: residential mortgages, consisting of residential mortgages, regardless of exposure size, if the owner occupies or rents out the mortgaged property.

– Retail: qualifying revolving retail exposures, consisting of unsecured and revolving credits to individuals that exhibit appropriate loss characteristics relating to credit card relationships at UBS.

– Retail: other, consisting primarily of Lombard lending that represents loans made against the pledge of eligible marketable securities or cash, as well as exposures to small businesses, private clients and other retail customers without mortgage financing.

– Equity: consisting of instruments that have no stated or predetermined maturity and represents a residual interest in the net assets of an entity.

– Other assets: consisting of the remainder of exposures to which UBS is exposed, mainly non-counterparty-related assets.

Governance over Pillar 3 disclosures

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

Risk management framework

Our Group-wide risk management framework is applied across all risk types. The table below presents an overview of risk management disclosures that are provided separately in our Annual Report 2018.

Annual |

OVA – Bank risk management approach

Pillar 3 disclosure requirement	Annual Report 2018 section	Disclosure	Annual Report 2018 page number
Business model and risk profile	Our strategy, business model and environment	– Risk factors	50–61
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	Risk, treasury and capital management	– Overview of risks arising from our business activities	119–120
		– Risk categories	121
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		– Credit risk – Key developments, Main sources of credit risk, Overview of measurement, monitoring and management techniques	133
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		–	Internal risk reporting	129
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		Risk management and control principles	
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Our approach to measuring risk exposure and risk-weighted assets

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

The table below provides a summary of the approaches we use for the main risk categories to determine the regulatory risk exposure and RWA. Our RWA are calculated according to the BCBS Basel III framework, as implemented by the Swiss Capital Adequacy Ordinance issued by the Swiss Federal Council.

I. Credit risk

Credit risk	Credit risk is the risk of a loss resulting from the failure of a counterparty to meet its contractual obligations toward UBS arising from transactions such as loans, debt securities held in our banking book and undrawn credit facilities. Refer to section 4 Credit risk	Exposure at default (EAD) is the amount we expect a counterparty to owe us at the time of a possible default. For banking products, the EAD generally equals the IFRS carrying value as of the reporting date. The EAD is expected to remain constant over the 12-month period. For loan commitments, a credit conversion factor is applied to model expected future drawdowns over the 12-month period.	We apply two approaches to measure credit risk RWA: – *Advanced internal ratings-based (A-IRB) approach*, applied for the majority of our businesses. Counterparty risk weights are determined by reference to internal probability of default and loss given default estimates. – *Standardized approach (SA)*, generally based on external ratings for a subset of our credit portfolio where internal measures are not available.
Non-counterparty-related risk	Non-counterparty-related risk (NCPA) denotes the risk of a loss arising from	The IFRS carrying value is the basis for measuring NCPA	We measure non-counterparty-related risk RWA by applying

	changes in value or from liquidation of assets not linked to any counterparty, for example, premises, equipment and software, and deferred tax assets on temporary differences.	exposure.	prescribed regulatory risk weights to the NCPA exposure.
	Refer to section 2 Regulatory exposures and risk-weighted assets.		
Equity positions in the banking book	Risk from equity positions in the banking book refers to the investment risk arising from equity positions and other relevant investments or instruments held in our banking book.	The IFRS carrying value is the basis for measuring risk exposure for equity securities held in our banking book, but reflecting a net position.	We measure the RWA from equity positions in the banking book by applying prescribed regulatory risk weights to our listed and unlisted equity exposures.
	Refer to section 4 Credit risk		

II. Counterparty credit risk

Counterparty credit risk	Counterparty credit risk is the risk that a counterparty for over-the-counter (OTC) derivatives, exchange-traded derivatives (ETD) or securities financing transactions (SFTs) will default before the final settlement of a transaction and cause a loss to the bank if the transaction has a positive economic value at the time of default. Refer to section 5 Counterparty credit risk.	We primarily use internal models to measure counterparty credit risk exposures to third parties. All internal models are approved by FINMA. – *For OTC derivatives and ETD* we apply the effective expected positive exposure (EEPE) and stressed expected positive exposure (stressed EPE) as defined in the Basel III framework. – *For SFTs* we apply the close-out period approach.	We apply two approaches to measure counterparty credit risk RWA: – *Advanced internal ratings-based (A-IRB) approach*, applied for the majority of our businesses. Counterparty risk weights are determined by reference to internal counterparty ratings and loss given default estimates. – *Standardized approach (SA),* generally based on external ratings for a subset of our credit portfolio, where internal measures are not available.
		In certain instances where risk models are not available: – *Exposure on OTC derivatives and ETD* is calculated considering the net positive replacement values and potential future exposure. – *Exposure for SFTs* is based on the IFRS carrying value, net of collateral mitigation.	We apply an additional credit valuation adjustment (CVA) capital charge to hold capital against the risk of mark-to-market losses associated with the deterioration of counterparty credit quality.
Settlement risk	Settlement risk is the risk of loss resulting from transactions that involve exchange of value (e.g., security versus cash) where we	The IFRS carrying value is the basis for measuring settlement risk exposure.	We measure settlement risk RWA through the application of prescribed regulatory risk weights to the settlement risk exposure.

	must deliver without first being able to determine with certainty that we will receive the countervalue. Refer to section 2 Regulatory exposures and risk-weighted assets.		
III. Securitization exposures in the banking book			
Securitization exposures in the banking book	Exposures arising from traditional and synthetic securitizations held in our banking book. Refer to section 7 Securitizations.	The IFRS carrying value after eligible regulatory credit risk mitigation and credit conversion factor is the basis for measuring securitization exposure.	We apply the following approaches to measure securitization exposure RWA: – *Internal ratings-based approach (SEC-IRBA)*, considering the advanced IRB risk weights, if the securitized pool largely consists of IRB positions and internal ratings are available. – *External ratings-based approach (SEC-ERBA)*, in case the IRB approach cannot be applied, risk weights are applied based on external ratings, provided that we are able to demonstrate our expertise in critically reviewing and challenging the external ratings. – *Standardized approach (SEC-SA) or 1,250% risk weight factor,* in case none of the aforementioned approaches can be applied, we would apply the standardized approach where the delinquency status of a

significant portion of the underlying exposure can be determined or a risk weight of 1,250%.

For re-securitization exposures we apply either the standardized approach or a risk weight factor of 1,250%.

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IV. Market risk

Value-at-risk (VaR)	VaR is a statistical measure of market risk, representing the market risk losses that could potentially be realized over a set time horizon (holding period) at an established level of confidence. For regulatory VaR, the holding period is 10 days and the confidence level is 99%. Refer to section 8 Market risk.	The VaR component of market risk RWA is calculated by taking the maximum of the period-end VaR and the product of the average VaR for the 60 trading days immediately preceding the period end and a VaR multiplier. The quantity is then multiplied by a risk weight factor of 1,250% to determine RWA. The VaR multiplier is dependent on the number of VaR backtesting exceptions within the most recent 250-business-day window.
Stressed VaR (SVaR)	SVaR is a 10-day 99% VaR measure that is estimated with model parameters that are calibrated to historical data covering a one-year period of significant financial stress relevant to the firm’s current portfolio. Refer to section 8 Market risk.	The derivation of SVaR RWA is similar to the one explained above for VaR. Unlike VaR, SVaR is computed weekly, and as a result the average SVaR is computed over the most recent 12 observations.
Add-on for risks-not-in-VaR (RniV)	Potential risks that are not fully captured by our VaR model are referred to as RniV. We have a framework to identify and quantify these potential risks and underpin them with capital.	Our RniV framework is used to derive the RniV-based component of the market risk RWA, which is approved by FINMA. Starting in the second quarter of 2018, RniV and RWA resulting from RniV are recalibrated on a monthly basis.

	Refer to section 8 Market risk.	As the RWA from RniV are add-ons, they do not reflect any diversification benefits across risks capitalized through VaR and SVaR.
Incremental risk charge (IRC)	The IRC represents an estimate of the default and rating migration risk of all trading book positions with issuer risk, except for equity products and securitization exposures, measured over a one-year time horizon at a 99.9% confidence level.	The IRC is calculated weekly, and the results are used to derive the IRC-based component of the market risk RWA. The derivation is similar to that for VaR- and SVaR-based RWA, but without a VaR multiplier.
	Refer to section 8 Market risk.	
Comprehensive risk measure (CRM)	The CRM is an estimate of the default and complex price risk, including the convexity and cross-convexity of the CRM portfolio across credit spread, correlation and recovery, measured over a one-year time horizon at a 99.9% confidence level.	The CRM is calculated weekly, and the results are used to derive the CRM-based component of the market risk RWA. The calculation is subject to a floor equal to 8% of the equivalent capital charge under the specific risk measure (SRM) for the correlation trading portfolio.
	Refer to section 8 Market risk.	

Securitization / re-securitization in the trading book	Risk arising from traditional and synthetic securitizations held in our trading book. Refer to section 7 Securitizations and section 7 Market risk.	The exposure is equal to the fair value of the net long or short securitization position.	We measure trading book securitization RWA using two approaches: – *Ratings-based approach*, applying risk weights based on external ratings. – *Supervisory formula approach*, considering the A-IRB risk weights for certain exposures where external ratings are not available.
V. Operational risk			
Operational risk	Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, including cyber risk. Operational risk includes, among others, legal risk, conduct risk and compliance risk. Refer to section 9 Operational risk.		We use the advanced measurement approach to measure operational risk RWA in accordance with FINMA requirements.

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Section 1 Key metrics

Key metrics of the fourth quarter of 2018

Quarterly | The table below is based on Basel Committee on Banking Supervision (BCBS) Basel III phase-in rules. During the fourth quarter of 2018, common equity tier 1 (CET1) capital decreased by USD 0.7 billion to USD 34.1 billion, mainly reflecting the accruals of capital returns to shareholders. Risk-weighted assets (RWA) increased by USD 6.7 billion to USD 263.7 billion, mainly due to increases of USD 8.3 billion in market risk RWA and USD 2.7 billion in credit risk RWA, partly offset by decreases of USD 3.4 billion in operational risk RWA and USD 1.1 billion in counterparty credit risk RWA. Leverage ratio exposure remained largely stable as in previous quarters.

Effective from 31 December 2018, UBS opted to phase in the effects from IFRS 9 expected credit loss (ECL) on CET1 capital, if any, over a five-year transitional period. This conclusion did not have a material effect on our CET1 capital as of 31 December 2018.p

Quarterly |

KM1: Key metrics

USD million, except where indicated

		31.12.18	30.9.18	30.6.18	31.3.18	31.12.17
Available capital (amounts)[1]						
1	Common equity tier 1 (CET1)	**34,119[2]**	34,816	34,116	34,774	36,412
1a	Fully loaded ECL accounting model	**34,071**	34,816	34,116	34,774	
2	Tier 1	**46,279**	45,972	45,353	46,180	44,562
2a	Fully loaded ECL accounting model Tier 1	**46,231**	45,972	45,353	46,180	
3	Total capital	**52,981**	52,637	52,450	54,972	53,535
3a	Fully loaded ECL accounting model total capital	**52,933**	52,637	52,450	54,972	
Risk-weighted assets (amounts)						
4	Total risk-weighted assets (RWA)	**263,747**	257,041	254,603	266,169	244,559[1]
4a	Total risk-weighted assets (pre-floor)	**263,747**	257,041	254,603	266,169	244,559
Risk-based capital ratios as a percentage of RWA[1]						
5		**12.94**	13.55	13.40	13.06	14.89

	Common equity tier 1 ratio (%)					
5a	Fully loaded ECL accounting model Common Equity Tier 1 (%)	**12.92**	13.55	13.40	13.06	
6	Tier 1 ratio (%)	**17.55**	17.89	17.81	17.35	18.22
6a	Fully loaded ECL accounting model Tier 1 ratio (%)	**17.53**	17.89	17.81	17.35	
7	Total capital ratio (%)	**20.09**	20.48	20.60	20.65	21.89
7a	Fully loaded ECL accounting model total capital ratio (%)	**20.07**	20.48	20.60	20.65	
Additional CET1 buffer requirements as a percentage of RWA						
8	Capital conservation buffer requirement (2.5% from 2019) (%)	**1.88**	1.88	1.88	1.88	1.25
9	Countercyclical buffer requirement (%)	**0.08**	0.05	0.06	0.03	0.02
9a	Additional countercyclical buffer for Swiss mortgage loans (%)	**0.21**	0.21	0.20	0.19	0.20
10	Bank G-SIB and/or D-SIB additional requirements (%)	**0.75**	0.75	0.75	0.75	0.50
11	Total of bank CET1 specific buffer requirements (%)	**2.71**	2.68	2.68	2.65	1.77
12	CET1 available after meeting the bank's minimum capital requirements (%)[1]	**8.44**	9.05	8.90	8.56	10.39
Basel III leverage ratio						
13	Total Basel III leverage ratio exposure measure	**904,598**	915,066	910,383	925,651	910,591[1]
14	Basel III leverage ratio (%)[1]	**5.12**	5.02	4.98	4.99	4.89
14a	Fully loaded ECL accounting model Basel III leverage ratio (%)[1]	**5.11**	5.02	4.98	4.99	
Liquidity coverage ratio						

15	Total HQLA	**173,389**	176,594	183,202	192,864	185,373
16	Total net cash outflow	**127,352**	130,750	127,324	141,910	129,566
17	LCR ratio (%)	**136**	135	144	136	143

1 Based on BCBS Basel III phase-in rules. 2 As of 31 December 2018, IFRS 9 expected credit loss (ECL) effects are considered on a phased-in basis in accordance with the FINMA guidance.

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Section 2 Regulatory exposures and risk-weighted assets

RWA development in the fourth quarter of 2018

Quarterly | The table below provides an overview of risk-weighted assets (RWA) and the related minimum capital requirement by risk type. During the fourth quarter of 2018, RWA increased by USD 6.7 billion to USD 263.7 billion, mainly due to increases of USD 8.3 billion in market risk RWA and USD 2.7 billion in credit risk RWA, partly offset by decreases of USD 3.4 billion in operational risk RWA and USD 1.1 billion in counterparty credit risk RWA. Information on movements in RWA over the fourth quarter of 2018 is provided on pages 54–55 of our fourth quarter 2018 report and in the respective sections of this report. More information on capital management and RWA, including detail on movements in RWA over 2018, is provided on pages 194–208 of our Annual Report 2018.p

Quarterly |

OV1: Overview of RWA

		RWA					Minimum capital requirements[2]
	USD million	**31.12.18**	30.9.18	30.6.18	31.3.18	31.12.17[1]	**31.12.18**
1	**Credit risk (excluding counterparty credit risk)**	**112,991**	**110,269**	**109,265**	**106,115**	**100,204**	**9,039**
2	*of which: standardized approach (SA)*[3]	***25,972***	*24,592*	*24,309*	*25,128*	*24,607*	***2,078***
3	*of which: foundation internal ratings-based (F-IRB) approach*						
4	*of which: supervisory slotting approach*						
5	*of which: advanced internal ratings-based (A-IRB) approach*	***87,019***	*85,677*	*84,956*	*80,988*	*75,597*	***6,962***
6	**Counterparty credit risk**[4]	**34,282**	**35,394**	**33,114**	**33,837**	**31,062**	**2,743**
7	*of which: SA for counterparty credit risk (SA-CCR)*[5]	***5,415***	*5,690*	*6,312*	*6,381*	*5,719*	***433***
8	*of which: internal model method (IMM)*	***17,624***	*18,366*	*18,548*	*19,464*	*17,720*	***1,410***

8a	*of which: value-at-risk (VaR)*	***5,036***	*4,863*	*4,458*	*4,498*	*4,102*	***403***
9	*of which: other CCR*	***6,207***	*6,475*	*3,796*	*3,494*	*3,520*	***497***
10	**Credit valuation adjustment (CVA)**	**2,816**	**2,797**	**3,496**	**3,419**	**3,164**	**225**
11	**Equity positions under the simple risk weight approach[6]**	**3,658**	**3,601**	**3,676**	**3,554**	**2,429**	**293**
12	**Equity investments in funds – look-through approach[7]**						
13	**Equity investments in funds – mandate-based approach[7]**						
14	**Equity investments in funds – fall-back approach[7]**						
15	**Settlement risk**	**375**	**322**	**532**	**492**	**379**	**30**
16	**Securitization exposures in banking book**	**709**	**1,240**	**1,275**	**1,196**	**1,739[8]**	**57**
17	*of which securitization internal ratings-based approach (SEC-IRBA)*						
18	*of which securitization external ratings-based approach (SEC-ERBA) including internal assessment approach (IAA)*	***701***	*1,240*	*1,274*	*1,114*		***56***
19	*of which securitization standardized approach (SEC-SA)*	***8***	*0*	*1*	*83*		***1***
20	**Market Risk**	**19,992**	**11,645**	**12,500**	**23,492**	**12,598**	**1,599**
21	*of which: standardized*	***452***	*333*	*364*	*421*	*410*	***36***

	approach (SA)						
22	*of which: internal model approaches (IMM)*	***19,541***	*11,313*	*12,136*	*23,072*	*12,188*	***1,563***
23	**Capital charge for switch between trading book and banking book**						
24	**Operational risk**	**77,558**	**80,931**	**80,124**	**83,308**	**81,476**	**6,205**
25	**Amounts below thresholds for deduction (250% risk weight)[9]**	**11,365**	**10,842**	**10,621**	**10,755**	**11,508**	**909**
26	**Floor adjustment[10]**	**0**	**0**	**0**	**0**	**0**	**0**
27	**Total**	**263,747**	**257,041**	**254,603**	**266,169**	**244,559**	**21,100**

1 Based on phase-in rules 2 Calculated based on 8% of RWA. 3 Includes non-counterparty-related risk not subject to the threshold deduction treatment (31 December 2018: RWA USD 9,514 million; 30 September 2018: RWA USD 9,382 million; 30 June 2018: RWA USD 9,346 million; 31 March 2018: RWA USD 9,456 million; 31 December 2017: RWA USD 9,180 million). Non-counterparty-related risk (31 December 2018: RWA USD 8,782 million; 30 September 2018: RWA USD 8,800 million; 30 June 2018: RWA USD 8,601 million; 31 March 2018: RWA USD 8,784 million; 31 December 2017: RWA USD 9,551 million), which is subject to the threshold treatment, is reported in line 25 "Amounts below thresholds for deduction (250% risk weight)." 4 Excludes settlement risk, which is separately reported in line 15 "Settlement risk." Includes RWA with central counterparties. New regulation for the calculation of RWA for exposure to central counterparties will be implemented by 1 January 2020. The split between the subcomponents of counterparty credit risk refers to the calculation of the exposure measure. 5 Calculated in accordance with the current exposure method (CEM), until SA-CCR is implemented by 1 January 2020. 6 Includes investments in funds. Items subject to threshold deduction treatments that do not exceed their respective threshold are risk weighted at 250% (31 December 2018: RWA USD 2,583 million; 30 September 2018: RWA USD 2,041 million; 30 June 2018: RWA USD 2,020 million; 31 March 2018: RWA USD 1,971 million; 31 December 2017: RWA USD 1,957 million) and are separately included in line 25 "Amounts below thresholds for deduction (250% risk weight)." 7 New regulation for the calculation of RWA for investments in funds will be implemented by 1 January 2020. 8 Calculated on the basis of the former securitization rules applicable until 31 December 2017. 9 Includes items subject to threshold deduction treatments that do not exceed their respective threshold and risk weighted at 250%. Items subject to threshold deduction treatments are significant investments in common shares of non-consolidated financial institutions (banks, insurance and other financial entities) and deferred tax assets arising from temporary differences, both of which are measured against their respective threshold. 10 No floor effect, as 80% of our Basel I RWA including the RWA equivalent of the Basel I capital deductions do not exceed our Basel III RWA including the RWA equivalent of the Basel III capital deductions. For the status of the finalization of the Basel III capital framework, refer to the "Regulatory and legal developments" section of our Annual Report 2018, available under "Annual reporting" at www.ubs.com/investors, which outlines how the proposed floor calculation would differ in significant aspects from the current approach.

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The table below is aligned with the principles applied in "OV1: Overview of RWA," and presents the net exposure at default (EAD) and RWA by risk type and FINMA-defined asset class, which forms the basis for the calculation of RWA. These exposures are then grouped into the advanced internal ratings-based (A-IRB) / model-based approaches and standardized approach. For credit risk, this defines the method used to derive the risk weight factors, through either internal ratings (A-IRB) or external ratings (standardized approach). The split between A-IRB / model-based approaches and standardized approach for counterparty credit risk refers to the exposure measure, whereas the split in templates CCR3 and CCR4 refers to the risk weighting approach. Market and operational risk RWA are derived using model calculations and are therefore included in the model-based approach columns.

The table provides references to sections in this report containing more information on the specific topics.

Regulatory exposures and risk-weighted assets

31.12.18	A-IRB / model-based approaches			Standardized approaches[2]			Tot
USD million	Net EAD	RWA	Section or table reference	Net EAD	RWA	Section or table reference	Net EAD
Credit risk (excluding counterparty credit risk)	**533,587**	**87,019**	**4**	**56,467**	**25,972**	**4**	**590,054**
Central governments and central banks	139,632	2,537	CR6, CR7	17,854	748	CR4, CR5	157,485
Banks and securities dealers	15,454	5,272	CR6, CR7	7,456	1,842	CR4, CR5	22,910
Public-sector entities, multilateral development banks	8,093	769	CR6, CR7	1,232	349	CR4, CR5	9,324
Corporates: specialized lending	22,858	12,156	CR6, CR7			CR4, CR5	22,858
Corporates: other lending	60,639	30,588	CR6, CR7	6,467	5,010	CR4, CR5	67,106
Central counterparties				284	27	CR4, CR5	284
Retail	286,912	35,697	CR6, CR7	12,650	8,481	CR4, CR5	299,562
Residential mortgages	*142,413*	*26,696*		*6,685*	*2,884*		*149,098*
Qualifying revolving retail exposures (QRRE)	*1,772*	*624*					*1,772*
Other retail[1]	*142,726*	*8,377*		*5,966*	*5,597*		*148,692*
Non-counterparty-related risk				10,524	9,514	CR4, CR5	10,524
Property, equipment and software				*9,305*	*9,305*		*9,305*
Other				*1,219*	*209*		*1,219*

Counterparty credit risk[2]	**83,202**	**22,660**	**5**	**85,179**	**11,622**	**5**	**168,381**
Central governments and central banks	6,068	693	CCR3, CCR4	2,997	353	CCR3, CCR4	9,065
Banks and securities dealers	16,843	5,118	CCR3, CCR4	3,166	955	CCR3, CCR4	20,009
Public-sector entities, multilateral development banks	1,988	249	CCR3, CCR4	670	39	CCR3, CCR4	2,658
Corporates incl. specialized lending	41,673	16,253	CCR3, CCR4	16,850	7,849	CCR3, CCR4	58,522
Central counterparties	16,630	346		51,139	1,795		67,769
Retail				10,358	631	CCR3, CCR4	10,358
Credit valuation adjustment (CVA)		**1,479**	**5, CCR2**		1,338	5, CCR2	
Equity positions in the banking book (CR)	**879**	**3,658**	**4, CR10**				**879**
Settlement risk	**58**	**89**		**222**	**285**		**280**
Securitization exposure in the banking book				**213**	**709**	**7**	**213**
Market risk		**19,541**	**8**	**500**	**452**	**7, 8**	**500**
Value-at-risk (VaR)		2,454	MR3				
Stressed value-at risk (SVaR)		5,866	MR3				
Add-on for risks-not-in-VaR (RniV)		8,915	MR3				
Incremental risk charge (IRC)		2,299	MR3				
Comprehensive risk measure (CRM)		7	MR3				
Securitization / re-securitization in the trading book				500	452	MR1	500
Operational risk		**77,558**					
Amounts below thresholds for deduction (250% risk weight)	**975**	**2,583**		**3,513**	**8,782**		**4,487**
Deferred tax assets				3,513	8,782		3,513
Significant investments in non-consolidated financial institutions	975	2,583					975
Total	**618,701**	**214,587**		**146,094**	**49,159**		**764,795**

Regulatory exposures and risk-weighted assets (continued)

30.6.18	A-IRB / model-based approaches			Standardized approaches[2]			Tot
USD million	Net EAD	RWA	Section or table reference	Net EAD	RWA	Section or table reference	Net EAD
Credit risk (excluding counterparty credit risk)	**546,097**	**84,956**	**4**	**51,349**	**24,309**	**4**	**597,446**
Central governments and central banks	144,415	2,747	CR6, CR7	14,293	498	CR4, CR5	158,708
Banks and securities dealers	16,376	4,660	CR6, CR7	6,726	1,599	CR4, CR5	23,102
Public-sector entities, multilateral development banks	11,657	874	CR6, CR7	1,602	446	CR4, CR5	13,259
Corporates: specialized lending	22,534	11,168	CR6, CR7			CR4, CR5	22,534
Corporates: other lending	60,132	31,118	CR6, CR7	5,376	4,178	CR4, CR5	65,508
Central counterparties				511	27	CR4, CR5	511
Retail	290,983	34,389	CR6, CR7	12,619	8,215	CR4, CR5	303,601
Residential mortgages	*139,175*	*24,937*		*6,642*	*2,626*		*145,816*
Qualifying revolving retail exposures (QRRE)	*1,655*	*582*					*1,655*
Other retail[1]	*150,153*	*8,870*		*5,977*	*5,589*		*156,130*
Non-counterparty-related risk				10,222	9,345	CR4, CR5	10,222
Property, equipment and software				*9,108*	*9,108*		*9,108*
Other				*1,114*	*238*		*1,114*
Counterparty credit risk[2]	**92,858**	**23,006**	**5**	**90,659**	**10,108**	**5**	**183,516**
Central governments and central banks	7,196	879	CCR3, CCR4	2,305	233	CCR3, CCR4	9,501
Banks and securities dealers	18,761	5,266	CCR3, CCR4	6,518	1,465	CCR3, CCR4	25,280
Public-sector entities, multilateral development banks	2,590	295	CCR3, CCR4	832	34	CCR3, CCR4	3,422
Corporates incl. specialized lending	46,298	16,225	CCR3, CCR4	18,092	5,878	CCR3, CCR4	64,390
Central counterparties	18,012	341		53,665	1,467		71,677
Retail				9,246	1,031	CCR3, CCR4	9,246
Credit valuation adjustment (CVA)		**1,799**	**5, CCR2**		**1,697**	**5, CCR2**	
Equity positions in the banking book (CR)	**882**	**3,676**	**4, CR10**				**882**

Settlement risk	**47**	**216**		**220**	**316**		**267**
Securitization exposure in the banking book				**234**	**1,275**	**7**	**234**
Market risk		**12,136**	**8**	**390**	**364**	**7, 8**	**390**
Value-at-risk (VaR)		1,652	MR3				
Stressed value-at risk (SVaR)		3,450	MR3				
Add-on for risks-not-in-VaR (RniV)		4,578	MR3				
Incremental risk charge (IRC)		2,399	MR3				
Comprehensive risk measure (CRM)		57	MR3				
Securitization / re-securitization in the trading book				390	364	MR1	390
Operational risk		**80,124**					
Amounts below thresholds for deduction (250% risk weight)	**762**	**2,020**		**3,441**	**8,601**		**4,203**
Deferred tax assets				3,441	8,601		3,441
Significant investments in non-consolidated financial institutions	762	2,020					762
Total	**640,646**	**207,934**		**146,292**	**46,669**		**786,938**

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Regulatory exposures and risk-weighted assets (continued)

31.12.17[3]	A-IRB / model-based approaches			Standardized approaches[2]			Tot
USD million	Net EAD	RWA	Section or table reference	Net EAD	RWA	Section or table reference	Net EAD
Credit risk (excluding counterparty credit risk)	**520,414**	**75,597**	**4**	**50,808**	**24,607**	**4**	**571,222**
Central governments and central banks	132,116	2,910	CR6, CR7	13,107	512	CR4, CR5	145,223
Banks and securities dealers	12,474	2,956	CR6, CR7	6,378	1,498	CR4, CR5	18,852
Public-sector entities, multilateral development banks	11,695	841	CR6, CR7	2,068	653	CR4, CR5	13,763
Corporates: specialized lending	23,296	10,207	CR6, CR7			CR4, CR5	23,296
Corporates: other lending	56,979	25,786	CR6, CR7	5,875	4,523	CR4, CR5	62,854
Central counterparties				458	25	CR4, CR5	458
Retail	283,854	32,897	CR6, CR7	12,687	8,216	CR4, CR5	296,541
Residential mortgages	*138,709*	*23,692*		*6,887*	*2,776*		*145,596*
Qualifying revolving retail exposures (QRRE)	*1,659*	*578*					*1,659*
Other retail[1]	*143,486*	*8,626*		*5,799*	*5,440*		*149,285*
Non-counterparty-related risk[4]				10,236	9,180	CR4, CR5	10,236
Property, equipment and software				*8,999*	*8,999*		*8,999*
Other				*1,237*	*181*		*1,237*
Counterparty credit risk[2]	**106,713**	**21,823**	**5**	**90,880**	**9,240**	**5**	**197,593**
Central governments and central banks	6,147	692	CCR3, CCR4	2,109	279	CCR3, CCR4	8,256
Banks and securities dealers	17,652	4,993	CCR3, CCR4	6,880	1,454	CCR3, CCR4	24,531
Public-sector entities, multilateral development banks	2,996	407	CCR3, CCR4	810	28	CCR3, CCR4	3,806
Corporates incl. specialized lending	42,867	15,134	CCR3, CCR4	17,285	5,121	CCR3, CCR4	60,151
Central counterparties	37,052	597		55,956	1,830		93,008
Retail				7,841	528	CCR3, CCR4	7,841
Credit valuation adjustment (CVA)		**2,017**	**5, CCR2**		**1,146**	**5, CCR2**	
Equity positions in the banking book (CR)	**587**	**2,429**	**4, CR10**				**587**

Settlement risk	**71**	**79**		**366**	**300**		**436**
Securitization exposure in the banking book	**2,352**	**1,739**				**7**	**2,352**
Market risk		**12,188**	**8**	**291**	**410**	**7, 8**	**291**
Value-at-risk (VaR)		1,656	MR3				
Stressed value-at risk (SVaR)		3,620	MR3				
Add-on for risks-not-in-VaR (RniV)		3,284	MR3				
Incremental risk charge (IRC)		3,547	MR3				
Comprehensive risk measure (CRM)		81	MR3				
Securitization / re-securitization in the trading book				291	410	MR1	291
Operational risk		**81,476**					
Amounts below thresholds for deduction (250% risk weight)	**739**	**1,958**		**3,820**	**9,550**		**4,559**
Deferred tax assets				3,820	9,550		3,820
Significant investments in non-consolidated financial institutions	739	1,958					739
Total	**630,875**	**199,305**		**146,165**	**45,254**		**777,040**

1 Consists primarily of Lombard lending, which represents loans made against the pledge of eligible marketable securities or cash, as well as exposures to small business, private clients and other retail customers without mortgage financing. 2 The split between A-IRB / model-based approaches and Standardized approaches for counterparty credit risk refers to the exposure measure, whereas the sp CCR3 and CCR4 refers to the risk weighting approach. As of 31 December 2018, USD 93,933 million c June 2018: USD 109,422 million; 31 December 2017: USD 103,037 million) was subject to the advanc weighting approach, and USD 6,679 million of EAD (30 June 2018: USD 2,417 million; 31 December 2(1,549 million) was subject to the standardized risk weighting approach. 3 Based on phase-in rules. Excludes EAD for deferred tax assets on net operating losses of USD 1,190 million, which is not subjec credit risk RWA calculation.

Section 3 Linkage between financial statements and regulatory exposures

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

Annual |

LI1: Differences between accounting and regulatory scopes of consolidation and mapping financial statement categories with regulatory risk categories

31.12.18	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Carrying values of items:			
USD million			Subject to credit risk framework[1]	Subject to counterparty credit risk framework[2]	Subject to securitization framework[3]	Subject to market risk framework
Assets						
Cash and balances at central banks	108,370	108,370	108,370			
Loans and advances to banks	16,868	16,655	15,612	1,043[4]		
Receivables from securities financing transactions	95,349	95,349		95,349		122
Cash collateral receivables on derivative instruments	23,602	23,602		23,602		7,271
Loans and advances to customers	320,352	320,405	314,762	5,643[4]		
Other financial assets measured at amortized cost	22,563	22,342	22,040	302		
	587,104	**586,723**	**460,785**	**125,938**		**7,393**

Total financial assets measured at amortized cost						
Financial assets at fair value held for trading	104,370	103,897	9,006[5]	32,121[6]	126	94,764
Derivative financial instruments	126,210	126,219		126,309		115,430
Brokerage receivables	16,840	16,840	4,407	12,434		
Financial assets at fair value not held for trading	82,690	61,241	50,637	10,340[7]	87	11,945
Total financial assets measured at fair value through profit or loss	**330,110**	**308,197**	**64,050**	**181,204**	**213**	**222,140**
Financial assets measured at fair value through other comprehensive income	**6,667**	**6,667**	**6,666**	**188**[6]		
Consolidated participations		77	77			
Investments in associates	1,099	1,099	977			
Property, equipment and software	9,348	9,297	9,297			
Goodwill and intangible assets	6,647	6,647				
Deferred tax assets	10,105	10,105	3,412			
Other non-financial assets	7,410	7,400	3,101			4,298
Total assets	**958,489**	**936,212**	**548,366**	**307,330**	**213**	**233,830**
Liabilities						
Amounts due to banks	10,962	10,962				
Payables from securities financing transactions	10,296	10,296				39

Cash collateral payables on derivative instruments	28,906	28,906		28,906		6,340
Customer deposits	419,838	419,787				
Debt issued measured at amortized cost	132,271	132,264				
Other financial liabilities measured at amortized cost	6,885	6,381				
Total financial liabilities measured at amortized cost	**609,159**	**608,597**		**28,906**		**6,379**
Financial liabilities at fair value held for trading	28,943	28,943				28,943
Derivative financial instruments	125,723	125,727		125,757		118,858
Brokerage payables designated at fair value	38,420	38,420				
Debt issued designated at fair value	57,031	57,031				57,031[9]
Other financial liabilities designated at fair value	33,594	11,915				5,452
Total financial liabilities measured at fair value through profit or loss	**283,711**	**262,037**		**125,757**		**210,284**
Provisions	3,494	3,494				
Other non-financial liabilities	9,022	9,007				
Total liabilities	**905,386**	**883,135**	**0**	**154,663**	**0**	**216,663**

1 Includes non-counterparty-related risk and equity positions in the banking book subject to the simp weight method of USD 23,161 million, which are excluded from the credit risk tables CR1, CR2, CR3 a section 3 of this report, resulting in IFRS carrying values reflected in the credit risk section of USD 53 million. However, credit risk tables CR4 and CR5 include non-counterparty-related risk and credit risk includes equity positions in the banking book, both not subject to the threshold deduction approach.

Includes settlement risk, which is not included in section 5 of this report. 3 This column only consist securitization positions in the banking book. Trading book securitizations are included in column "Sub market risk framework." 4 Consists of settlement risk and margin loans, which are both subject to c credit risk. 5 Includes trading portfolio assets in the banking book and traded loans. 6 Includes as pledged as collateral, since collateral posted is subject to counterparty credit risk. 7 Includes struct reverse repurchase and securities borrowing agreements, as well as other exposures subject to the c credit risk framework. 8 Consists of goodwill on investments in associates of USD 176 million net of tax liability (DTL) on goodwill of USD 54 million. 9 'Debt issued designated at fair value' is presented 'market risk framework' as of 31 December 2018. In prior year's Pillar 3 disclosures, these financial in were presented as 'Not subject to capital requirements or subject to deductions from capital'. The rev presentation did not have an effect on capital and capital ratios.

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UBS Group AG consolidated

Annual | The table on the previous page provides a breakdown of the IFRS balance sheet into the risk types used to calculate our regulatory capital requirements. Receivables and payables from securities financing transactions, cash collateral receivables and payables on derivative instruments, financial assets at fair value held for trading, derivative financial instruments, and financial assets at fair value not held for trading are subject to regulatory capital charges in both the market risk and the counterparty credit risk categories. In addition, financial assets measured at fair value through profit or loss and financial assets measured at fair value through other comprehensive income include securities that were pledged as collateral. These securities are also considered in the counterparty credit risk framework, as collateral posted is subject to counterparty credit risk. p

Explanation of the difference between the IFRS and regulatory scope of consolidation

Quarterly | The scope of consolidation for the purpose of calculating Group regulatory capital is generally the same as the consolidation scope under International Financial Reporting Standards (IFRS) and includes subsidiaries that are directly or indirectly controlled by UBS Group AG and active in banking and finance. However, subsidiaries consolidated under IFRS whose business is outside the banking and finance sector are excluded from the regulatory scope of consolidation.

The key difference between the IFRS and regulatory capital scope of consolidation as of 31 December 2018 relates to investments in insurance, real estate and commercial companies as well as investment vehicles that are consolidated under IFRS, but not for regulatory capital purposes, where they are subject to risk-weighting.

The table below provides a list of the most significant entities that were included in the IFRS scope of consolidation, but not in the regulatory capital scope of consolidation. These entities account for most of the difference between the “Balance sheet in accordance with IFRS scope of consolidation” and the “Balance sheet in accordance with regulatory scope of consolidation” columns in the “CC2: Reconciliation of accounting balance sheet to balance sheet under the regulatory scope of consolidation” table and such difference is mainly related to financial assets at fair value not held for trading and other financial liabilities designated at fair value. As of 31 December 2018, entities consolidated under either the IFRS or the regulatory scope of consolidation did not report any significant capital deficiencies.

In the banking book, certain equity investments are consolidated neither under IFRS nor under the regulatory scope. As of 31 December 2018, these investments mainly consisted of infrastructure holdings and joint operations (e.g., settlement and clearing institutions, stock and financial futures exchanges) and included our participation in the SIX Group. These investments were risk weighted based on applicable threshold rules.

More information on the legal structure of the UBS Group and on the IFRS scope of consolidation is provided on pages 12–13 and 328–329, respectively, of our Annual Report 2018, available under “Annual reporting” at *www.ubs.com/investors*. p

Main legal entities consolidated under IFRS but not included in the regulatory scope of consolidation
31.12.18

USD million	**Total assets[1]**	**Total equity[1]**	**Purpose**
UBS Asset Management Life Ltd	21,722	41	Life insurance
A&Q Alpha Select Hedge Fund Limited	305	304[2]	Investment vehicle for multiple investors
A&Q Alternative Solution Limited	268	263[2]	Investment vehicle for multiple investors
A&Q Alternative Solution Master Limited	262	262[2]	Investment vehicle for multiple investors
UBS Life Insurance Company USA	163	43	Life insurance
A&Q Global Alpha Strategies XL Limited	106	52[2]	Investment vehicle for multiple investors

1 Total assets and total equity on a standalone basis. 2 Represents the net asset value of issued fund units. These fund units are subject to liability treatment in the consolidated financial statements in accordance with IFRS.

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Annual |

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

31.12.18		Total	Items subject to:			
USD million			Credit risk framework	Counterparty credit risk framework	Securitization framework	Market risk framework
1	Asset carrying value amount under scope of regulatory consolidation (as per template LI1)	936,212	548,366[1]	307,330	213	233,830
2	Liabilities carrying value amount under scope of regulatory consolidation[2]	(125,652)		(125,652)		
3	**Total net amount under regulatory scope of consolidation**	**810,560**	**548,366**	**181,678**	**213**	**233,830**
4	Off-balance sheet amounts (post CCF; e.g., guarantees, commitments)	68,297	58,565	9,731		
5	Differences due to prudential filters	(13,470)				
6	PFE, differences in netting and collateral mitigation on derivatives	78,636		78,636		
7	SFTs including collateral mitigation	(101,385)		(101,385)		
8	Other differences including collateral mitigation in the banking book	(77,842)	(11,511)			(233,330)
9	**Exposure amounts considered for regulatory purposes**	**764,795**	**595,421**	**168,661**	**213**	**500**

1 Includes non-counterparty-related risk and equity positions in the banking book subject to the simple risk weight method of USD 23,161 million, which are excluded from the credit risk tables CR1, CR2, CR3 and CRB in section 3 of this report, resulting in IFRS carrying values reflected in the credit risk section of USD 531,975 million. However, credit risk tables CR4 and CR5 include non-counterparty-related risk and credit risk table CR10 includes equity positions in the banking book, both not subject to the threshold deduction approach. 2 Includes the amounts of financial instruments and cash collateral considered as netting per relevant

netting agreement so as not to exceed the net amount of financial assets presented on the balance sheet; i.e., over-collateralization, where it exists, is not reflected in the table. 3 Includes exposure amounts considered for regulatory purposes for non-cash collateral provided on derivative transactions. 4 Exposure at default is only calculated for securitization exposures in the trading book, resulting in a difference between carrying values and exposure amounts considered for regulatory purposes. The effect on the total exposure is higher, since certain exposures are subject to regulatory capital charges in both the market risk and the counterparty credit risk categories.

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Regulatory exposures

Annual | The table above illustrates the key differences between regulatory exposure amounts and accounting carrying values under the regulatory scope of consolidation. In addition to the accounting carrying values, the regulatory exposure amount includes:

– off-balance sheet amounts (line 4)

– potential future exposure (PFE) for derivatives, offset by netting where an enforceable master netting agreement is in place, and by eligible financial collateral deductions (line 6)

– effects from the model calculation of effective expected positive exposure (EEPE) applied to derivatives (line 6)

– any netting and collateral mitigation on securities financing transactions (SFTs) through the application of the close-out period approach or the comprehensive measurement approach (line 7)

– effect of collateral mitigation in the banking book (line 8)

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

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Fair value measurement

The table below references more information on fair value measurement, which is provided in our Annual Report 2018.

Annual |

Pillar 3 disclosure requirement	Annual Report 2018 section	Disclosure	Annual Report 2018 page number
Valuation methodologies applied, including mark-to-market and mark-to-model methodologies in use	Consolidated financial statements	– Note 24a Valuation principles	429–430
		– Note 24c Fair value hierarchy	431–437
		– Note 24f Level 3 instruments: valuation techniques and inputs	441–443
Description of the independent price verification process	Consolidated financial statements	– Note 24b Valuation governance	430
Procedures for valuation adjustments or reserves for valuing trading positions by type of instrument	Consolidated financial statements	– Note 24d Valuation adjustments	437–439

p

Section 4 Credit risk

Introduction

This section provides information on the exposures subject to the Basel III credit risk framework, as presented in the “Regulatory exposures and risk-weighted assets” table on pages 16–18 of this report. Information on counterparty credit risk is reflected in the “Counterparty credit risk” section on pages 55–66 of this report. Securitization positions are reported in the “Securitizations” section on pages 72–79 of this report.

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

Credit risk exposure categories

Annual | The definitions of the FINMA-defined Pillar 3 credit risk exposure categories “Loans” and “Debt securities” as referred to in the “CR1: Credit quality of assets” and “CR3: Credit risk mitigation techniques – overview” tables in this section have been updated to reflect the new IFRS balance sheet structure under IFRS 9.

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

– balances at central banks

– loans and advances to banks

– loans and advances to customers

– other financial assets measured at amortized cost, excluding money market instruments, checks and bills and other debt instruments

– traded loans in the banking book that are included within *Financial assets at fair value held for trading*

– brokerage receivables

– loans including structured loans that are included within *Financial assets at fair value not held for trading*

– other non-financial assets

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

– money market instruments, checks and bills and other debt instruments that are included within *Other financial assets measured at amortized cost*

– financial assets at fair value held for trading, excluding traded loans

– financial assets at fair value not held for trading, excluding loans

– financial assets measured at fair value through other comprehensive income

p

This section is organized in seven sub-sections.

Credit risk management

Annual | Includes a reference to disclosures on our risk management objectives and risk management process, our organizational structure and our risk governance. p

Credit risk exposure and credit quality of assets

Annual | Semiannual | Provides information on our credit risk exposures and credit quality of assets. pp

Credit risk mitigation

Annual | Semiannual | Refers to disclosures on policies and processes for collateral evaluation and management, the use of netting and credit risk mitigation instruments. We also disclose information on our credit risk mitigation (CRM) techniques used to reduce credit risk for loans and debt securities. All secured exposures are presented in a table, irrespective of whether the standardized approach or the A-IRB approach is used for the risk-weighted assets (RWA) calculation.pp

Credit risk under the standardized approach

Annual | Semiannual | Provides information on the use of external credit assessment institutions (ECAI) to determine risk weightings applied to rated counterparties, as well as quantitative information on credit risk exposures and the effect of CRM under the standardized approach. pp

Credit risk under internal risk-based approaches

Annual | Semiannual | Refers to disclosures on our internal risk-based models used to calculate RWA, including information on internal model development and control, as well as characteristics of our models. Includes tables that provide information on credit risk exposures under the A-IRB approach, including the main parameters used in A-IRB models for the calculation of capital requirements, presented by portfolio and probability of default (PD) range. pp

Credit risk risk-weighted assets under the A-IRB approach

Quarterly | Comprises disclosures on the quarterly credit risk RWA development under the A-IRB approach. p

Backtesting

Annual | Refers to disclosures on backtesting. p

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Credit risk management

The table below presents an overview of Pillar 3 disclosures that are provided separately in our Annual Report 2018.

Annual |

CRA – Credit risk management

Pillar 3 disclosure requirement	Annual Report 2018 section	Disclosure	Annual Report 2018 page number
Translation of the business model into the components of the bank's credit risk profile	Risk, treasury and capital management	– Key risks, risk measures and performance by business division and Corporate Center unit	120
		– Risk categories, Risk definitions	121
		– Credit risk profile of the Group	134
		– Main sources of credit risk	133
	Consolidated financial statements	– Note 23 d) Maximum exposure to credit risk	421–422
Criteria and approach used for defining credit risk management policy and for setting credit risk limits	Risk, treasury and capital management	– Risk governance	123–124
		– Risk appetite framework	125–128
		– Risk measurement	130–132
		– Credit risk – Overview of measurement, monitoring and management techniques	133
Structure and organization of the credit risk management and control function	Risk, treasury and capital management	– Risk governance	123–124
Interaction between the credit risk management, risk control,	Risk, treasury and capital management	– Risk governance	123–124
		– Risk appetite framework	125–128

compliance and internal audit functions				
Scope and content of the reporting on credit risk exposure to the executive management and to the board of directors	Risk, treasury and capital management	–	Risk governance	123–124
		–	Internal risk reporting	129
		–	Credit risk profile of the Group	134
		–	Risk appetite framework	125–128

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Credit risk exposure and credit quality of assets

Amounts shown in the tables below are IFRS carrying values according to the regulatory scope of consolidation that are subject to the credit risk framework. Comparative prior-period information has not been disclosed due to the adoption of IFRS 9, effective prospectively from 1 January 2018.

Annual |

CRB: Breakdown of exposures by industry
31.12.18

USD million	Banks	Construc-tion	Electricity, gas, water supply	Financial services	Hotels and restaurants	Manufac-turing[2]	Mining	Private households	au
Balances at central banks	**107,622**								
Loans and advances to banks[1]	**15,612**								
Loans and advances to customers[1]		**2,005**	**777**	**58,944**	**1,806**	**3,963**	**571**	**196,407**	
Other financial assets measured at amortized cost	**2,350**	**127**	**1**	**2,560**	**7**	**280**	**10**	**4,503**	
Total financial assets measured at amortized cost	**125,584**	**2,132**	**779**	**61,505**	**1,812**	**4,244**	**581**	**200,910**	
Financial assets at fair value held for trading	**93**	**20**	**76**	**224**	**2**	**121**	**25**		
Brokerage receivables	**7**	**42**	**19**	**322**	**4**		**4**	**3,360**	
Financial assets at fair value not held for trading	**13,505**	**0**	**1**	**11,752**			**16**	**1,284**	
Total financial assets measured at fair value through profit or loss	**13,606**	**62**	**96**	**12,297**	**6**	**121**	**45**	**4,644**	
Financial assets measured at	**209**			**3,931**				**50**	

fair value through other comprehensive income								
Other non-financial assets	300			53				419
Total	139,699	2,194	875	77,786	1,818	4,365	626	206,022

1 Loan exposure is reported in line with the IFRS definition. 2 Includes the chemicals industry. 3 In
Transport, storage, communications and other.

p

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

Annual |

CRB: Breakdown of exposures by geographical area

31.12.18

USD million	Asia Pacific	Latin America	Middle East and Africa	North America	Switzerland	Rest of Europe	Total carrying value of assets
Balances at central banks	6,528			15,655	70,008	15,430	107,622
Loans and advances to banks[1]	4,485	155	461	5,870	261	4,380	15,612
Loans and advances to customers[1]	23,068	5,525	4,526	81,028	164,390	36,225	314,762
Other financial assets measured at amortized cost	404	33	19	16,988	1,995	2,259	21,698
Total financial assets measured at amortized cost	34,486	5,714	5,006	119,541	236,655	58,294	459,695
Financial assets at fair value held for trading	1,754	631	8	3,384	30	2,928	8,735
Brokerage receivables	6	55	14	4,278	11	43	4,407
Financial assets at fair value not held for trading	16,196			16,741	2,431	14,084	49,452
Total financial assets measured at fair value through	17,956	686	21	24,403	2,472	17,055	62,594

profit or loss							
Financial assets measured at fair value through other comprehensive income	**439**	**76**		**6,151**			**6,666**
Other non-financial assets	**134**	**29**	**4**	**481**	**295**	**2,078**	**3,021**
Total	**53,015**	**6,504**	**5,032**	**150,575**	**239,422**	**77,427**	**531,975**

1 Loan exposure is reported in line with IFRS definition.

UBS Group AG consolidated

Annual | The table below provides a breakdown of our credit risk exposure by residual maturity. Residual maturity is presented based on contract end date and does not include potential early redemption features. p

Annual |

CRB: Breakdown of exposures by residual maturity
31.12.18

USD million	Due in 1 year or less	Due between 1 year and 5 years	Due over 5 years	Total carrying value of assets
Balances at central banks	**107,622**			**107,622**
Loans and advances to banks[1]	**15,559**	**34**	**19**	**15,612**
Loans and advances to customers[1]	**178,182**	**89,294**	**47,286**	**314,762**
Other financial assets measured at amortized cost	**6,811**	**6,545**	**8,342**	**21,698**
Total financial assets measured at amortized cost	**308,174**	**95,874**	**55,647**	**459,695**
Financial assets at fair value held for trading	**488**	**1,453**	**6,793**	**8,735**
Brokerage receivables	**4,407**			**4,407**
Financial assets at fair value not held for trading	**28,597**	**18,668**	**2,188**	**49,452**
Total financial assets measured at fair value through profit or loss	**33,492**	**20,121**	**8,981**	**62,594**
Financial assets measured at fair value through other comprehensive income	**1,077**	**1,409**	**4,180**	**6,666**
Other non-financial assets	**1,709**	**1,312**		**3,021**
Total	**344,452**	**118,716**	**68,808**	**531,975**

1 Loan exposure is reported in line with the IFRS definition.

p

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

Annual | We have adopted IFRS 9, *Financial Instruments*, effective as of 1 January 2018. IFRS 9 introduces a forward-looking expected credit loss (ECL) approach, which is intended to result in an earlier recognition of credit losses compared with the incurred-loss impairment approach for financial instruments under IAS 39, *Financial Instruments: Recognition and Measurement*, and the loss-provisioning approach for financial guarantees and loan commitments under IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*.

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.

UBS applies a single definition of default for classifying assets and determining the PD of its obligors for risk modeling purposes. The definition of default is based on quantitative and qualitative criteria. A counterparty is classified as defaulted at the latest when material payments of interest, principal or fees are overdue for more than 90 days, or more than 180 days for certain exposures in relation to loans to private and commercial clients in Personal & Corporate Banking, and to private clients of Global Wealth Management Region Switzerland. UBS does not consider the general 90-day presumption for default recognition appropriate for these latter portfolios based on an analysis of the cure rates, which demonstrated that strict application of the 90-day criterion would not accurately reflect the inherent credit risk. Counterparties are also classified as defaulted when bankruptcy, insolvency proceedings or enforced liquidation have commenced; obligations have been restructured on preferential terms (forbearance); or there is other evidence that payment obligations will not be fully met without recourse to collateral. The latter may be the case even if, to date, all contractual payments have been made when due. If a counterparty is defaulted, generally all claims against the counterparty are treated as defaulted.

An instrument is classified as credit-impaired if the counterparty is defaulted, and / or the instrument is identified as purchased or originated credit-impaired (POCI). An instrument is POCI if it has been purchased with a material discount to its carrying amount following a risk event of the issuer or originated with a defaulted counterparty. Once a financial asset is classified as defaulted / credit-impaired (except POCIs), 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.

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

CRB: Credit-impaired exposures by industry

31.12.18

USD million	Credit-impaired exposures, gross (Stage 3)	Allowances for credit-impaired exposures	Credit-impaired exposures net of allowances	Write-offs for the year ended
Banks	**3**	**(3)**	**0**	**0**
Construction	**33**	**(12)**	**21**	**(9)**
Electricity, gas, water supply	**14**	**(2)**	**13**	**(1)**
Financial services	**164**	**(48)**	**115**	**(7)**
Hotels and restaurants	**69**	**(11)**	**58**	**0**
Manufacturing[1]	**207**	**(110)**	**98**	**(81)**
Mining	**87**	**(31)**	**56**	**(5)**
Private households	**1,035**	**(151)**	**884**	**(29)**
Public authorities	**28**	**(7)**	**21**	**0**
Real estate and rentals	**519**	**(51)**	**467**	**0**
Retail and wholesale[2]	**251**	**(182)**	**69**	**(4)**
Services	**117**	**(39)**	**78**	**(5)**
Transport, storage, communications and other	**359**	**(12)**	**347**	**(67)**
Total	**2,886**	**(659)**	**2,227**	**(210)**

31.12.17[3]

USD million	Impaired financial instruments	Specific allowances	Impaired financial instruments net of specific allowances	Collective allowances	Total allowances	Write-offs for the year ended
Total[3]	**1,669**	**(718)**	**951**	**(13)**	**(731)**	**(120)**

1 Includes the chemicals industry 2 Includes the food and beverages industry. 3 Prior-period information is presented under IAS 39 requirements. However, it now includes exposures presented within table CR1 in the 30 June 2018 Pillar 3 report - UBS Group and significant related subsidiaries and sub-groups of USD 361 million, with associated allowances of USD 19 million.

p

UBS Group AG consolidated

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

Annual |

CRB: Credit-impaired exposures by geographical area

31.12.18

USD million	Credit-impaired exposures, gross (Stage 3)	Allowances for credit-impaired exposures	Credit-impaired exposures net of allowances	Write-offs for the year ended
Asia Pacific	**79**	**(43)**	**36**	**(11)**
Latin America	**67**	**(45)**	**23**	**0**
Middle East and Africa	**10**	**(2)**	**8**	**0**
North America	**742**	**(121)**	**621**	**(24)**
Switzerland	**1,696**	**(330)**	**1,366**	**(51)**
Rest of Europe	**292**	**(118)**	**174**	**(123)**
Total	**2,886**	**(659)**	**2,227**	**(210)**

31.12.17[1]

USD million	Impaired financial instruments	Specific allowances	Impaired financial instruments net of specific allowances	Collective allowances	**Total allowances**	Write-offs for the year ended
Total	**1,669**	**(718)**	**951**	**(13)**	**(731)**	**(120)**

1 Prior-period information is presented under IAS 39 requirements. However, it now includes exposures presented within table CR1 in the 30 June 2018 Pillar 3 report - UBS Group and significant related subsidiaries and sub-groups of USD 361 million, with associated allowances of USD 19 million.

p

Semiannual | The table below provides a breakdown of defaulted and non-defaulted loans, debt securities and off-balance sheet exposures. With the implementation of IFRS 9, the "Allowances / impairments" columns were enhanced to reflect expected credit loss (ECL) allowances and provisions related to stages 1–3 as of 30 June 2018 and 31 December 2018. Comparative numbers as of 31 December 2017 are based on the incurred loss model of IAS 39, *Financial Instruments: Recognition and Measurement*, and were largely comparable to the IFRS 9 stage 3 allowances and provisions. More information on the net value movements related to Loans and Debt securities shown in the table below is provided on page 31 in the "CR3: Credit risk mitigation techniques – overview" table.p

Semiannual |

CR1: Credit quality of assets

		Gross carrying values of:						Allowance		
								Stage 3		
USD million		Defaulted exposures			Non-defaulted exposures			(credit-impaired)		Stage 1
		31.12.18[1]	30.6.18	31.12.17	**31.12.18**	30.6.18	31.12.17	**31.12.18**	30.6.18	**31.12.18**
1	Loans[2]	**2,886**	2,912	2,856	**460,119**	457,110	439,606	**(659)**	(753)	**(272)**[3]
2	Debt securities				**69,902**	77,930	74,282			
3	Off-balance sheet exposures	**383**	302	281	**304,595**	315,673	207,304	**(34)**	(26)	**(82)**
4	**Total**	**3,269**	**3,215**	**3,137**	**834,616**	**850,713**	**721,191**	**(693)**	**(779)**	**(354)**

1 Defaulted exposures are in line with credit-impaired exposures (stage 3) under IFRS 9. Refer to "No
IFRS 9 as of 1 January 2018" of our second quarter 2018 report under "Quarterly reporting" at www.u
exposure is reported in line with the Pillar 3 definition. Refer to "Credit risk exposure categories" in th
Debt securities. 3 Excludes ECL on exposures subject to counterparty credit risk (31 December 201

p

Semiannual | The total amount of defaulted loans and debt securities amounted to USD 3.3 billion as of 31 December 2018. The net increase of USD 54 million was driven by the gross USD 381 million increase in total defaulted exposures compared with 30 June 2018, mainly driven by various corporate clients in Switzerland, partly offset by amounts written off, defaulted loans returned to non-defaulted status and other changes. p

Semiannual |

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

USD million	***For the half year ended 31.12.18***	*For the half year ended 30.6.18*
1	**3,215**	3,137

	Defaulted loans, debt securities and off-balance sheet exposures as of the beginning of the half year		
2	Loans and debt securities that have defaulted since the last reporting period	**381**	414
3	Returned to non-defaulted status	**(56)**	(147)
4	Amounts written off	**(172)**	(38)
5	Other changes	**(99)**	(151)
6	**Defaulted loans, debt securities and off-balance sheet exposures as of the end of the half year**	**3,269**	3,215

p

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UBS Group AG consolidated

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

Annual |

CRB: Past due exposures

USD million	**31.12.18**	31.12.17
1–10 days	**53**	133
11–30 days	**98**	119
31–60 days	**74**	133
61–90 days	**39**	201
>90 days	**1,535**	1,049
of which: mortgage loans	***474[1]***	*421[1]*
Total	**1,800**	**1,635**

1 Total mortgage loans: USD 165,398 million (31 December 2017: 157,705 million).

p

Restructured exposures

Annual | Under imminent payment default or where default has already occurred, we may grant concessions to borrowers in financial difficulties that we would otherwise not consider in the normal course of our business, such as preferential interest rates, extension of maturity, modifying the schedule of repayments, debt / equity swap, subordination, etc. When a forbearance measure takes place, each case is considered individually and the exposure is generally classified in default. Forbearance classification will remain, until the loan is collected or written off, non-preferential conditions are granted that supersede the preferential conditions or until the counterparty has recovered and the preferential conditions no longer exceed our risk appetite.

Contractual adjustments when there is no evidence of imminent payment default, or where changes to terms and conditions are within our usual risk appetite, are not considered to be forborne.

Refer to pages 151 –153 in our Annual Report 2018 for more information on our policies for restructured exposures.

The table below provides more information on restructured exposures as of 31 December 2018. p

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

	Credit-impaired		Non-credit-impaired		Total	
USD million	**31.12.18**	31.12.17	**31.12.18**	31.12.17	**31.12.18**	31.12.17
Restructured exposures	**1,114**	411		755	**1,114**	1,166

p

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Credit risk mitigation

The table below presents an overview of Pillar 3 disclosures that are provided separately in our Annual Report 2018.

Annual |

CRC – Credit risk mitigation

Pillar 3 disclosure requirement	Annual Report 2018 section	Disclosure	Annual Report 2018 page number
Core features of policies and processes for, and an indication of the extent to which the bank makes use of, on- and off-balance sheet netting	Risk, treasury and capital management	– Traded products	141–142
	Consolidated financial statements	– Note 11 Derivative instruments	395–399
		– Note 27 Offsetting financial assets and financial liabilities	455
		– Note 1a item 3i Netting	346
Core features of policies and processes for collateral evaluation and management	Risk, treasury and capital management	– Credit risk mitigation	143–145
Information about market or credit risk concentrations under the credit risk mitigation instruments used	Risk, treasury and capital management	– Risk concentrations	132
		– Credit risk mitigation	143–145
	Consolidated financial statements	– Note 11 Derivative instruments	395–399

p

Additional information on counterparty credit risk mitigation is provided in the “Counterparty credit risk” section on pages 55–66 of this report.

Semiannual | The table below provides a breakdown of unsecured and partially or fully secured exposures, including security type, for the categories *Loans* and *Debt securities*.

The total carrying amount of loans increased by USD 3 billion to USD 462 billion in the second half of 2018. This was driven by an increase of USD 5 billion in cash and balances at central banks, mainly resulting from client-driven activity that affected funding consumption by the business divisions, contributing to unsecured exposures. This was partly offset by a decrease of USD 2 billion primarily as a result of lower lending in Global Wealth Management. The total carrying value of debt securities decreased by USD 8 billion to USD 69.9 billion mainly resulting from net transfers out of high-quality government bills and bonds held at fair value into SFTs in Group Asset and Liability Management (Group ALM).p

Semiannual |

CR3: Credit risk mitigation techniques – overview[1]

					Secured portion of exposures partially or fully secured:		
USD million		Exposures fully unsecured: carrying amount	Exposures partially or fully secured: carrying amount	Total: carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
31.12.18							
1	Loans[2]	**145,458**	**316,615**	**462,073**	**304,900**	**1,204**	**38**
2	Debt securities	**69,902**		**69,902**			
3	**Total**	**215,360**	**316,615**	**531,975**	**304,900**	**1,204**	**38**
4	*of which: defaulted*	***412***	***1,815***	***2,227***	***1,215***	***320***	
30.6.18							
1	Loans[2]	138,563	320,431	458,994	308,335	1,349	19
2	Debt securities	77,929		77,929			
3	**Total**	**216,492**	**320,431**	**536,923**	**308,335**	**1,349**	**19**
4	*of which: defaulted*	*667*	*1,493*	*2,160*	*1,055*	*255*	
31.12.17							
1	Loans[2]	121,582	320,183	441,765	308,412	1,382	45
2	Debt securities	74,281		74,281			
3	**Total**	**195,864**	**320,183**	**516,046**	**308,412**	**1,382**	**45**
4	*of which: defaulted*	*737*	*1,422*	*2,158*	*892*	*295*	

1 Exposures in this table represent carrying values in accordance with the regulatory scope of consolidation. 2 Loan exposure is reported in line with the Pillar 3 definition. Refer to "Credit

risk exposure categories" in this section, for more information on the classification of Loans and Debt securities.

p

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UBS Group AG consolidated

Standardized approach – credit risk mitigation

Semiannual | The table below illustrates the effect of credit risk mitigation on the calculation of capital requirements under the standardized approach. p

Semiannual |

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

		Exposures before CCF and CRM[1]			Exposures post CCF and CRM			RWA and RWA density	
	USD million, except where indicated	On-balance sheet amount	Off-balance sheet amount	Total	On-balance sheet amount	Off-balance sheet amount	Total	RWA	RWA density in %
	31.12.18								
	Asset classes[2]								
1	Central governments and central banks	**17,859**		**17,859**	**17,851**		**17,851**	**746**	**4.2**
2	Banks and securities dealers	**6,749**	**1,179**	**7,928**	**6,733**	**722**	**7,456**	**1,842**	**24.7**
3	Public-sector entities and multilateral development banks	**1,180**	**277**	**1,457**	**1,179**	**55**	**1,235**	**351**	**28.4**
4	Corporates	**6,146**	**4,523**	**10,669**	**6,087**	**722**	**6,810**	**5,058**	**74.3**
5	Retail	**12,786**	**4,230**	**17,016**	**12,437**	**155**	**12,592**	**8,461**	**67.2**
6	Equity								
7	Other assets	**10,524**		**10,524**	**10,524**		**10,524**	**9,513**	**90.4**
8	**Total**	**55,244**	**10,208**	**65,452**	**54,812**	**1,655**	**56,467**	**25,972**	**46.0**
	30.6.18								
	Asset classes[2]								
1	Central governments and central banks	14,287		14,287	14,286		14,286	494	3.5
2		6,285	903	7,188	6,284	442	6,725	1,599	23.8

	Banks and securities dealers								
3	Public-sector entities and multilateral development banks	1,555	279	1,834	1,553	56	1,608	450	28.0
4	Corporates	5,555	3,744	9,299	5,537	439	5,976	4,236	70.9
5	Retail	14,263	3,387	17,650	12,280	252	12,532	8,185	65.3
6	Equity								
7	Other assets	10,222		10,222	10,222		10,222	9,345	91.4
8	**Total**	**52,167**	**8,314**	**60,480**	**50,161**	**1,188**	**51,349**	**24,309**	**47.3**
	31.12.17								
	Asset classes[2]								
1	Central governments and central banks	13,076		13,076	13,075		13,075	483	3.7
2	Banks and securities dealers	5,837	1,057	6,894	5,834	554	6,389	1,514	23.7
3	Public-sector entities and multilateral development banks	1,932	289	2,221	1,929	143	2,072	655	31.6
4	Corporates	6,416	3,808	10,225	5,964	479	6,444	4,591	71.3
5	Retail	14,381	3,080	17,460	12,422	171	12,593	8,183	65.0
6	Equity								
7	Other assets	10,236		10,236	10,236		10,236	9,181	89.7
8	**Total**	**51,876**	**8,235**	**60,111**	**49,459**	**1,348**	**50,808**	**24,607**	**48.4**

1 Exposures in this table represent carrying values in accordance with the regulatory scope of consolidation. 2 The CRM effect is reflected on the original asset class.

p

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IRB approach – credit derivatives used as credit risk mitigation

Semiannual | We actively manage the credit risk in our corporate loan portfolios by utilizing credit derivatives. Single-name credit derivatives that fulfill the operational requirements prescribed by FINMA are recognized in the RWA calculation using the PD or rating (and asset class) assigned to the hedge provider. The PD (or rating) substitution is only applied in the RWA calculation when the PD (or rating) of the hedge provider is lower than the PD (or rating) of the obligor. In addition, default correlation between the obligor and hedge provider is taken into account through the double default approach. Credit derivatives with tranched cover or first-loss protection are recognized through the securitization framework. Refer to the “CCR6: Credit derivatives exposures” table in the “Counterparty credit risk” section on page 66 of this report for notional and fair value information on credit derivatives used as credit risk mitigation. p

Semiannual |

CR7: IRB – effect on RWA of credit derivatives used as CRM techniques[1]

		31.12.18		30.6.18		31.12.17	
USD million		Pre-credit derivatives RWA	Actual RWA	Pre-credit derivatives RWA	Actual RWA	Pre-credit derivatives RWA	Actual RWA
1	Central governments and central banks – FIRB						
2	Central governments and central banks – AIRB	**2,502**	**2,500**	2,728	2,722	2,786	2,775
3	Banks and securities dealers – FIRB						
4	Banks and securities dealers – AIRB	**5,240**	**5,240**	4,561	4,561	2,722	2,722
5	Public-sector entities, multilateral development banks – FIRB						
6	Public-sector entities, multilateral development banks – AIRB	**798**	**798**	902	902	874	874

7	Corporates: Specialized lending – FIRB						
8	Corporates: Specialized lending – AIRB	**12,172**	**12,172**	11,319	11,319	10,273	10,273
9	Corporates: Other lending – FIRB						
10	Corporates: Other lending – AIRB	**31,083**	**30,612**	31,960	31,487	26,832	26,055
11	Retail: mortgage loans	**26,696**	**26,696**	24,964	24,964	23,692	23,692
12	Retail exposures: qualifying revolving retail (QRRE)	**624**	**624**	582	582	579	579
13	Retail: other	**8,377**	**8,377**	8,420	8,420	8,626	8,626
14	Equity positions (PD/LGD approach)						
15	**Total**	**87,493**	**87,019**	**85,436**	**84,956**	**76,385**	**75,597**

1 The CRM effect is reflected on the original asset class.

p

UBS Group AG consolidated

Credit risk under the standardized approach

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

The mapping of external ratings to the standardized approach risk weights is determined by FINMA and published on its website. There were no changes in the ECAI used compared with 31 December 2017.

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

Annual |

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

		31.12.18		
		External ratings used		
	Asset classes	Moody's	Standard & Poor's	Fitch
1	Central governments and central banks	l	l	l
2	Banks and securities dealers	l	l	l
3	Public-sector entities and multilateral development banks	l	l	l
4	Corporates	l	l	l

p

The table below illustrates the exposures by asset classes and the risk weights applied.

Semiannual |

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

	Risk weight	0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount (post CCF and CRM)
31.12.18											
Asset classes											
1	Central governments and central banks	**17,061**		**42**		**24**		**727**			**17,854**
2	Banks and securities dealers			**6,259**		**1,192**		**4**	**0**		**7,456**
3	Public-sector entities and multilateral development banks	**101**		**771**		**330**		**30**	**0**		**1,232**
4	Corporates			**1,961**		**138**	**266**	**4,385**	**2**		**6,751**
5	Retail				**5,809**		**1,811**	**4,910**	**120**		**12,650**
6	Equity										
7	Other assets	**1,010**						**9,513**			**10,524**
8	**Total**	**18,172**		**9,033**	**5,809**	**1,684**	**2,077**	**19,570**	**122**	**0**	**56,467**
9	*of which: mortgage loans*				***5,809***		***97***	***778***			***6,685***
10	*of which: past due[1]*							***112***			***112***
30.6.18											
Asset classes											
1	Central governments and central banks	13,717		85		20		471			14,293
2	Banks and securities dealers			5,889		831		6			6,726

3	Public-sector entities and multilateral development banks	175	972		406		49			1,602
4	Corporates		1,873		182		3,831			5,886
5	Retail			6,133		1,959	4,383	144		12,619
6	Equity									
7	Other assets	877					9,345			10,222
8	**Total**	**14,769**	**8,819**	**6,133**	**1,439**	**1,959**	**18,085**	**145**	**0**	**51,349**
9	*of which: mortgage loans*			*6,133*		*116*	*392*			*6,642*
10	*of which: past due[1]*						*109*			*109*
31.12.17										
Asset classes										
1	Central governments and central banks	12,487	122		21		478	0		13,107
2	Banks and securities dealers		5,677		676		25			6,378
3	Public-sector entities and multilateral development banks	215	1,183		507		162	0		2,068
4	Corporates	69	1,958		177		4,118	11		6,333
5	Retail			6,266		1,817	4,491	113		12,687
6	Equity									
7	Other assets	1,057					9,180			10,236
8	**Total**	**13,829**	**8,938**	**6,266**	**1,381**	**1,817**	**18,453**	**124**	**0**	**50,808**
9	*of which: mortgage loans*			*6,266*		*156*	*465*			*6,887*
10	*of which: past due[1]*			*2*		*2*	*58*	*16*		*79*

1 Includes mortgage loans.

p

UBS Group AG consolidated

Credit risk under internal ratings-based approaches

Annual | We use the A-IRB approach for calculating certain credit risk exposures. Under the A-IRB approach, the required capital for credit risk is quantified through empirical models that we have developed to estimate the probability of default (PD), loss given default (LGD), exposure at default (EAD) and other parameters, subject to FINMA approval. The table below presents an overview of Pillar 3 disclosures that are provided separately in our Annual Report 2018.p

Annual |

CRE – Internal ratings-based models

Pillar 3 disclosure requirement	Annual Report 2018 section	Disclosure	Annual Report 2018 page number
Internal model development, controls and changes	Risk, treasury and capital management	– Risk measurement	130–132
		– Credit risk models	145–151
		– Key features of our main credit risk models	146
		– Risk governance	123–124
Relationships between risk management and internal audit and independent review of IRB models	Risk, treasury and capital management	– Risk governance	123–124
		– Risk measurement	130–132
Scope and content of the reporting related to credit risk models	Risk, treasury and capital management	– Risk measurement	130–132
		– Credit risk – Overview of measurement, monitoring and management techniques	133
		– Credit risk models	145–151
Supervisor approval of applied approaches	Risk, treasury and capital management	– Risk measurement	130–132
		– Changes to models and model parameters during the period	151
		– Stress testing	130–132
		– Key features of our main credit risk models	146

Number of key models used by portfolio and the main differences between models	Risk, treasury and capital management	–	Credit risk models	145–151
Description of the main characteristics of approved models	Risk, treasury and capital management	–	Credit risk models	145–151

p

Semiannual | The table in this sub-section provides information on credit risk exposures under the A-IRB approach, including the main parameters used in A-IRB models for the calculation of capital requirements, presented by portfolio and PD range. Under the A-IRB approach, the required capital for credit risk is quantified through empirical models that we have developed to estimate the PD, loss given default (LGD), exposure at default (EAD) and other parameters, subject to FINMA approval. The proportion of EAD covered by either the standardized or the A-IRB approach is provided in the “Regulatory exposures and risk-weighted assets” table in section 2 on pages 16–18 of this report.

The “CR6: IRB – Credit risk exposures by portfolio and PD range” table on the following pages provides a breakdown of the key parameters used for calculation of capital requirements under the A-IRB approach, shown by PD range across FINMA defined asset classes.p

As of 31 December 2018, exposures before the application of CCFs decreased by USD 21.6 billion to USD 774.6 billion. This decrease was primarily related to a reduction in Lombard lending in Global Wealth Management, which decreased exposures before CCF and CRM by USD 12.1 billion with a reduction in EAD post-CCF and post-CRM of USD 10 billion. This was partly offset by an increase of USD 2.5 billion on exposures before CCF and CRM and post-CCF and post-CRM, due to the revision of the methodology applied for Lombard lending transactions in Japan. There was a USD 6.5 billion reduction in exposures before CCF and CRM and post-CCF and post-CRM in the asset classes “Central governments and central banks” and “Public-sector entities and multilateral development banks”, reflecting a decrease in high-quality liquid assets (HQLA). Information on credit risk RWA for the third quarter of 2018, including details on movements in RWA, is provided on pages 6–7 in our 30 September 2018 UBS Group AG and significant regulated subsidiaries and sub-groups report for the third quarter of 2018, available under “Pillar 3 disclosures” at *www.ubs.com/investors* and for the fourth quarter on pages 46–47 of this reportp

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

USD million, except where indicated	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM[1]	Average PD in %	Number of obligors (in thousands)	Average LGD in %	A m i
Central governments and central banks as of 31.12.18									
0.00 to <0.15	**139,551**	**19**	**139,570**	**47**	**139,558**	**0.0**	**0.1**	**29.1**	
0.15 to <0.25	**0**	**0**	**0**	**0**	**0**	**0.2**	**<0.1**	**55.2**	
0.25 to <0.50	**3**	**0**	**3**	**10**	**3**	**0.3**	**<0.1**	**54.9**	
0.50 to <0.75	**9**	**0**	**9**	**0**	**9**	**0.7**	**<0.1**	**97.9**	
0.75 to <2.50	**2**	**0**	**2**	**55**	**1**	**1.0**	**<0.1**	**38.3**	
2.50 to <10.00	**4**	**12**	**15**	**52**	**10**	**3.6**	**<0.1**	**54.3**	
10.00 to <100.00	**28**	**0**	**28**	**10**	**28**	**13.9**	**<0.1**	**5.0**	
100.00 (default)	**13**	**37**	**50**	**55**	**23**		**<0.1**		
Subtotal	**139,609**	**68**	**139,676**	**52**	**139,632**	**0.0**	**0.2**	**29.1**	
Central governments and central banks as of 30.6.18									
0.00 to <0.15	144,249	126	144,376	58	144,322	0.0	0.1	35.3	
0.15 to <0.25	0	0	0	0	0	0.2	<0.1	61.0	
0.25 to <0.50	4	0	4	10	4	0.3	<0.1	69.3	
0.50 to <0.75	5	0	5	0	5	0.7	<0.1	95.7	
0.75 to <2.50	1	3	4	1	1	1.1	<0.1	36.4	
2.50 to <10.00	4	3	7	57	6	2.7	<0.1	9.7	
10.00 to <100.00	37	0	37	50	37	13.9	<0.1	5.0	
100.00 (default)	22	52	74	55	40		<0.1		
Subtotal	144,322	185	144,507	56	144,415	0.0	0.1	35.3	
Central governments and central banks as of 31.12.17									
0.00 to <0.15	131,998	129	132,127	49	132,060	0.0	0.1	39.0	
0.15 to <0.25	0	0	0	0	0	0.2	<0.1	61.8	
0.25 to <0.50	5	0	5	19	5	0.3	<0.1	70.0	
0.50 to <0.75	4	0	4	0	4	0.7	<0.1	65.9	

0.75 to <2.50	1	51	52	54	28	1.2	<0.1	6.9
2.50 to <10.00	0	3	3	36	1	2.7	<0.1	8.0
10.00 to <100.00	0	0	0	0	0	13.3	<0.1	10.0
100.00 (default)	27	1	28	55	17		<0.1	
Subtotal	132,035	183	132,218	50	132,116	0.0	0.1	39.0

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

USD million, except where indicated	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM[1]	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Avera matu in ye
Banks and securities dealers as of 31.12.18									
0.00 to <0.15	**11,855**	**1,805**	**13,659**	**54**	**12,639**	**0.1**	**0.5**	**43.0**	**1**
0.15 to <0.25	**1,011**	**458**	**1,469**	**46**	**793**	**0.2**	**0.3**	**49.3**	**1**
0.25 to <0.50	**454**	**391**	**845**	**52**	**570**	**0.4**	**0.2**	**61.8**	**1**
0.50 to <0.75	**167**	**263**	**430**	**42**	**221**	**0.6**	**0.1**	**62.9**	**1**
0.75 to <2.50	**974**	**304**	**1,278**	**46**	**866**	**1.7**	**0.2**	**48.3**	**1**
2.50 to <10.00	**320**	**388**	**708**	**45**	**363**	**4.7**	**0.2**	**52.5**	**1**
10.00 to <100.00	**0**	**12**	**12**	**28**	**3**	**15.9**	**<0.1**	**32.5**	**1**
100.00 (default)									
Subtotal	**14,780**	**3,621**	**18,401**	**50**	**15,454**	**0.3**	**1.5**	**44.8**	**1**
Banks and securities dealers as of 30.6.18									
0.00 to <0.15	11,822	1,914	13,735	52	12,887	0.1	0.5	42.3	1
0.15 to <0.25	1,097	693	1,790	52	1,396	0.2	0.3	48.4	1
0.25 to <0.50	337	528	866	53	569	0.4	0.2	56.3	1
0.50 to <0.75	116	307	423	44	182	0.5	0.1	56.1	1
0.75 to <2.50	1,193	599	1,793	37	1,059	1.5	0.2	48.1	1
2.50 to <10.00	209	292	499	46	277	5.3	0.2	52.4	1
10.00 to <100.00	1	16	17	26	5	15.7	<0.1	16.2	0

100.00 (default)								
Subtotal	14,774	4,348	19,123	49	16,376	0.2	1.5	44.0
Banks and securities dealers as of 31.12.17								
0.00 to <0.15	8,359	3,204	11,563	47	9,832	0.0	0.5	40.6
0.15 to <0.25	801	681	1,481	46	952	0.2	0.3	46.9
0.25 to <0.50	371	293	664	37	499	0.4	0.2	66.8
0.50 to <0.75	230	246	476	34	271	0.6	0.1	64.3
0.75 to <2.50	716	568	1,284	40	665	1.2	0.2	61.4
2.50 to <10.00	229	229	458	20	221	4.4	0.2	65.1
10.00 to <100.00	33	7	40	39	34	12.3	<0.1	7.6
100.00 (default)								
Subtotal	10,739	5,227	15,967	43	12,474	0.3	1.4	44.1

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

USD million, except where indicated	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM[1]	Average PD in %	Number of obligors (in thousands)	Average LGD in %
Public-sector entities, multilateral development banks as of 31.12.18								
0.00 to <0.15	**6,816**	**909**	**7,725**	**19**	**6,990**	**0.0**	**0.4**	**37.2**
0.15 to <0.25	**350**	**221**	**571**	**12**	**377**	**0.2**	**0.2**	**29.9**
0.25 to <0.50	**581**	**332**	**913**	**24**	**662**	**0.3**	**0.2**	**27.4**
0.50 to <0.75	**44**	**1**	**44**	**28**	**44**	**0.6**	**<0.1**	**31.7**
0.75 to <2.50	**1**	**3**	**5**	**90**	**4**	**1.1**	**<0.1**	**17.8**
2.50 to <10.00	**5**	**20**	**25**	**53**	**16**	**2.8**	**<0.1**	**5.5**
10.00 to <100.00								
100.00 (default)								
Subtotal	**7,797**	**1,487**	**9,284**	**20**	**8,093**	**0.1**	**0.8**	**36.0**
Public-sector entities, multilateral development banks as of 30.6.18								
0.00 to <0.15	10,434	933	11,368	19	10,613	0.0	0.4	36.3
0.15 to <0.25	334	100	434	14	348	0.2	0.2	32.0
0.25 to <0.50	560	313	872	26	641	0.3	0.2	26.4
0.50 to <0.75	45	4	49	11	45	0.6	<0.1	27.0
0.75 to <2.50	5	3	8	81	7	1.6	<0.1	10.5
2.50 to <10.00	1	4	6	31	2	2.8	<0.1	22.9
10.00 to <100.00								
100.00 (default)								
Subtotal	11,380	1,357	12,736	20	11,657	0.0	0.8	35.6
Public-sector entities, multilateral development banks as of 31.12.17								

0.00 to <0.15	10,349	1,030	11,380	19	10,543	0.0	0.3	36.4
0.15 to <0.25	362	259	622	11	391	0.2	0.1	30.8
0.25 to <0.50	572	340	912	28	666	0.3	0.2	17.2
0.50 to <0.75	50	3	52	12	50	0.6	<0.1	17.8
0.75 to <2.50	2	3	4	99	4	1.3	<0.1	11.8
2.50 to <10.00	3	39	42	98	41	2.7	<0.1	8.8
10.00 to <100.00								
100.00 (default)								
Subtotal	11,338	1,674	13,012	21	11,695	0.1	0.7	34.9

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

USD million, except where indicated	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM[1]	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Ave mat in y
Corporates: specialized lending as of 31.12.18									
0.00 to <0.15	**1,853**	**327**	**2,180**	**71**	**2,087**	**0.1**	**0.4**	**13.5**	
0.15 to <0.25	**994**	**161**	**1,155**	**77**	**1,118**	**0.2**	**0.3**	**18.3**	
0.25 to <0.50	**3,712**	**2,006**	**5,718**	**40**	**4,496**	**0.4**	**0.6**	**30.9**	
0.50 to <0.75	**4,446**	**2,875**	**7,321**	**34**	**5,360**	**0.6**	**0.6**	**32.1**	
0.75 to <2.50	**7,379**	**2,467**	**9,846**	**36**	**8,266**	**1.3**	**1.5**	**33.7**	
2.50 to <10.00	**1,195**	**289**	**1,483**	**64**	**1,381**	**3.3**	**0.4**	**40.5**	
10.00 to <100.00									
100.00 (default)	**232**	**46**	**278**	**54**	**150**		**0.1**		
Subtotal	**19,810**	**8,171**	**27,981**	**40**	**22,858**	**1.6**	**3.8**	**30.6**	
Corporates: specialized lending as of 30.6.18									
0.00 to <0.15	1,157	401	1,559	57	1,385	0.1	0.3	14.2	
0.15 to <0.25	1,061	207	1,269	76	1,220	0.2	0.3	18.6	
0.25 to <0.50	4,015	2,530	6,545	46	5,150	0.4	0.6	30.5	
0.50 to <0.75	3,736	2,200	5,935	37	4,483	0.6	0.6	33.8	
0.75 to <2.50	7,723	2,198	9,921	39	8,570	1.4	1.7	32.9	
2.50 to <10.00	1,426	326	1,752	56	1,608	3.5	0.4	38.6	
10.00 to <100.00	2	0	2	25	2	11.0	<0.1	10.0	
100.00 (default)	240	25	265	54	115		<0.1		

Subtotal	19,361	7,888	27,249	43	22,534	1.5	3.9	31.0
Corporates: specialized lending as of 31.12.17								
0.00 to <0.15	1,157	457	1,614	62	1,439	0.1	0.3	16.7
0.15 to <0.25	886	356	1,243	72	1,144	0.2	0.3	19.6
0.25 to <0.50	3,947	2,952	6,899	35	4,982	0.4	0.6	28.1
0.50 to <0.75	4,391	2,141	6,532	33	5,018	0.6	0.6	31.5
0.75 to <2.50	8,015	2,271	10,286	40	8,884	1.4	1.7	30.8
2.50 to <10.00	1,464	332	1,796	70	1,686	3.2	0.4	35.8
10.00 to <100.00	6	0	6	43	6	11.7	<0.1	16.0
100.00 (default)	228	20	248	67	137		<0.1	
Subtotal	20,094	8,530	28,624	40	23,296	1.6	3.9	29.4

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

USD million, except where indicated	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM[1]	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Ave mat in y
Corporates: other lending as of 31.12.18									
0.00 to <0.15	**18,566**	**21,196**	**39,763**	**37**	**20,917**	**0.0**	**3.9**	**36.7**	
0.15 to <0.25	**4,347**	**6,500**	**10,847**	**37**	**6,099**	**0.2**	**1.6**	**33.4**	
0.25 to <0.50	**3,604**	**4,593**	**8,197**	**40**	**5,328**	**0.4**	**2.5**	**30.2**	
0.50 to <0.75	**3,111**	**2,516**	**5,627**	**44**	**4,204**	**0.6**	**2.6**	**37.8**	
0.75 to <2.50	**7,481**	**6,155**	**13,637**	**41**	**10,142**	**1.4**	**11.4**	**26.4**	
2.50 to <10.00	**9,116**	**7,861**	**16,977**	**39**	**12,321**	**3.4**	**4.8**	**18.1**	
10.00 to <100.00	**297**	**285**	**582**	**53**	**449**	**15.3**	**0.1**	**16.7**	
100.00 (default)	**1,385**	**409**	**1,794**	**42**	**1,178**		**0.7**		
Subtotal	**47,908**	**49,516**	**97,424**	**39**	**60,639**	**3.1**	**27.5**	**30.1**	
Corporates: other lending as of 30.6.18									
0.00 to <0.15	17,771	21,572	39,343	37	19,778	0.0	3.9	34.5	
0.15 to <0.25	5,012	6,667	11,679	39	6,399	0.2	1.7	34.3	
0.25 to <0.50	3,267	4,155	7,422	41	4,811	0.4	2.6	30.3	
0.50 to <0.75	3,337	2,744	6,080	33	4,221	0.6	2.7	38.8	
0.75 to <2.50	7,478	5,729	13,207	41	9,139	1.4	11.5	28.6	
2.50 to <10.00	10,065	11,919	21,986	34	14,171	3.4	4.9	19.2	
10.00 to <100.00	346	427	773	47	553	16.1	0.1	15.1	
100.00 (default)	1,261	255	1,517	41	1,060		0.6		

Subtotal	48,536	53,469	102,007	37	60,132	3.0	28.0	29.8
Corporates: other lending as of 31.12.17								
0.00 to <0.15	14,251	21,956	36,207	36	16,805	0.1	2.2	33.5
0.15 to <0.25	5,382	6,684	12,066	38	5,621	0.2	1.1	33.3
0.25 to <0.50	3,494	4,633	8,127	39	5,087	0.4	1.8	28.1
0.50 to <0.75	3,196	3,148	6,344	35	4,444	0.6	1.7	27.1
0.75 to <2.50	7,150	6,424	13,575	40	9,759	1.4	8.0	23.0
2.50 to <10.00	10,695	7,576	18,271	42	13,611	3.4	4.3	13.9
10.00 to <100.00	352	437	789	54	561	14.8	0.1	16.5
100.00 (default)	1,313	237	1,551	46	1,091		0.5	
Subtotal	45,833	51,096	96,930	38	56,979	3.2	19.8	25.9

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

USD million, except where indicated	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM[1]	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Ave mat in y
Retail: residential mortgages as of 31.12.18									
0.00 to <0.15	**62,193**	**1,272**	**63,465**	**57**	**62,916**	**0.1**	**129.5**	**19.4**	
0.15 to <0.25	**13,409**	**229**	**13,638**	**69**	**13,567**	**0.2**	**20.7**	**23.3**	
0.25 to <0.50	**20,155**	**479**	**20,634**	**81**	**20,544**	**0.4**	**27.8**	**24.2**	
0.50 to <0.75	**13,276**	**425**	**13,701**	**88**	**13,649**	**0.6**	**15.4**	**24.5**	
0.75 to <2.50	**21,252**	**1,318**	**22,570**	**78**	**22,278**	**1.3**	**27.1**	**28.3**	
2.50 to <10.00	**7,608**	**260**	**7,868**	**84**	**7,825**	**4.3**	**10.2**	**25.1**	
10.00 to <100.00	**912**	**25**	**937**	**84**	**933**	**15.3**	**1.2**	**24.4**	
100.00 (default)	**723**	**5**	**729**	**69**	**702**		**1.1**		
Subtotal	**139,529**	**4,013**	**143,542**	**73**	**142,413**	**1.2**	**232.8**	**22.7**	
Retail: residential mortgages as of 30.6.18									
0.00 to <0.15	59,794	1,278	61,072	56	60,505	0.1	127.3	18.7	
0.15 to <0.25	13,192	289	13,481	73	13,363	0.2	20.8	22.6	
0.25 to <0.50	19,338	468	19,808	75	19,643	0.4	27.9	23.6	
0.50 to <0.75	13,358	393	13,751	78	13,621	0.6	15.2	24.2	
0.75 to <2.50	21,538	1,260	22,797	76	22,436	1.3	27.4	28.3	
2.50 to <10.00	7,650	408	8,058	81	7,943	4.3	9.9	27.1	
10.00 to <100.00	942	17	959	75	951	15.7	1.2	26.2	

100.00 (default)	736	3	739	60	712		1.1	
Subtotal	136,547	4,116	140,663	70	139,175	1.2	230.8	22.4
Retail: residential mortgages as of 31.12.17								
0.00 to <0.15	53,250	758	54,008	75	53,818	0.1	127.4	17.5
0.15 to <0.25	14,112	243	14,356	83	14,277	0.2	21.1	22.1
0.25 to <0.50	21,876	388	22,264	87	22,167	0.4	25.4	23.7
0.50 to <0.75	14,923	339	15,261	89	15,178	0.6	14.1	24.5
0.75 to <2.50	23,620	1,233	24,854	77	24,504	1.3	27.5	29.2
2.50 to <10.00	7,277	225	7,502	87	7,425	4.3	10.7	26.7
10.00 to <100.00	632	16	648	91	644	15.9	0.8	22.7
100.00 (default)	719	4	723	83	696		1.0	
Subtotal	136,409	3,206	139,615	80	138,709	1.2	228.1	22.4

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

USD million, except where indicated	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM[1]	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Aver matu in ye
Retail: qualifying revolving retail exposures (QRRE) as of 31.12.18[3]									
0.00 to <0.15									
0.15 to <0.25									
0.25 to <0.50									
0.50 to <0.75									
0.75 to <2.50	**103**	**348**	**450**		**142**	**1.7**	**34.6**	**47.0**	
2.50 to <10.00	**1,166**	**5,213**	**6,378**		**1,614**	**2.7**	**860.5**	**42.0**	
10.00 to <100.00									
100.00 (default)	**26**	**0**	**26**		**16**		**21.4**		
Subtotal	**1,294**	**5,560**	**6,855**		**1,772**	**3.5**	**916.5**	**42.0**	
Retail: qualifying revolving retail exposures (QRRE) as of 30.6.18[3]									
0.00 to <0.15									
0.15 to <0.25									
0.25 to <0.50									
0.50 to <0.75									
	110	329	438		152	1.7	35.8	47.0	

0.75 to <2.50							
2.50 to <10.00	1,073	4,879	5,953	1,487	2.7	827.2	42.0
10.00 to <100.00							
100.00 (default)	34	0	34	15		25.3	
Subtotal	1,218	5,208	6,425	1,655	3.5	888.3	42.1
Retail: qualifying revolving retail exposures (QRRE) as of 31.12.17[3]							
0.00 to <0.15							
0.15 to <0.25							
0.25 to <0.50							
0.50 to <0.75							
0.75 to <2.50	99	338	437	138	1.7	34.1	47.0
2.50 to <10.00	1,081	4,928	6,009	1,514	2.7	818.5	42.0
10.00 to <100.00							
100.00 (default)	26	0	26	7		21.8	
Subtotal	1,206	5,266	6,472	1,659	3.0	874.4	42.2

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

USD million, except where indicated	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Total exposures pre-CCF	Average CCF in %	EAD post-CCF and post-CRM[1]	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Avera matur in yea
Retail: other retail as of 31.12.18									
0.00 to <0.15	**104,165**	**202,715**	**306,881**	**13**	**131,207**	**0.0**	**195.3**	**30.7**	
0.15 to <0.25	**2,718**	**4,373**	**7,091**	**15**	**3,361**	**0.2**	**6.2**	**26.3**	
0.25 to <0.50	**2,256**	**2,434**	**4,690**	**13**	**2,567**	**0.4**	**2.6**	**32.1**	
0.50 to <0.75	**1,283**	**1,519**	**2,803**	**13**	**1,474**	**0.6**	**1.8**	**28.7**	
0.75 to <2.50	**2,193**	**6,013**	**8,207**	**14**	**3,140**	**1.1**	**48.1**	**29.4**	
2.50 to <10.00	**680**	**850**	**1,530**	**12**	**782**	**4.2**	**1.5**	**31.9**	
10.00 to <100.00	**156**	**89**	**245**	**19**	**173**	**16.4**	**0.7**	**28.1**	
100.00 (default)	**27**	**8**	**34**	**2**	**22**		**<0.1**		
Subtotal	**113,478**	**218,002**	**331,480**	**13**	**142,726**	**0.1**	**256.2[4]**	**30.6**	
Retail: other retail as of 30.6.18									
0.00 to <0.15	107,920	207,902	315,823	15	139,021	0.0	189.2	31.0	
0.15 to <0.25	2,964	5,753	8,717	13	3,684	0.2	4.7	29.8	
0.25 to <0.50	1,352	3,112	4,464	11	1,704	0.4	3.1	31.9	
0.50 to <0.75	1,058	2,322	3,380	11	1,308	0.6	1.7	32.2	
0.75 to <2.50	2,296	4,142	6,438	20	3,136	1.2	45.2	31.7	
2.50 to <10.00	620	3,173	3,794	11	977	4.3	2.1	30.4	
	175	696	871	20	312	16.9	3.1	23.9	

10.00 to <100.00									
100.00 (default)	96	7	103	0	11		<0.1		
Subtotal	116,482	227,108	343,590	15	150,153	0.1	249.0[4]	31.0	
Retail: other retail as of 31.12.17									
0.00 to <0.15	107,538	98,469	206,007	25	132,504	0.0	206.2	30.5	
0.15 to <0.25	2,061	2,318	4,380	26	2,670	0.2	5.5	27.4	
0.25 to <0.50	1,762	1,694	3,456	19	2,084	0.4	3.6	29.7	
0.50 to <0.75	780	878	1,658	27	1,017	0.6	2.0	35.9	
0.75 to <2.50	3,121	3,234	6,355	25	3,933	1.1	55.9	34.3	
2.50 to <10.00	763	901	1,664	22	963	3.7	2.5	35.7	
10.00 to <100.00	177	609	785	20	298	16.8	3.6	27.5	
100.00 (default)	91	9	100	5	17		<0.1		
Subtotal	116,293	108,113	224,406	25	143,486	0.1	279.3	30.6	
Total 31.12.18	**484,205**	**290,438**	**774,644**	**20**	**533,587**	**0.8**	**1,439.3 [4]**	**28.6**	**1.**
Total 30.6.18	**492,621**	**303,679**	**796,301**	**21**	**546,097**	**0.8**	**1,402.6[4]**	**30.3**	**1.**
Total 31.12.17	**473,948**	**183,295**	**657,243**	**30**	**520,414**	**0.8**	**1,407.7**	**30.4**	**1.**

1 CRM through financial collateral is considered in the EAD post-CCF and post-CRM, but not in the cal
with the Pillar 3 guidance, provisions are only provided for the subtotals by asset class. With the impl
January 2018, this column includes expected credit loss allowances related to stages 1 - 3 for exposu
ratings-based approaches. 3 For the calculation of column "EAD post-CCF and post-CRM," a balance
CCF approach. The EAD is calculated by multiplying the on-balance sheet exposure with a fixed facto
for Lombard loan facilities in the region Americas that are entirely undrawn.

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Credit risk risk-weighted assets under the A-IRB approach

This section provides disclosures on the quarterly credit risk RWA development for the credit risk measured under the A-IRB approach. The table below provides definitions of components driving the RWA as applied in the table on the following page.

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

References in the table below link to the line numbers provided in the movement tables on pages 46 and 57 of this report.

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

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Development in the fourth quarter of 2018

Quarterly | Credit risk RWA under the advanced internal ratings-based (A-IRB) approach increased by USD 1.3 billion to USD 87.0 billion as of 31 December 2018. As presented in the "CR8: RWA flow statements of credit risk exposures under IRB" table below, the RWA increase of USD 2.7 billion from model updates was primarily driven by the continued phasing-in of RWA increases related to: probability of default (PD) and loss given default (LGD) changes from the implementation of revised models for Swiss residential mortgages and income-producing real estate; the new LGD model for unsecured financing and commercial self-used real estate; and calibration of aircraft leasing PD and LGD parameters, together resulting in an increase of USD 2.3 billion in Personal & Corporate Banking and USD 0.3 billion in Global Wealth Management. In addition, regulatory add-ons increased RWA by USD 0.3 billion due to a higher internal ratings-based (IRB) multiplier on Investment Bank exposures to corporates. p

Quarterly |

CR8: RWA flow statements of credit risk exposures under IRB

USD million		**For the quarter ended 31.12.18**	For the quarter ended 30.9.18	For the quarter ended 30.6.18	For the quarter ended 31.3.18
1	**RWA as of the beginning of the quarter**	**85,677**	**84,956**	**80,988**	**75,597**
2	Asset size	**(868)**	(1,472)	3,614	1,109
3	Asset quality	**(480)**	(955)	(850)	1,153
4	Model updates	**2,668**	3,067	2,451	10,290
5	Methodology and policy	**139**	332	625	(8,303)
5a	*of which: regulatory add-ons*	***277***	*332*	*306*	*(8,233)*
6	Acquisitions and disposals	**42**	0	0	0
7	Foreign exchange movements	**(159)**	359	(2,175)	1,142
8	Other	**0**	(611)	303	0
9	**RWA as of the end of the quarter**	**87,019**	**85,677**	**84,956**	**80,988**

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Backtesting

Annual | More information on backtesting of credit models is provided on page 145–151 of our Annual Report 2018. p

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

PD range	External rating equivalent Moody's	External rating equivalent Standard & Poor's	External rating equivalent Fitch	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands) End of previous year	End of the year	Defaulted obligors in the year	*of w defa obl in*
Central governments and central banks as of 31.12.18									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.0	0.0	< 0.1	< 0.1	0	
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	< 0.1	< 0.1	0	
0.25 to <0.50	Baa3	BBB–	BBB–	0.3	0.3	< 0.1	< 0.1	0	
0.50 to <0.75	Ba1	BB+	BB+	0.7	0.6	< 0.1	< 0.1	0	
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.2	1.5	< 0.1	< 0.1	0	
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	2.7	3.3	< 0.1	< 0.1	0	
10.00 to <100.00	Caa to C	CCC to C	CCC to C	13.3	13.0	< 0.1	< 0.1	0	
Subtotal				0.0	1.5	< 0.1	< 0.1	0	
Central governments and central banks as of 31.12.17									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.0	0.0	< 0.1	< 0.1	0	
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB				< 0.1	0	

0.25 to <0.50	Baa3	BBB–	BBB–	0.3	0.4	< 0.1	< 0.1	0
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.7	< 0.1	< 0.1	0
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.4	1.4	< 0.1	< 0.1	0
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	3.9	4.2	< 0.1	< 0.1	0
10.00 to <100.00	Caa to C	CCC to C	CCC to C	10.2	13.0	< 0.1	< 0.1	0
Subtotal				0.0	2.4	< 0.1	< 0.1	0

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

PD range	External rating equivalent Moody's	External rating equivalent Standard & Poor's	External rating equivalent Fitch	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands) End of previous year	Number of obligors (in thousands) End of the year	Defaulted obligors in the year	*of which new defaulted obligors in the year*
Banks and securities dealers as of 31.12.18									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	0.5	0.5	0	*0*
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.3	0.3	0	*0*
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.3	0.2	0.2	1	*0*
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	0.1	< 0.1	0	*0*
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.2	1.2	0.1	0.2	0	*0*
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.4	3.3	0.2	0.2	0	*0*
10.00 to <100.00	Caa to C	CCC to C	CCC to C	12.3	14.3	< 0.1	< 0.1	0	*0*
Subtotal				0.3	0.8	1.4	1.4	1	*0*
Banks and securities dealers as of 31.12.17									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.0	0.1	0.5	0.5	0	*0*
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.4	0.3	0	*0*
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	0.2	0.2	0	*0*
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	0.1	0.1	0	*0*
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.3	1.3	0.2	0.1	2	*0*
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	3.7	3.4	0.2	0.2	2	*0*

10.00 to <100.00	Caa to C	CCC to C	CCC to C	12.4	15.3	< 0.1	< 0.1	0	0
Subtotal				0.2	0.8	1.5	1.4	4	0

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

PD range	External rating equivalent Moody's	External rating equivalent Standard & Poor's	External rating equivalent Fitch	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands) End of previous year	Number of obligors (in thousands) End of the year	Defaulted obligors in the year	*of wh… defau… obli… in…*
Public-sector entities, multilateral development banks as of 31.12.18									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.0	0.1	0.3	0.4	0	
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.1	0.2	0	
0.25 to <0.50	Baa3	BBB–	BBB–	0.3	0.3	0.2	0.2	0	
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	< 0.1	< 0.1	0	
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.7	1.2	< 0.1	< 0.1	0	
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	2.7	2.7	< 0.1	0.0	0	
10.00 to <100.00	Caa to C	CCC to C	CCC to C			0.0	0.0	0	
Subtotal				0.1	0.2	0.7	0.8	0	
Public-sector entities, multilateral development banks as of 31.12.17									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.0	0.1	0.4	0.3	0	
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.2	0.1	0	
0.25 to <0.50	Baa3	BBB–	BBB–	0.3	0.3	0.2	0.2	0	
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	< 0.1	< 0.1	0	
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.2	1.2	< 0.1	< 0.1	0	
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	2.7	2.7	< 0.1	0.0	0	
10.00 to <100.00	Caa to C	CCC to C	CCC to C			0.0	0.0	0	
Subtotal				0.0	0.2	0.8	0.7	0	

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

PD range	External rating equivalent Moody's	External rating equivalent Standard & Poor's	External rating equivalent Fitch	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands) End of previous year	End of the year	Defaulted obligors in the year	*of whic... ne... default... oblig... in t... ye...*
Corporates: specialized lending as of 31.12.18									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	0.3	0.4	0	
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.3	0.3	0	
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	0.6	0.6	1	
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	0.6	0.6	2	
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.4	1.4	1.7	1.4	7	
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	3.3	3.4	0.4	0.3	10	
10.00 to <100.00	Caa to C	CCC to C	CCC to C	11.7	13.0	< 0.1	0.2	1	
Subtotal				1.6	1.2	3.9	4.0	21	
Corporates: specialized lending as of 31.12.17									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	0.7	0.3	2	
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.3	0.3	1	
0.25 to <0.50	Baa3	BBB–	BBB–	0.3	0.4	0.5	0.6	1	
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	0.6	0.6	1	
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.3	1.3	1.7	1.7	8	
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	3.5	3.9	0.2	0.4	2	
10.00 to <100.00	Caa to C	CCC to C	CCC to C	14.2	15.5	< 0.1	< 0.1	1	

Subtotal	1.1	1.0	4.2	3.9	16

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

PD range	External rating equivalent Moody's	External rating equivalent Standard & Poor's	External rating equivalent Fitch	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands) End of previous year	End of the year	Defaulted obligors in the year	*of whi n default oblig in t ye*
Corporates: other lending as of 31.12.18									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	2.2	3.8	3	
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	1.1	1.6	3	
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	1.8	2.4	15	
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	1.7	2.5	6	
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.4	1.5	7.9	11.2	83	
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.4	4.1	4.3	4.7	133	
10.00 to <100.00	Caa to C	CCC to C	CCC to C	14.8	15.3	0.1	0.1	19	
Subtotal				2.9	1.6	19.1	26.3	262	
Corporates: other lending as of 31.12.17									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	1.7	2.2	2	
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	1.0	1.1	3	
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	1.4	1.8	1	
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	1.5	1.7	2	
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.3	1.5	8.1	7.9	59	
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.1	4.1	4.3	4.3	138	
10.00 to <100.00	Caa to C	CCC to C	CCC to C	16.9	14.7	0.1	0.1	24	

Subtotal	4.3	1.8	18.3	19.1	229

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

PD range	External rating equivalent Moody's	External rating equivalent Standard & Poor's	External rating equivalent Fitch	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands) End of previous year	Number of obligors (in thousands) End of the year	Defaulted obligors in the year	*of wh defau oblig in y*
Retail: residential mortgages as of 31.12.18									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.1	112.2	129.5	74	
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	22.3	20.7	30	
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	31.6	27.8	58	
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	17.1	15.4	112	
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.3	1.3	29.8	27.0	119	
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.3	3.8	13.3	10.2	135	
10.00 to <100.00	Caa to C	CCC to C	CCC to C	15.9	16.1	0.8	1.2	25	
Subtotal				1.2	0.6	227.1	231.7	553	
Retail: residential mortgages as of 31.12.17									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.0	124.7	112.2	95	
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	21.2	22.3	27	
0.25 to <0.50	Baa3	BBB–	BBB–	0.3	0.3	25.6	31.6	42	
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	14.5	17.1	85	
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.4	1.4	29.7	29.8	174	
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	4.4	4.3	11.1	13.3	168	

10.00 to <100.00	Caa to C	CCC to C	CCC to C	15.1	14.9	1.0	0.8	37
Subtotal				1.1	0.6	227.7	227.1	628

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

PD range	External rating equivalent Moody's	External rating equivalent Standard & Poor's	External rating equivalent Fitch	Weighted average PD in %	Arithmetic average PD by obligors in %	Number of obligors (in thousands) End of previous year	Number of obligors (in thousands) End of the year	Defaulted obligors in the year	*of which: new defaulted obligors in the year*
Retail: other retail as of 31.12.18									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.0	0.0	206.2	195.3	8	4
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	5.5	6.2	0	0
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	3.6	2.6	0	0
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	2.0	1.8	0	0
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.0	1.0	55.9	48.1	0	0
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	3.6	3.5	2.5	1.5	0	0
10.00 to <100.00	Caa to C	CCC to C	CCC to C	17.4	21.3	3.6	0.7	0	0
Subtotal				0.3	0.3	279.3	256.2	8	4
Retail: other retail as of 31.12.17									
0.00 to <0.15	Aaa to A3	AAA to A–	AAA to AA–	0.1	0.0	167.2	206.2	5	[illegible]
0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	0.2	0.2	0.9	5.5	0	0
0.25 to <0.50	Baa3	BBB–	BBB–	0.4	0.4	4.4	3.6	0	0
0.50 to <0.75	Ba1	BB+	BB+	0.6	0.6	1.0	2.0	0	0
0.75 to <2.50	Baa2 to Ba3	BB to BB–	BB to BB–	1.1	1.5	8.4	55.9	0	0
2.50 to <10.00	B1 to B3	B+ to B–	B+ to B–	5.5	4.6	0.9	2.5	0	0

10.00 to <100.00	Caa to C	CCC to C	CCC to C			0.0	3.6	0	
Subtotal				0.2	0.1	182.8	279.3	5	

1 CR9 covers all Pillar 1 PD models that are approved by FINMA and are subject to a yearly confirmati
backtesting (refer to the table "Key features of our main credit risk models" in Annual Report 2018 or
146). 2 We use 11 years of data for the calculation of the "average historical annual default rate."

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Equity exposures

The table below provides information on our equity exposures under the simple risk weight method.

Semiannual |

CR10: IRB (equities under the simple risk weight method)[1]

USD million, except where indicated	On-balance sheet amount	Off-balance sheet amount	Risk weight in %[2]	Exposure amount[3]	RWA[2]
31.12.18					
Exchange-traded equity exposures	**66**		**300**	**65**	**208**
Other equity exposures	**1,122**		**400**	**814**	**3,450**
Total	**1,188**	**0**		**879**	**3,658**
30.6.18					
Exchange-traded equity exposures	59		300	58	186
Other equity exposures	1,112		400	823	3,491
Total	**1,171**	**0**		**882**	**3,676**
31.12.17					
Exchange-traded equity exposures	59		300	59	188
Other equity exposures	873		400	529	2,242
Total	**932**	**0**		**587**	**2,429**

1 This table excludes significant investments in the common shares of non-consolidated financial institutions (banks, insurance and other financial entities) that are subject to the threshold treatment and risk weighted at 250%. 2 RWA are calculated post-application of the A-IRB multiplier of 6%, therefore the respective risk weight is higher than 300% and 400%. 3 The exposure amount for equities in the banking book is based on the net position.

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Section 5 Counterparty credit risk

Introduction

Annual | Counterparty credit risk (CCR) arises from over-the-counter (OTC) and exchange-traded derivatives (ETD), securities financing transactions (SFTs) and long settlement transactions. Within traded products, we determine the regulatory credit exposure on the majority of our derivatives portfolio by applying the effective expected positive exposure (EPE) and stressed expected positive exposure (stressed EPE) as defined in the Basel III framework. For the rest of the portfolio we apply the current exposure method (CEM) based on the replacement value of derivatives in combination with a regulatory prescribed add-on. For the majority of securities financing transactions (securities borrowing, securities lending, margin lending, repurchase agreements and reverse repurchase agreements), we determine the regulatory credit exposure using the close-out period (COP) approach.

The counterparty credit risk-related tables in this report correspond to the CCR by asset class that is provided in the "Regulatory exposures and risk-weighted assets" table on page 16–18 of this report. p

This section is structured into three sub-sections:

Counterparty credit risk management

Annual | Refers to disclosures on our risk management objectives, policies and risk management process, operating limits for CCR exposures, wrong-way risks and the effect of a credit rating downgrade. p

Counterparty credit risk risk-weighted assets

Quarterly | Comprises disclosures on the quarterly credit risk RWA development. p

Counterparty credit risk exposure

Semiannual | Provides information on our CCR exposures, credit valuation adjustment (CVA), capital charge and credit derivatives exposures. This section excludes CCR exposures to central counterparties; CVA is separately covered in table CCR2. p

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Counterparty credit risk management

The table below presents an overview of Pillar 3 disclosures that are provided separately in our Annual Report 2018.

Annual |

CCRA – Counterparty credit risk management

Pillar 3 disclosure requirement	Annual Report 2018 section	Disclosure	Annual Report 2018 page number
Risk management objectives and policies related to counterparty credit risk	Risk, treasury and capital management	– Traded products	141–142
		– Credit hedging	145
		– Mitigation of settlement risk	145
	Consolidated financial statements	– Note 1a item 3e Securities borrowing / lending and repurchase / reverse repurchase transactions	338
		– Note 1a item 3j Hedge accounting	346–347
		– Note 11 Derivative instruments	395–399
The method used to assign the operating limits defined in terms of internal capacity for counterparty credit exposures and for CCP exposures	Risk, treasury and capital management	– Risk governance	123–124
		– Portfolio and position limits	132
		– Credit risk – Overview of measurement, monitoring and management techniques	133
		– Credit hedging	145
		– Credit risk models	145–151
Policies relating to guarantees and other risk mitigants and counterparty risk assessment	Risk, treasury and capital management	– Credit risk mitigation	143–145
	Consolidated financial statements	– Note 11 Derivative instruments	395–399

		–	Note 25 Offsetting financial assets and financial liabilities	450–451
Policies with respect to wrong-way risk exposures	Risk, treasury and capital management	–	Exposure at default	148
The effect on the bank of a credit rating downgrade (i.e., amount of collateral that the bank would be required to provide)	Risk, treasury and capital management	–	Credit ratings	186

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Counterparty credit risk risk-weighted assets

Quarterly | CCR RWA under the internal model method (IMM) and value-at-risk (VaR) decreased by USD 0.6 billion to USD 22.7 billion during the fourth quarter of 2018. For definitions of counterparty credit risk RWA movement table components, refer to “Definitions of credit risk and counterparty credit risk RWA movement table components for CR8 and CCR7” in the “Credit risk” section on page 45 of this report.p

Quarterly |

CCR7: RWA flow statements of CCR exposures under internal model method (IMM) and val

		For the quarter ended 31.12.18			For the quarter ended 30.9.18			For the quarter ended 30.6.18	
	USD million	**Derivatives**	**SFTs**	**Total**	**Derivatives**	**SFTs**	**Total**	**Derivatives**	**SFTs**
		Subject to IMM	Subject to VaR		Subject to IMM	Subject to VaR		Subject to IMM	Subject to VaR
1	RWA as of the beginning of the quarter	**18,366**	**4,863**	**23,229**	18,548	4,458	23,006	19,464	4,498
2	Asset size	**(738)**	**249**	**(489)**	(621)	491	(130)	(437)	62
3	Credit quality of counterparties	**165**	**(62)**	**103**	(30)	(134)	(163)	(238)	(48)
4	Model updates	**(116)**	**(57)**	**(173)**	285	0	285	0	0
5	Methodology and policy	**227**	**64**	**291**	222	56	278	229	64
5a	*of which: regulatory add-ons*	***227***	***64***	***291***	*222*	*56*	*278*	*229*	*64*
6	Acquisitions and disposals	**0**	**0**	**0**	0	0	0	0	0
7	Foreign exchange movements	**(61)**	**(20)**	**(81)**	(38)	(8)	(47)	(470)	(118)
8	Other	**(220)**	**0**	**(220)**	0	0	0	0	0
9	**RWA as of the end of the quarter**	**17,624**	**5,036**	**22,660**	**18,366**	**4,863**	**23,229**	**18,548**	**4,458**

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Counterparty credit exposure

Semiannual | Exposure at default (EAD) post credit-risk mitigation (CRM) related to counterparty credit risk (CCR) decreased by USD 11.2 billion to USD 100.6 billion, whereas RWA increased by USD 0.8 billion to USD 32.1 billion as of 31 December 2018. EAD post CRM on derivative exposures decreased by USD 11.5 billion and RWA by USD 2.2 billion, primarily in our Foreign exchange, Rates and Credit and Equities businesses within the Investment Bank and Group ALM, largely as a result of client-driven decreases and fair value changes. RWA from securities financing transactions increased by USD 3 billion, mainly due to the revision of the methodology applied for structured margin lending transactions. p

Semiannual |

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

USD million, except where indicated		Replacement cost	Potential future exposure	EEPE	Alpha used for computing regulatory EAD	EAD post-CRM	RWA
31.12.18							
1	SA-CCR (for derivatives)[1]	**8,670**[2]	**8,168**		**1.0**[1]	**16,838**	**3,664**
2	Internal model method (for derivatives)			**25,889**	**1.6**	**41,423**	**17,375**
3	Simple approach for credit risk mitigation (for SFTs)						
4	Comprehensive approach for credit risk mitigation (for SFTs)					**17,202**	**6,163**
5	VaR (for SFTs)					**25,149**	**4,939**
6	**Total**					**100,612**	**32,140**
30.6.18							
1	SA-CCR (for derivatives)[1]	11,379[2]	9,278		1.0[1]	20,657	4,862
2	Internal model method (for derivatives)			30,677	1.6	49,083	18,349
3	Simple approach for credit risk mitigation (for SFTs)						

4	Comprehensive approach for credit risk mitigation (for SFTs)					16,337	3,779
5	VaR (for SFTs)					25,762	4,316
6	**Total**					**111,839**	**31,307**
31.12.17							
1	SA-CCR (for derivatives)[1]	10,941[2]	7,845		1.0[1]	18,786	3,901
2	Internal model method (for derivatives)			28,922	1.6	46,275	17,267
3	Simple approach for credit risk mitigation (for SFTs)						
4	Comprehensive approach for credit risk mitigation (for SFTs)					16,139	3,508
5	VaR (for SFTs)					23,386	3,959
6	**Total**					**104,586**	**28,635**

1 Standardized approach for CCR. Calculated in accordance with the current exposure method (CEM) until the implementation of SA-CCR with expected effective date 1 January 2020, when an alpha factor of 1.4 will be used for calculating regulatory EAD. 2 Replacement costs include collateral mitigation for on- and off-balance sheet exposures related to CCR for derivative transactions.

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Semiannual | In addition to the default risk capital requirements for CCR based on the advanced internal ratings-based (A-IRB) or standardized approach, we are required to add a capital charge to derivatives to cover the risk of mark-to-market losses associated with the deterioration of counterparty credit quality, referred to as the CVA. The advanced CVA VaR approach has been used to calculate the CVA capital charge where we apply the IMM. Where this is not the case, the standardized CVA approach has been applied. More information on our portfolios subject to the CVA capital charge as of 31 December 2018 is provided in the table below. p

Semiannual |

CCR2: Credit valuation adjustment (CVA) capital charge

	31.12.18		30.6.18		31.12.17	
USD million	EAD post-CRM[1]	RWA	EAD post-CRM[1]	RWA	EAD post-CRM[1]	RWA
Total portfolios subject to the	**26,680**	**1,479**	27,947	1,799	24,684	2,017

	advanced CVA capital charge						
1	(i) VaR component (including the 3× multiplier)		**271**		346		473
2	(ii) Stressed VaR component (including the 3× multiplier)		**1,208**		1,453		1,544
3	All portfolios subject to the standardized CVA capital charge	**4,946**	**1,338**	8,543	1,697	8,226	1,146
4	**Total subject to the CVA capital charge**	**31,626**	**2,816**	**36,489**	**3,496**	**32,911**	**3,164**

1 Includes EAD of the underlying portfolio subject to the respective CVA charge.

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Semiannual | The table below provides information on our counterparty credit risk under the standardized approach. Exposure at default (EAD) increased by USD 4.3 billion to USD 6.7 billion mainly due to the revision of the methodology applied for structured margin lending transactions. p

Semiannual |

CCR3: Standardized approach – CCR exposures by regulatory portfolio and risk weights
USD million

Risk weight		0%	10%	20%	50%	75%	100%	150%	Others	Total credit exposure
	Regulatory portfolio as of 31.12.18									
1	Central governments and central banks	**202**					**0**			**202**
2	Banks and securities dealers			**31**	**176**	**0**	**4**	**0**		**210**
3	Public-sector entities and multilateral development banks			**0**						**1**
4	Corporates				**99**	**4,974**	**1,045**	**0**		**6,119**
5	Retail					**18**	**128**			**147**
6	Equity									
7	Other assets									
8	**Total**	**202**		**32**	**275**	**4,993**	**1,177**	**0**	**0**	**6,679**
	Regulatory portfolio as of 30.6.18									
1	Central governments and central banks	203								203
2	Banks and securities dealers			105	101		50	3		259
3	Public-sector entities and multilateral development banks						1			1
4	Corporates			1	170		1,255			1,426

5	Retail				18	509			527
6	Equity								
7	Other assets								
8	**Total**	**203**	**105**	**271**	**18**	**1,815**	**3**	**0**	**2,417**
	Regulatory portfolio as of 31.12.17								
1	Central governments and central banks	207							207
2	Banks and securities dealers		102	242		1			345
3	Public-sector entities and multilateral development banks					4			4
4	Corporates			62		827			889
5	Retail				4	99			104
6	Equity								
7	Other assets								
8	**Total**	**207**	**102**	**304**	**4**	**932**	**0**	**0**	**1,549**

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Semiannual | Information on RWA, including details on movements in RWA, is provided on pages 6–7 of our UBS Group AG and significant regulated subsidiaries and sub-groups report for the third quarter of 2018, available under "Pillar 3 disclosures" at *www.ubs.com/investors* and on page 57 of this report.

Semiannual |

CCR4: IRB – CCR exposures by portfolio and PD scale

USD million, except where indicated	EAD post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %
Central governments and central banks as of 31.12.18							
0.00 to <0.15	**8,415**	**0.0**	**0.1**	**44.0**	**0.3**	**740**	**8.8**
0.15 to <0.25	**197**	**0.2**	**<0.1**	**65.3**	**0.9**	**93**	**47.0**
0.25 to <0.50	**128**	**0.3**	**<0.1**	**84.3**	**1.0**	**106**	**83.4**
0.50 to <0.75	**100**	**0.7**	**<0.1**	**45.0**	**1.0**	**85**	**85.1**
0.75 to <2.50	**23**	**1.0**	**<0.1**	**53.8**	**0.8**	**21**	**90.2**
2.50 to <10.00	**0**	**2.6**	**<0.1**	**88.8**	**1.0**	**0**	**229.2**
10.00 to <100.00							
100.00 (default)							
Subtotal	**8,864**	**0.1**	**0.2**	**45.1**	**0.5**	**1,046**	**11.8**
Central governments and central banks as of 30.6.18							
0.00 to <0.15	8,824	0.0	0.1	49.1	0.4	805	9.1
0.15 to <0.25	279	0.2	<0.1	66.2	0.9	129	46.2
0.25 to <0.50	169	0.3	<0.1	90.7	1.0	152	89.9
0.50 to <0.75							
0.75 to <2.50	25	0.9	<0.1	59.8	0.6	25	99.7
2.50 to <10.00	0	5.2	<0.1	67.2	1.0	1	253.9
10.00 to <100.00							
100.00 (default)							
Subtotal	9,298	0.1	0.2	50.4	0.5	1,112	12.0
Central governments and central banks as of 31.12.17							
0.00 to <0.15	7,746	0.0	0.1	47.3	0.6	790	10.2
0.15 to <0.25	224	0.2	<0.1	68.1	0.9	108	48.2
0.25 to <0.50	26	0.3	<0.1	79.2	1.0	21	79.1

0.50 to <0.75	20	0.7	<0.1	70.0	0.1	18	87.8
0.75 to <2.50	31	1.0	<0.1	60.0	0.5	30	95.2
2.50 to <10.00	2	6.2	<0.1	70.0	1.0	5	281.5
10.00 to <100.00							
100.00 (default)							
Subtotal	8,050	0.1	0.2	48.1	0.6	971	12.1

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

USD million, except where indicated	EAD post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %
Banks and securities dealers as of 31.12.18							
0.00 to <0.15	**13,103**	**0.1**	**0.4**	**50.5**	**0.8**	**2,672**	**20.4**
0.15 to <0.25	**3,927**	**0.2**	**0.2**	**48.3**	**0.8**	**1,415**	**36.0**
0.25 to <0.50	**1,458**	**0.4**	**0.2**	**49.9**	**0.8**	**764**	**52.4**
0.50 to <0.75	**636**	**0.7**	**0.1**	**58.8**	**0.8**	**551**	**86.7**
0.75 to <2.50	**352**	**1.2**	**0.2**	**63.7**	**0.8**	**432**	**122.8**
2.50 to <10.00	**320**	**7.5**	**0.1**	**12.0**	**0.2**	**132**	**41.2**
10.00 to <100.00	**0**	**13.0**	**<0.1**	**66.0**	**1.0**	**10**	**0.0**
100.00 (default)							
Subtotal	**19,799**	**0.3**	**1.1**	**49.9**	**0.8**	**5,976**	**30.2**
Banks and securities dealers as of 30.6.18							
0.00 to <0.15	18,456	0.1	0.4	49.7	0.7	3,370	18.3
0.15 to <0.25	4,102	0.2	0.3	48.9	0.8	1,450	35.4
0.25 to <0.50	1,334	0.4	0.2	50.2	1.0	717	53.8
0.50 to <0.75	507	0.6	0.1	61.9	1.1	497	98.0
0.75 to <2.50	491	1.1	0.2	60.5	0.7	425	86.6
2.50 to <10.00	130	7.2	0.1	31.0	0.3	143	110.4
10.00 to <100.00	0	13.0	<0.1	66.0	1.0	1	249.1
100.00 (default)							
Subtotal	25,020	0.2	1.2	50.0	0.7	6,604	26.4
Banks and securities dealers as of 31.12.17							
0.00 to <0.15	18,435	0.1	0.4	50.0	0.7	3,155	17.1
0.15 to <0.25	3,202	0.2	0.3	49.2	0.9	1,207	37.7
0.25 to <0.50	1,399	0.4	0.2	47.6	1.0	735	52.5
0.50 to <0.75	429	0.6	0.1	63.6	1.0	432	100.7
0.75 to <2.50	603	1.1	0.2	61.6	0.7	619	102.6
2.50 to <10.00	86	4.7	0.1	42.7	0.4	120	139.5
10.00 to <100.00	0	13.0	<0.1	66.0	1.0	1	350.0
100.00 (default)	32		<0.1			34	106.0
Subtotal	24,186	0.3	1.2	50.3	0.7	6,303	26.1

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

USD million, except where indicated	EAD post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %
Public-sector entities, multilateral development banks as of 31.12.18							
0.00 to <0.15	**2,519**	**0.0**	**0.1**	**43.7**	**1.1**	**223**	**8.8**
0.15 to <0.25	**86**	**0.2**	**<0.1**	**53.2**	**1.1**	**28**	**32.3**
0.25 to <0.50	**39**	**0.4**	**<0.1**	**61.3**	**1.0**	**24**	**62.6**
0.50 to <0.75	**0**	**0.0**	**<0.1**	**0.0**	**0.0**	**0**	**0.0**
0.75 to <2.50	**0**	**1.0**	**<0.1**	**35.0**	**1.0**	**0**	**60.4**
2.50 to <10.00	**0**	**2.7**	**<0.1**	**35.0**	**1.0**	**0**	**87.4**
10.00 to <100.00							
100.00 (default)	**12**		**<0.1**			**13**	**106.0**
Subtotal	**2,657**	**0.5**	**0.1**	**44.1**	**1.1**	**288**	**10.8**
Public-sector entities, multilateral development banks as of 30.6.18							
0.00 to <0.15	3,267	0.0	0.1	42.8	1.4	251.0	7.7
0.15 to <0.25	84	0.2	<0.1	58.9	1.0	30.8	36.7
0.25 to <0.50	44	0.3	<0.1	56.6	1.0	25.5	57.6
0.50 to <0.75							
0.75 to <2.50	14	1.0	<0.1	35.0	1.0	8.4	60.4
2.50 to <10.00	0	2.7	<0.1	35.0	1.0	0.0	87.4
10.00 to <100.00							
100.00 (default)	12		<0.1			12.8	106.0
Subtotal	3,421	0.4	0.1	43.3	1.4	328.5	9.6
Public-sector entities, multilateral development banks as of 31.12.17							
0.00 to <0.15	3,595	0.0	0.1	43.5	1.5	334	9.3
0.15 to <0.25	119	0.2	<0.1	49.3	1.2	36	30.6
0.25 to <0.50	42	0.3	<0.1	58.7	1.0	25	59.2
0.50 to <0.75							
0.75 to <2.50	23	1.0	<0.1	35.0	0.0	11	50.0
2.50 to <10.00	0	2.7	<0.1	35.0	1.0	0	87.4
10.00 to <100.00							
100.00 (default)	23		<0.1			25	106.0
Subtotal	3,802	0.6	0.1	43.6	1.5	431	11.3

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

USD million, except where indicated	EAD post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %
Corporates: including specialized lending as of 31.12.18[1]							
0.00 to <0.15	**35,475**	**0.0**	**12.0**	**35.0**	**0.6**	**4,717**	**13.3**
0.15 to <0.25	**6,761**	**0.2**	**1.6**	**51.0**	**0.6**	**3,688**	**54.6**
0.25 to <0.50	**2,194**	**0.4**	**0.9**	**78.3**	**1.0**	**2,815**	**128.3**
0.50 to <0.75	**2,351**	**0.6**	**1.0**	**68.2**	**0.6**	**3,668**	**156.0**
0.75 to <2.50	**4,311**	**1.2**	**1.6**	**28.2**	**0.7**	**3,569**	**82.8**
2.50 to <10.00	**1,311**	**3.2**	**0.3**	**13.8**	**0.4**	**819**	**62.4**
10.00 to <100.00	**0**	**13.0**	**<0.1**	**5.0**	**1.0**	**0**	**36.7**
100.00 (default)	**1**		**<0.1**			**1**	**106.0**
Subtotal	**52,403**	**0.3**	**17.3**	**39.3**	**0.6**	**19,276**	**36.8**
Corporates: including specialized lending as of 30.6.18[1]							
0.00 to <0.15	41,954	0.0	12.2	35.9	0.6	5,293	12.6
0.15 to <0.25	8,878	0.2	1.5	46.6	0.5	4,196	47.3
0.25 to <0.50	2,500	0.4	0.9	73.8	1.0	3,059	122.3
0.50 to <0.75	2,290	0.6	0.9	62.9	0.7	3,420	149.4
0.75 to <2.50	5,530	1.2	1.9	25.2	0.8	3,834	69.3
2.50 to <10.00	1,806	3.1	0.3	12.6	0.4	947	52.4
10.00 to <100.00	5	13.1	<0.1	46.2	1.0	14	317.5
100.00 (default)	1		<0.1			1	106.0
Subtotal	62,963	0.3	17.7	38.3	0.6	20,764	33.0
Corporates: including specialized lending as of 31.12.17[1]							
0.00 to <0.15	38,883	0.0	12.0	37.7	0.6	4,988	12.8
0.15 to <0.25	7,665	0.2	1.5	46.9	0.5	3,491	45.5
0.25 to <0.50	2,659	0.4	1.0	68.8	1.0	3,140	118.1
0.50 to <0.75	1,970	0.6	0.9	64.7	0.7	2,901	147.2
0.75 to <2.50	6,241	1.2	1.9	22.3	0.8	3,906	62.6
2.50 to <10.00	1,827	3.2	0.3	12.8	0.4	952	52.1
10.00 to <100.00	2	13.5	<0.1	48.6	1.0	5	307.1
100.00 (default)	15		<0.1			16	106.0
Subtotal	59,262	0.3	17.6	38.8	0.6	19,397	32.7

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

USD million, except where indicated	EAD post-CRM	Average PD in %	Number of obligors (in thousands)	Average LGD in %	Average maturity in years	RWA	RWA density in %
Retail: other retail as of 31.12.18							
0.00 to <0.15	**9,749**	**0.0**	**15.1**	**28.0**		**362**	**3.7**
0.15 to <0.25	**19**	**0.2**	**0.3**	**28.2**		**2**	**10.8**
0.25 to <0.50	**126**	**0.4**	**0.1**	**29.5**		**23**	**18.2**
0.50 to <0.75	**30**	**0.6**	**0.1**	**28.0**		**7**	**24.2**
0.75 to <2.50	**271**	**1.1**	**9.0**	**29.6**		**87**	**32.1**
2.50 to <10.00	**11**	**2.9**	**0.1**	**27.9**		**5**	**42.0**
10.00 to <100.00	**4**	**21.3**	**<0.1**	**30.1**		**3**	**70.4**
100.00 (default)							
Subtotal	**10,211**	**0.1**	**24.6**	**28.1**		**489**	**4.8**
Retail: other retail as of 30.6.18							
0.00 to <0.15	7,977	0.0	17.1	27.8		294.7	3.7
0.15 to <0.25	311	0.2	0.2	61.1		72.9	23.5
0.25 to <0.50	61	0.3	0.1	27.2		10.3	16.8
0.50 to <0.75	11	0.6	0.1	27.0		2.5	23.4
0.75 to <2.50	340	1.0	11.2	29.8		117.9	34.7
2.50 to <10.00	15	3.8	0.1	29.1		6.7	44.7
10.00 to <100.00	5	21.4	0.1	29.4		3.3	69.7
100.00 (default)							
Subtotal	8,719	0.1	29.0	29.0		508.3	5.8
Retail: other retail as of 31.12.17							
0.00 to <0.15	7,111	0.0	13.9	27.2		256	3.6
0.15 to <0.25	198	0.2	0.1	28.9		22	11.1
0.25 to <0.50	44	0.4	0.1	29.3		8	18.1
0.50 to <0.75	13	0.6	0.1	28.8		3	24.9
0.75 to <2.50	324	1.0	10.4	29.7		114	35.3
2.50 to <10.00	43	3.9	0.2	29.4		20	45.2
10.00 to <100.00	4	20.2	0.1	32.1		3	74.5
100.00 (default)							
Subtotal	7,737	0.1	24.8	27.4		426	5.5
Total 31.12.18	**93,933**	**0.2**	**43.4**	**41.0**	**0.7**	**27,075**	**28.8**
Total 30.6.18	**109,422**	**0.2**	**48.7**	**41.8**	**0.7**	**29,316**	**26.8**
Total 31.12.17	**103,037**	**0.3**	**45.0**	**42.6**	**0.8**	**27,528**	**26.7**

1 Includes exposures to managed funds.

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Semiannual |

Fair value of collateral posted for securities financing transactions increased by USD 18.6 billion to USD 477.6 billion, mainly in Group ALM, resulting from higher client activity. p

Semiannual |

CCR5: Composition of collateral for CCR exposure[1]

	Collateral used in derivative transactions						Collateral u SFTs	
	Fair value of collateral received			Fair value of posted collateral			Fair value of collateral received	Fa o c
USD million	Segregated[2]	Unsegregated	Total	Segregated[3]	Unsegregated	Total		
31.12.18								
Cash – domestic currency (USD)	**2,042**	**16,958**	**19,000**	**1,221**	**6,980**	**8,200**	**33,134**	
Cash – other currencies		**19,784**	**19,285**	**1,591**	**13,808**	**15,399**	**12,987**	
Sovereign debt	**5,552**	**8,656**	**14,208**	**7,995**	**5,444**	**13,439**	**252,257**	**1**
Other debt securities		**2,277**	**2,277**	**812**	**135**	**946**	**79,359**	
Equity securities	**4,778**	**23**	**4,801**	**1,570**	**1,465**	**3,035**	**243,027**	**1**
Total	**12,372**	**47,698**	**59,571**	**13,190**	**27,831**	**41,020**	**620,764**	**4**
30.6.18								
Cash – domestic currency (USD)[4]	2,864	16,970	19,834	1,550	7,061	8,611	27,779	
Cash – other currencies[4]		22,151	22,151	1,704	14,796	16,500	15,317	
Sovereign debt	1,594	8,929	10,523	3,773	8,448	12,221	203,678	1
Other debt securities		1,427	1,427	5	1,106	1,111	80,589	
Equity securities	4,424	36	4,460	1,611	1,593	3,203	293,287	1
Total	**8,882**	**49,513**	**58,395**	**8,643**	**33,004**	**41,647**	**620,650**	**4**
31.12.17								

Cash – domestic currency (USD)[4]	2,459	16,298	18,757	1,135	6,011	7,146	29,612	
Cash – other currencies[4]		20,524	20,524	1,809	15,256	17,065	12,493	
Sovereign debt	1,723	10,391	12,114	3,555	7,751	11,306	219,538	1
Other debt securities		1,211	1,211	5	1,368	1,373	73,512	
Equity securities	2,898	45	2,943	1,828	1,147	2,975	305,891	1
Total	**7,080**	**48,469**	**55,549**	**8,331**	**31,534**	**39,865**	**641,046**	**4**

1 This table includes collateral received and posted with and without the right of rehypothecation, bu excludes securities placed with central banks related to undrawn credit lines and for payment, clearin settlement purposes for which there were no associated liabilities or contingent liabilities. 2 Include collateral received in derivative transactions, primarily initial margins, that is placed with a third-party custodian and to which UBS has access only in the case of counterparty default. 3 Includes collatera posted to central counterparties, where we apply a 0% risk weight for trades that we have entered in behalf of a client and where the client has signed a legally enforceable agreement stipulating that the default risk of that central counterparty is carried by the client. 4 The presentation of 'cash - domes currency' was aligned with US dollars as the new presentation currency applied for UBS Group AG's IF consolidated financial statements as of 31 December 2018.

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Semiannual | Notionals for credit derivatives decreased by USD 4.4 billion for protection bought and USD 4.1 billion for protection sold, primarily as a result of continued reductions in our Corporate Center – Non-core and Legacy Portfolio.p

Semiannual |

CCR6: Credit derivatives exposures

	31.12.18		30.6.18		31.12.17	
USD million	Protection bought	Protection sold	Protection bought	Protection sold	Protection bought	Protection sold
Notionals[1]						
Single-name credit default swaps	**43,265**	**44,875**	48,609	48,154	62,884	57,117
Index credit default swaps	**37,006**	**32,309**	34,288	33,438	39,258	39,365
Total return swaps	**4,726**	**1,976**	4,497	1,665	4,551	1,703
Credit options	**4,065**	**57**	6,087	58	4,400	60
Other credit derivatives						
Total notionals	**89,063**	**79,218**	**93,481**	**83,316**	**111,093**	**98,244**
Fair values						
Positive fair value (asset)	***1,117***	***815***	*940*	*1,217*	*813*	*2,088*
Negative fair value (liability)	***1,612***	***1,232***	*1,943*	*1,328*	*2,996*	*910*

1 Includes notional amounts for client-cleared transactions.

p

Section 6 Comparison of A-IRB approach and standardized approach for credit risk

Background

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

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

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

Refer to the "Introduction and basis for preparation" section of this report for more information on FINMA-defined asset classes.p

Key methodological differences between A-IRB and current SA approaches

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

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

EAD measurement

For the measurement of EAD, the main differences relate to derivatives, driven by the differences between the internal model method (IMM) and the regulatory prescribed current exposure method (CEM).

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

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

Risk weights

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

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

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

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

In contrast, the SA risk weights are largely reliant on external rating agencies' assessments of the credit quality of the counterparty, with a 100% risk weight typically being applied where no external rating is available. Even where external ratings are available, there is only a coarse granularity of risk weights, with only four primary risk weights used for differentiating counterparties, with the addition of a 0% risk weight for AA– or better rated Central governments and central banks. Risk weights of 35% and 75% are used for mortgages and retail exposures, respectively.

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

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

Maturity is also an important factor, with the A-IRB approach producing a higher capital requirement for longer maturity exposures than for shorter maturity exposures. Since the accelerated implementation of our strategy in 2012, the maturity effect has become particularly important as we had a notable shift from longer-term to shorter-term transactions in our credit portfolio.

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

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

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

Annual | The following table shows EAD, average risk weight (RW), RWA and leverage ratio denominator (LRD) per asset class for Central governments and central banks, Multilateral development banks and Public-sector entities, Banks and securities dealers, Corporates and Retail credit risk and counterparty credit risk exposures subject to the A-IRB approach. LRD is the exposure measure used for the leverage ratio.

LRD estimates presented in the table reflect the credit risk and counterparty credit risk components of exposures only and are therefore not representative of the LRD requirement at bank level overall. The LRD estimates exclude exposures subject to market risk, non-counterparty-related risk and SA credit risk to provide a like-for-like comparison with the A-IRB credit risk EAD shown. p

Annual |

Breakdown by asset classes

	A-IRB			LRD
in USD billion, except where indicated	EAD	RW %	RWA	
Central governments and central banks	149	2	4	160
Multilateral development banks	5	2	0	4
Public-sector entities	6	17	1	7
Banks and securities dealers	35	32	11	77
Corporates	136	46	62	227
Retail	297	12	36	278
of which: residential mortgages	*142*	*19*	*27*	*148*
of which: Lombard lending	*153*	*6*	*9*	*124*

p

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

Annual | The differences between the A-IRB approach, the SA and LRD per asset class are discussed below and on the following pages.

Asset classes Central governments and central banks, Multilateral development banks and Public sector entities

The regulatory net EAD for Central governments and central banks, Multilateral development banks (MDBs) and Public sector entities (PSEs) is USD 160 billion under the A-IRB approach. Since the vast majority of our exposure is driven by banking products exposures, the LRD is broadly in line with the A-IRB net EAD and we would expect a similar amount under the SA.

The charts below provide comparisons of risk weights for exposures to the asset classes Central governments and central banks, highly rated MDBs and other MDBs and PSEs calculated under the A-IRB approach and the SA. Risk weights under the A-IRB approach are shown for one-year and five-year maturities, both assuming an LGD of 45%. Our internal A-IRB ratings have been mapped to external ratings based on the long-term average of one-year default rates available from the major credit rating agencies, as described on page 147 of our Annual Report 2018.

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

For other MDB and PSE counterparties rated AA- and better, the risk weight applied is 20%.

Despite this, we would expect an increase in average risk weight under the SA due to exposures to unrated counterparties such as sovereign wealth funds, which attract a 100% risk weight under the SA despite being generally considered very low risk, and short-term repo transactions with central banks rated below AA–, such as the Bank of Japan.

However, as the asset class is not a significant driver of RWA, we would expect any resulting increase in RWA to be relatively small.

Asset class Banks and securities dealers

The regulatory net EAD for exposures to the asset class Banks and securities dealers is USD 35 billion under the A-IRB approach. The A-IRB net EAD is lower compared with the LRD as a result of collateral mitigation on derivatives and securities financing transactions. We would expect the net EAD to increase significantly under the regulatory prescribed rules related to derivatives and securities financing transactions within the Investment Bank, due to the aforementioned methodological differences between the calculation of EAD under the two approaches.

The chart below provides a comparison of risk weights for SA.

The vast majority of our exposure toward Banks and securities dealers is of investment grade quality. The average contractual maturity of this exposure is closer to the one-year example provided in the chart above. Therefore, we would expect a higher average risk weight under the SA than the 25% average risk weight under the A-IRB approach. In combination with higher EAD, we would expect this to lead to significantly higher RWA for Banks and securities dealers under the SA.

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Asset class Corporates

The regulatory net EAD for the asset class Corporates is USD 136 billion under the A-IRB approach. The A-IRB net EAD is lower compared with the LRD as a result of collateral mitigation on derivatives and securities financing transactions. We would expect the EAD figure to be higher under the regulatory prescribed rules related to derivatives and securities financing transactions due to the aforementioned methodological differences between the calculation of EAD under the two approaches. Derivatives and securities financing transactions currently account for 40% of the EAD for this asset class.

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

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

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

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

Annual | Comparison of risk weights as a function of internal rating assessment

The table assumes two counterparties without external rating assignment.

Managed funds	NA	NA	0	100%	AAA–A	< 1Y	10–20%	100%
Leveraged finance counterparty	< 2	> 2.5	> 50%	0%	BB–C	> 5Y	100–250%	100%

p

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Asset class Retail

Sub-asset class Residential mortgages

The regulatory net EAD for the sub-asset class Residential mortgages is USD 142 billion under the A-IRB approach. Since the vast majority is driven by banking products exposures, the LRD is broadly in line with the A-IRB net EAD and we would expect a similar amount under the SA.

Due to the size of our personal and corporate banking business in Switzerland, our domestic portfolios represent a significant portion of our overall lending exposures, with the largest being loans secured by residential properties.

Our internal models assign risk weights to such loans by considering the debt service capacity of borrowers as well as the availability of other collateral, amongst other factors. These are important considerations for the Swiss market, where there is legal recourse to the borrower.

In contrast, and different to the assignment of risk weights for asset classes above, the SA only crudely differentiates the risk weights based on loan-to-value (LTV) ranges as shown in the table below.

The vast majority of our exposures would attract the minimum 35% risk weight under the SA, compared with the average of 15% observed under the A-IRB approach.

The difference is largely due to the current SA rules not giving benefit to the portion of exposures with an LTV below 67%. The vast majority of exposures fall within this category, as shown in the "Swiss mortgages: distribution of net exposure at default (EAD) across exposure segments and loan-to-value (LTV) buckets" table on page 138 of our Annual Report 2018.

Sub-asset class Lombard lending

Annual | The regulatory net EAD for the sub-asset class Lombard loans is USD 153 billion under the A-IRB approach as of 31 December 2018 and mainly arises in our wealth management businesses.

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

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Section 7 Securitizations

Introduction

Annal | This section provides details of traditional and synthetic securitization exposures in the banking and trading book based on the revised Basel III securitization framework, applicable since 1 January 2018, which incorporated changes to the treatment of banking book securitization positions.

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

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

Objectives, roles and involvement

Securitization in the banking book

Annual | Securitization positions held in the banking book include legacy risk positions in Corporate Center – Non-core and Legacy Portfolio. In 2018, for the majority of securitization carrying values on the balance sheet, we acted in the role of originator or investor.

Securitization and resecuritization positions in the banking book are measured at fair value, reflecting market prices where available or based on our internal pricing models. p

Securitization in the trading book

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

Type of structured entities and affiliated entities involved in securitization transactions

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

We also manage or advise groups of affiliated entities that invest in exposures we have securitized or in structured entities that we sponsor.

Refer to Note 31 "Interests in subsidiaries and other entities" on pages 485–492 of our Annual Report 2018 for further information on interests in structured entities. p

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

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

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

Accounting policies

Annual | Refer to "Consolidation" on pages 328–329 in "Note 1 Summary of significant accounting policies" in the "Consolidated financial statements" section of our Annual Report 2018 for information on accounting policies that relate to securitization activities. p

Regulatory capital treatment of securitization exposures

Annual | With the implementation of the revised securitization framework as of 1 January 2018 for banking book securitization exposures, the following approaches to calculate the associated risk-weighted assets (RWA) have become available, each with specific preconditions that must be met:

– we use internal ratings (internal ratings-based approach (SEC-IRBA)) if the securitized pool largely consists of internal ratings-based positions and internal ratings are available;

– if the IRBA cannot be applied, we use external ratings (external ratings-based approach (SEC-ERBA)), if available, from Standard & Poor's, Moody's Investors Service and Fitch Ratings for securitization exposures, provided that we are able to demonstrate our expertise in critically challenging and reviewing the external ratings; or

– if we cannot apply the IRBA or ERBA methods, we apply the standardized approach (SEC-SA) where the delinquency status of a significant portion of the underlying exposure can be determined or a risk weight of 1,250%. Resecuritization positions are either treated under the standardized approach or with a 1,250% risk weight.

The selection of the external credit assessment institutions (ECAI) is based on the primary rating agency concept. This concept is applied, in principle, to avoid having the credit assessment by one ECAI applied to one or more tranches and by another ECAI to the other tranches, unless this is the result of the application of the specific rules for multiple assessments. If any two of the aforementioned rating agencies have issued a rating for a particular exposure, we would apply the lower of the two credit ratings. If all three rating agencies have issued a rating for a particular exposure, we would apply the middle of the three credit ratings. As of 31 December 2018, UBS did not use internal ratings for the purpose of the RWA calculation for securitization positions in the banking book. p

Securitization exposures in the banking and trading book

Semiannual | The tables "SEC1: Securitization exposures in the banking book" and "SEC2: Securitization exposures in the trading book" outline the carrying values on the balance sheet in the banking and trading books as of 31 December 2018, 30 June 2018 and 31 December 2017. The activity is further broken down by our role (originator, sponsor or investor) and by securitization type (traditional or synthetic). Amounts disclosed under the "Traditional" column of these tables reflect the total outstanding notes at par value issued by the securitization vehicle at issuance. For synthetic securitization transactions, the amounts disclosed generally reflect the balance sheet carrying values of the securitized exposures at issuance.

The tables "SEC3: Securitization exposures in the banking book and associated regulatory capital requirements – bank acting as originator or as sponsor" and "SEC4: Securitization exposures in the banking book and associated regulatory capital requirements – bank acting as investor" have been modified to reflect changes to the revised securitization framework.

Development in RWA related to securitization exposures in the banking book in the second half of 2018

RWA from securitization exposures from the banking book decreased by USD 0.6 billion due to rating changes for exposures under the external ratings-based approach.

For information on the development of RWA in the first half of 2018 refer to our 30 June 2018 Pillar 3 report – UBS Group and significant subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors.* p

UBS Group AG consolidated

Semiannual |

SEC1: Securitization exposures in the banking book

	USD million	Bank acts as originator			Bank acts as sponsor			Bank acts as orig sponsor	
		Traditional	Synthetic	Subtotal	Traditional	Synthetic	Subtotal	Traditional	Syntheti
	31.12.18								
	Asset classes								
1	Retail (total)	**87**		**87**					
	of which:								
2	*Residential mortgage*	***87***		***87***					
3	*Credit card receivables*								
4	*Student loans*								
5	*Consumer loans*								
6	*Other retail exposures*								
7	Wholesale (total)				**0**		**0**		
	of which:								
8	*Loans to corporates or SME*								
9	*Commercial mortgage*				***0***		***0***		
10	*Lease and receivables*								
11	*Trade receivables*								
12	*Other wholesale*								
13	Re-securitization								
14	**Total securitization / re-securitization (including retail and wholesale)**	**87**		**87**	**0**		**0**		
	30.6.18								
	Asset classes								
1	Retail (total)	92		92					
	of which:								
2	*Residential mortgage*	*92*		*92*					
3	*Credit card receivables*								
4	*Student loans*								
5	*Consumer loans*								
6									

	Other retail exposures						
7	Wholesale (total) *of which:*						
8	*Loans to corporates or SME*						
9	*Commercial mortgage*						
10	*Lease and receivables*						
11	*Trade receivables*						
12	*Other wholesale*						
13	Re-securitization						
14	**Total securitization / re-securitization (including retail and wholesale)**	**92**		**92**			
31.12.17							
Asset classes							
1	Retail (total) *of which:*	97		97	137		137
2	*Residential mortgage*	*97*		*97*			
3	*Credit card receivables*						
4	*Student loans*				*137*		*137*
5	*Consumer loans*						
6	*Other retail exposures*						
7	Wholesale (total) *of which:*		1,976	1,976			
8	*Loans to corporates or SME*		*1,976*	*1,976*			
9	*Commercial mortgage*						
10	*Lease and receivables*						
11	*Trade receivables*						
12	*Other wholesale*						
13	Re-securitization	0		0	0		0
14	**Total securitization / re-securitization (including retail and wholesale)**	**97**	**1,976**	**2,073**	**137**		**137**

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Semiannual |

SEC2: Securitization exposures in the trading book

	USD million	Bank acts as originator			Bank acts as sponsor			Bank acts as orig sponsor	
		Traditional	Synthetic	Subtotal	Traditional	Synthetic	Subtotal	Traditional	Syntheti
	31.12.18								
	Asset classes								
1	Retail (total)	**3**		**3**	**7**		**7**		
	of which:								
2	*Residential mortgage*	***3***		***3***	***7***		***7***		
3	*Credit card receivables*								
4	*Student loans*								
5	*Consumer loans*								
6	*Other retail exposures*								
7	Wholesale (total)	***1***	***4***	***5***	**1**		**1**	**222**	
	of which:								
8	*Loans to corporates or SME*								
9	*Commercial mortgage*	***1***		***1***	***1***		***1***	***222***	
10	*Lease and receivables*								
11	*Trade receivables*								
12	*Other wholesale*		***4***	***4***					
13	Re-securitization		**3**	**3**				**1**	
14	**Total securitization / re-securitization (including retail and wholesale)**	**4**	**6**	**10**	**8**		**8**	**223**	
	30.6.18								
	Asset classes								
1	Retail (total)	3		3	7		7		
	of which:								
2	*Residential mortgage*	*3*		*3*	*7*		*7*		
3	*Credit card receivables*								
4	*Student loans*								
5	*Consumer loans*								
6									

	Other retail exposures							
7	Wholesale (total)				4		4	100
	of which:							
8	*Loans to corporates or SME*							
9	*Commercial mortgage*							*100*
10	*Lease and receivables*				*4*		*4*	
11	*Trade receivables*							
12	*Other wholesale*							
13	Re-securitization		6	6	3		3	
14	**Total securitization / re-securitization (including retail and wholesale)**	**3**	**6**	**9**	**14**		**14**	**100**
31.12.17								
Asset classes								
1	Retail (total)	3		3	10		10	
	of which:							
2	*Residential mortgage*	*3*		*3*	*10*		*10*	
3	*Credit card receivables*							
4	*Student loans*							
5	*Consumer loans*							
6	*Other retail exposures*							
7	Wholesale (total)				2		2	18
	of which:							
8	*Loans to corporates or SME*							
9	*Commercial mortgage*							*18*
10	*Lease and receivables*							
11	*Trade receivables*							
12	*Other wholesale*				*2*		*2*	
13	Re-securitization		6	6	2		2	
14	**Total securitization / re-securitization (including retail and wholesale)**	**3**	**6**	**10**	**14**		**14**	**18**

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SEC3: Securitization exposures in the banking book and associated regulatory capital requ

USD million	Total exposure values	Exposure values (by RW bands)					Exposure values (by regulatory approach)			
		≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	SEC-IRBA	SEC-ERBA	SEC-SA	1250%
31.12.18										
Asset classes										
1 Total exposures	**87**			**0**	**67**	**20**		**87**		
2 Traditional securitization	**87**			**0**	**67**	**20**		**87**		
3 of which: securitization	***87***			***0***	***67***	***20***		***87***		
4 of which: retail underlying	***87***				***67***	***20***		***87***		
5 of which: wholesale	***0***			***0***				***0***		
6 of which: re-securitization										
7 of which: senior										
8 of which: non-senior										
9 Synthetic securitization										
10 of which: securitization										
11 of which: retail underlying										
12 of which: wholesale										
13 of which: re-securitization										
14 of which: senior										
15 of which: non-senior										
30.6.18										
1 Total exposures	92				0	92		92	0	
2 Traditional securitization	92				0	92		92	0	
3 of which: securitization	*92*				*0*	*92*		*92*	*0*	

4	*of which: retail underlying*	*92*	*0*	*92*	*92*	*0*
5	*of which: wholesale*					
6	*of which: re-securitization*					
7	*of which: senior*					
8	*of which: non-senior*					
9	Synthetic securitization					
10	*of which: securitization*					
11	*of which: retail underlying*					
12	*of which: wholesale*					
13	*of which: re-securitization*					
14	*of which: senior*					
15	*of which: non-senior*					

SEC3: Securitization exposures in the banking book and associated regulatory capital requ originator or as sponsor (continued)

USD million	Total exposure values	Exposure values (by RW bands) ≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	Exposure values (by regulatory approach) IRB RBA	IRB SFA	1250%	Total RWA	R re ap IRB RBA
31.12.17											
Asset classes											
1 Total exposures	2,210	137	1,976		0	96	137	1,976	96	1,676	17
2 Traditional securitization	234	137			0	96	137		96	1,224	17
3 of which: securitization	*234*	*137*				*96*	*137*		*96*	*1,224*	*17*
4 of which: retail underlying	*234*	*137*				*96*	*137*		*96*	*1,224*	*17*
5 of which: wholesale											
6 of which: re-securitization	*0*				*0*	*0*	*0*		*0*	*0*	*0*
7 of which: senior											
8 of which: non-senior	*0*				*0*	*0*	*0*		*0*	*0*	*0*
9 Synthetic securitization	1,976		1,976					1,976		452	
10 of which: securitization	*1,976*		*1,976*					*1,976*		*452*	
11 of which: retail underlying											
12 of which: wholesale	*1,976*		*1,976*					*1,976*		*452*	
13 of which: re-securitization											
14 of which: senior											
15 of which: non-senior											

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Semiannual |

SEC4: Securitization exposures in the banking book and associated regulatory capital requ

USD million		Total exposure values	Exposure values (by RW bands) ≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	Exposure values (by regulatory approach) SEC-IRBA	SEC-ERBA	SEC-SA	1250%
31.12.18											
Asset classes											
1	Total exposures	**126**			**49**	**77**	**1**		**126**		**1**
2	Traditional securitization	**126**			**49**	**77**	**1**		**126**		**1**
3	*of which: securitization*	***126***			***49***	***77***	***1***		***126***		***1***
4	*of which: retail underlying*	***1***					***1***				***1***
5	*of which: wholesale*	***126***			***49***	***77***			***126***		
6	*of which: re-securitization*										
7	*of which: senior*										
8	*of which: non-senior*										
9	Synthetic securitization										
10	*of which: securitization*										
11	*of which: retail underlying*										
12	*of which: wholesale*										
13	*of which: re-securitization*										
14	*of which: senior*										
15	*of which: non-senior*										
30.6.18											
Asset classes											
1	Total exposures	142			62	80	0		142	0	
2	Traditional securitization	142			62	80	0		142	0	
3		*142*			*62*	*80*	*0*		*142*	*0*	

	of which: securitization						
4	*of which: retail underlying*	*0*			*0*		*0*
5	*of which: wholesale*	*142*	*62*	*80*		*142*	
6	*of which: re-securitization*						
7	*of which: senior*						
8	*of which: non-senior*						
9	Synthetic securitization						
10	*of which: securitization*						
11	*of which: retail underlying*						
12	*of which: wholesale*						
13	*of which: re-securitization*						
14	*of which: senior*						
15	*of which: non-senior*						

SEC4: Securitization exposures in the banking book and associated regulatory capital requ investor

USD million		Total exposure values	Exposure values (by RW bands) ≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	Exposure values (by regulatory approach) IRB RBA	IRB SFA	1250%	Total RWA	RWA (b regulato approac IRB RBA	IRB SFA12
31.12.17													
Asset classes													
1	Total exposures	142	66	0	76	0	0	142		0	64	63	
2	Traditional securitization	142	66	0	76	0	0	142		0	64	63	
3	*of which: securitization*	*142*	*66*	*0*	*76*	*0*	*0*	*142*		*0*	*64*	*63*	
4	*of which: retail underlying*	*0*					*0*			*0*	*1*		
5	*of which: wholesale*	*142*	*66*	*0*	*76*		*0*	*142*		*0*	*63*	*63*	
6	*of which: re-securitization*	*0*		*0*			*0*	*0*		*0*	*0*	*0*	
7	*of which: senior*												
8	*of which: non-senior*	*0*		*0*			*0*	*0*		*0*	*0*	*0*	
9	Synthetic securitization												
10	*of which: securitization*												
11	*of which: retail underlying*												
12	*of which: wholesale*												
13	*of which: re-securitization*												
14	*of which: senior*												
15	*of which: non-senior*												

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Section 8 Market risk

Overview

The amount of capital required to underpin market risk in the regulatory trading book is calculated using a variety of methods approved by FINMA. The components of market risk risk-weighted assets (RWA) are value-at-risk (VaR), stressed VaR (SVaR), an add-on for risks that are potentially not fully modeled in VaR (RniV), the incremental risk charge (IRC), the comprehensive risk measure (CRM) for the correlation portfolio and the securitization framework for securitization positions in the trading book. More information on each of these components is detailed in the following pages.

The table below presents an overview of Pillar 3 disclosures separately provided in our Annual Report 2018.

Annual |

MRA – Market risk

Pillar 3 disclosure requirement	Annual Report 2018 section		Disclosure	Annual Report 2018 page number
Strategies and processes of the bank for market risk	Risk, treasury and capital management	–	Risk appetite framework	125–128
		–	Market risk – Overview of measurement, monitoring and management techniques	154
		–	Market risk stress loss, Value-at-risk	155–158
	Consolidated financial statements	–	Note 11 Derivative instruments	395–399
Structure and organization of the market risk management function	Risk, treasury and capital management	–	Key risks, risk measures and performance by business division and Corporate Center unit	120
		–	Risk governance	123–124
Scope and nature of risk reporting	Risk, treasury and capital	–	Internal risk reporting	129

and measurement systems	management	–	Main sources of market risk, Overview of measurement, monitoring and management techniques	154

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Market risk risk-weighted assets

Market risk RWA development in the quarter

Quarterly | This section provides disclosures on the quarterly market risk RWA developments for market risk measured under the internal models method. The four main components that contribute to market risk RWA are VaR, SVaR, IRC and the CRM. VaR and SVaR components include the RWA charge for RniV. The “MR2: RWA flow statements of market risk exposures under an internal models approach” table on the following page provides a breakdown of the market risk RWA movement in the fourth quarter of 2018 across these components, according to Basel Committee on Banking Supervision-defined movement categories. These categories are described below. p

Definitions of market risk RWA movement table components for MR2

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

Reference	Description	Definition
1 / 8c	**RWA as of previous and current reporting period end (end of period)**	Quarter-end RWA.
1a / 8b	**Regulatory adjustment**	Indicates the difference between rows 1 and 1b, and 8c and 8a, respectively.
1b / 8a	**RWA at previous and current quarter end (end of day)**	For a given component (e.g., VaR), this refers to the RWA computed whenever that component’s snapshot quarter-end figure is higher than the 60-day average for regulatory VaR, and the 12-week average for SVaR and IRC, thus determining the quarter-end RWA. The regulatory adjustment would be zero if the quarter-end RWA were triggered by the snapshot quarter-end figure.
	Movement of end-of-day RWA	
2	**Movement in risk levels**	Movements due to changes in positions and risk levels.
3	**Model updates / changes**	Movements due to routine updates to model parameters and model changes.
4	**Methodology and policy**	Movements due to methodological changes in calculations driven by regulatory policy changes, including revisions of existing regulations, new regulations and add-ons mandated by the regulator.
5	**Acquisitions and disposals**	Movements due to the disposal or acquisition of business operations,

		quantified based on the market risk exposures at the end of the quarter preceding a disposal or following an acquisition. Purchases and sales of exposures in the ordinary course of business are reflected in “Movements in risk levels.”
6	**Foreign exchange movements**	Movements due to changes in exchange rates. Note that the effect of movements in exchange rates is captured in “Movement in risk levels,” since exchange rate movements are part of the effects of market movements on risk levels.
7	**Other**	Movements due to changes that cannot be attributed to any other category.

RWA flow

Quarterly |

Market risk RWA increased by USD 8.3 billion in the fourth quarter, driven by asset size and other movements resulting from higher average regulatory and stressed value-at-risk (VaR) levels observed in the Investment Bank, mainly in its Equities business following significant market volatility. The increase from regulatory add-ons of USD 1.4 billion reflects updates from the monthly risks-not-in-VaR assessment and higher levels of regulatory VaR and stressed VaR.

The VaR multiplier remained unchanged at 3.0 compared with the third quarter of 2018. p

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Quarterly |

MR2: RWA flow statements of market risk exposures under an internal models approach[1]

USD million		VaR	Stressed VaR	IRC	CRM	Other	Total RWA
1	**RWA as of 31.12.17**	**3,157**	**5,403**	**3,547**	**81**		**12,188**
1a	*Regulatory adjustment*	*(2,454)*	*(4,635)*	*0*	*(27)*		*(7,116)*
1b	RWA at previous quarter-end (end of day)	703	768	3,547	54		5,072
2	*Movement in risk levels*	*410*	*1,539*	*(1,159)*	*0*		*789*
3	*Model updates / changes*	*74*	*(3)*	*0*	*0*		*71*
4	*Methodology and policy*	*0*	*0*	*0*	*0*		*0*
5	*Acquisitions and disposals*	*0*	*0*	*0*	*0*		*0*
6	*Foreign exchange movements*	*0*	*0*	*0*	*0*		*0*
7	*Other*	*19*	*285*	*0*	*(15)*		*289*
8a	RWA at the end of the reporting period (end of day)	1,207	2,589	2,387	39		6,222
8b	*Regulatory adjustment*	*6,021*	*9,968*	*847*	*14*		*16,850*
8c	**RWA as of 31.3.18**	**7,228**	**12,557**	**3,234**	**53**		**23,072**
1	**RWA as of 31.3.18**	**7,228**	**12,557**	**3,234**	**53**		**23,072**
1a	*Regulatory adjustment*	*(6,021)*	*(9,968)*	*(847)*	*(14)*		*(16,850)*
1b	RWA at previous quarter-end (end of day)	1,207	2,589	2,387	39		6,222
2	*Movement in risk levels*	*1,019*	*822*	*12*	*0*		*1,852*
3	*Model updates / changes*	*(135)*	*12*	*0*	*0*		*(123)*
4	*Methodology and policy*	*0*	*0*	*0*	*0*		*0*
5	*Acquisitions and disposals*	*0*	*0*	*0*	*0*		*0*
6	*Foreign exchange movements*	*0*	*0*	*0*	*0*		*0*
7	*Other*	*(101)*	*23*	*0*	*18*		*(60)*
8a	RWA at the end of the reporting period (end of day)	1,989	3,446	2,399	57		7,891
8b	*Regulatory adjustment*	*1,311*	*2,934*	*0*	*0*		*4,245*
8c	**RWA as of 30.6.18**	**3,300**	**6,380**	**2,399**	**57**		**12,136**
1	**RWA as of 30.6.18**	**3,300**	**6,380**	**2,399**	**57**		**12,136**
1a	*Regulatory adjustment*	*(1,311)*	*(2,934)*	*0*	*0*		*(4,245)*
1b	RWA at previous quarter-end (end of day)	1,989	3,446	2,399	57		7,891
2	*Movement in risk levels*	*(1,653)*	*(2,400)*	*327*	*0*		*(3,726)*
3	*Model updates / changes*	*(8)*	*(62)*	*(60)*	*0*		*(130)*
4	*Methodology and policy*	*0*	*0*	*0*	*0*		*0*
5	*Acquisitions and disposals*	*0*	*0*	*0*	*0*		*0*

6	*Foreign exchange movements*	*0*	*0*	*0*	*0*	*0*
7	*Other*	*(1)*	*80*	*0*	*(57)*	*22*
8a	RWA at the end of the reporting period (end of day)	328	1,063	2,666	0	4,057
8b	*Regulatory adjustment*	*2,142*	*5,101*	*0*	*12*	*7,255*
8c	**RWA as of 30.9.18**	**2,470**	**6,164**	**2,666**	**12**	**11,313**
1	**RWA as of 30.9.18**	**2,470**	**6,164**	**2,666**	**12**	**11,313**
1a	*Regulatory adjustment*	***(2,142)***	***(5,101)***	***0***	***(12)***	***(7,255)***
1b	RWA at previous quarter-end (end of day)	**328**	**1,063**	**2,666**	**0**	**4,057**
2	*Movement in risk levels*	***1,765***	***1,975***	***(1,373)***	***0***	***2,368***
3	*Model updates / changes*	***335***	***(47)***	***(53)***	***0***	***235***
4	*Methodology and policy*	***0***	***0***	***0***	***0***	***0***
5	*Acquisitions and disposals*	***0***	***0***	***0***	***0***	***0***
6	*Foreign exchange movements*	***0***	***0***	***0***	***0***	***0***
7	*Other*	***489***	***689***	***0***	***0***	***1,178***
8a	RWA at the end of the reporting period (end of day)	**2,918**	**3,680**	**1,240**	**0**	**7,838**
8b	*Regulatory adjustment*	***2,167***	***8,470***	***1,059***	***7***	***11,702***
8c	**RWA as of 31.12.18**	**5,085**	**12,149**	**2,299**	**7**	**19,541**

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

p

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Securitization positions in the trading book

Semiannual | Our exposure to securitization positions in the trading book relates primarily to positions in Corporate Center – Non-core and Legacy Portfolio that we continue to wind down. A small amount of exposure also arises from secondary trading in commercial mortgage-backed securities in the Investment Bank. Refer to the "Regulatory exposures and risk-weighted assets" table on page 16–18 of this report and to the "Securitizations" section of this report for more information.

The table below provides information on market risk RWA from securitization exposures in the trading book. p

Semiannual |

MR1: Market risk under standardized approach

			RWA	
USD million		**31.12.18**	30.6.18	31.12.17
	Outright products			
1	Interest rate risk (general and specific)			
2	Equity risk (general and specific)			
3	Foreign exchange risk			
4	Commodity risk			
	Options			
5	Simplified approach			
6	Delta-plus method			
7	Scenario approach			
8	Securitization	**452**	364	410
9	**Total**	**452**	**364**	**410**

p

Annual | The table below presents an overview of Pillar 3 disclosures separately provided in our Annual Report 2018. p

Annual |

MRB – Internal models approach

Pillar 3 disclosure requirement	**Annual Report 2018 section**	**Disclosure**	**Annual Report 2018 page number**

Description of activities and risks covered by the VaR models and stressed VaR models	Risk, treasury and capital management	–	Value-at-risk	155–158
		–	Main sources of market risk	154
VaR models applied by different entities within the Group	Risk, treasury and capital management	–	Main sources of market risk	154
		–	Value-at-risk	155–158
General description of VaR and stressed VaR models	Risk, treasury and capital management	–	Value-at-risk	155–158
Main differences between the VaR and stressed VaR models used for management purposes and for regulatory purposes	Risk, treasury and capital management	–	Value-at-risk	155–158
Further information on VaR models	Risk, treasury and capital management	–	Value-at-risk	155–158
		–	Market risk stress loss	155
		–	Market risk – Overview of measurement, monitoring and management techniques	154
	Consolidated financial statements	–	Note 24 Fair value measurement	429–449
Description of stress testing applied to modeling parameters	Consolidated financial statements	–	Note 24 Fair value measurement	429–449
Description of backtesting approach	Risk, treasury and capital management	–	Backtesting of VaR	157–158
		–	VaR model confirmation	158

p

Regulatory calculation of market risk

Semiannual | The table below shows minimum, maximum, average and period-end regulatory VaR, stressed VaR, the IRC and the comprehensive risk capital charge.

During the second half of 2018, average 10-day 99% regulatory VaR and stressed VaR decreased due to risk management actions, despite increased market volatility in the fourth quarter. p

Semiannual |

MR3: IMA values for trading portfolios

USD million		**For the six-month period ended 31.12.18**	For the six-month period ended 30.6.18	For the six-month period ended 31.12.17
	VaR (10-day 99%)			
1	Maximum value	**107**	181	93
2	Average value	**38**	52	36
3	Minimum value	**6**	2	12
4	Period end	**79**	65	22
	Stressed VaR (10-day 99%)			
5	Maximum value	**202**	334	333
6	Average value	**93**	107	86
7	Minimum value	**35**	23	27
8	Period end	**98**	122	31
	Incremental risk charge (99.9%)			
9	Maximum value	**247**	342	310
10	Average value	**193**	222	272
11	Minimum value	**99**	153	209
12	Period end	**99**	192	284
	Comprehensive risk capital charge (99.9%)			
13	Maximum value	**5**	5	9
14	Average value	**1**	4	6
15	Minimum value	**0**	3	4
16	Period end	**0**	5	4
17	Floor (standardized measurement method)	**0**	1	1

p

Value-at-risk

VaR definition

Annual | VaR is a statistical measure of market risk, representing the market risk losses that could potentially be realized over a set time horizon (holding period) at an established level of confidence. The measure assumes no change in the Group's trading positions over the set time horizon.

We calculate VaR on a daily basis. The profit or loss distribution from which VaR is derived is generated by our internally developed VaR model. The VaR model simulates returns over the holding period of those risk factors to which our trading positions are sensitive, and subsequently quantifies the profit or loss effect of these risk factor returns on the trading positions. Risk factor returns associated with the risk factor classes of general interest rates, foreign exchange and commodities are based on a pure historical simulation approach, taking into account a five-year look-back window. Risk factor returns for selected issuer-based risk factors, such as equity price and credit spreads, are decomposed into systematic and residual, issuer-specific components using a factor model approach. Systematic returns are based on historical simulation, and residual returns are based on a Monte Carlo simulation. The VaR model profit and loss distribution is derived from the sum of the systematic and residual returns in such a way that we consistently capture systematic and residual risk. Correlations among risk factors are implicitly captured via the historical simulation approach. In modeling the risk factor returns, we consider the stationarity properties of the historical time series of risk factor changes. Depending on the stationarity properties of the risk factors within a given risk factor class, we choose to model the risk factor returns using absolute returns or logarithmic returns. The risk factor return distributions are updated on a fortnightly basis.

Although our VaR model does not have full revaluation capability, we source full revaluation grids and sensitivities from our front-office systems, enabling us to capture material non-linear profit or loss effects.

We use a single VaR model for both internal management purposes and determining market risk risk-weighted assets (RWA), although we consider different confidence levels and time horizons. For internal management purposes, we establish risk limits and measure exposures using VaR at the 95% confidence level with a one-day holding period, aligned to the way we consider the risks associated with our trading activities. The regulatory measure of market risk used to underpin the market risk capital requirement under Basel III requires a measure equivalent to a 99% confidence level using a 10-day holding period. In the calculation of a 10-day holding period VaR, we employ 10-day risk factor returns, whereby all observations are equally weighted.

Additionally, the population of the portfolio within management and regulatory VaR is slightly different. The population within regulatory VaR meets regulatory requirements for inclusion in regulatory VaR. Management VaR includes a broader population of positions. For example, regulatory VaR excludes the credit spread risks from the securitization portfolio, which are treated instead under the securitization approach for regulatory purposes.

We also use SVaR for the calculation of regulatory capital. SVaR adopts broadly the same methodology as regulatory VaR and is calculated using the same population, holding period (10-day) and confidence level (99%). However, unlike regulatory VaR, the historical data set for SVaR is not limited to five years, but spans the time period from 1 January 2007 to present. In deriving SVaR, we search for the largest 10-day holding period VaR for the current portfolio of the Group across all one-year look-back windows that fall into the interval from 1 January 2007 to present. SVaR is computed weekly. p

Derivation of VaR- and SVaR-based RWA

Annual | VaR and SVaR are used to derive the VaR and SVaR components of the market risk Basel III RWA, as shown in the "Regulatory exposures and risk-weighted assets" table on pages 16–18 of this report. This calculation takes the maximum of the respective period-end VaR measure and the product of the average VaR measure for the 60 trading days immediately preceding the period end and a VaR multiplier set by FINMA. The VaR multiplier, which was 3.0 as of 31 December 2018, is dependent upon the number of VaR backtesting exceptions within a 250-business-day window. When the number of exceptions is greater than four, the multiplier increases gradually from three to a maximum of four if 10 or more backtesting exceptions occur. This is then multiplied by a risk weight factor of 1,250% to determine RWA.

In addition to the VaR multiplier, at the time of the structural change to our VaR model in the first quarter of 2016, FINMA introduced a model multiplier of 1.3 to be applied in the calculation of VaR and SVaR RWA. This model multiplier was temporarily introduced to offset a reduction in VaR at the time, pending other improvements to the VaR model which are expected to increase VaR. This temporary multiplier has not yet been removed.

This calculation is set out in the table below. p

Annual |

Calculation of VaR- and SVaR-based RWA as of 31 December 2018

	Period-end VaR	60-day average VaR	VaR multiplier	Model multiplier	**Max. (A, B x C) x D**	Risk weight factor	**Basel III RWA**
USD million	(A)	(B)	(C)	(D)	**(E)**	(F)	**(E x F)**
VaR (10-day 99%)	79	50	3.00	1.3	**196**	1,250%	**2,454**
Stressed VaR (10-day 99%)	98	120	3.00	1.3	**469**	1,250%	**5,866**

p

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MR4: Comparison of VaR estimates with gains / losses

Semiannual | VaR backtesting is a performance measurement process in which the 1-day VaR prediction is compared with the realized 1-day profit & loss (P&L). We compute backtesting VaR using a 99% confidence level and one-day holding period for the population included within regulatory VaR. Since 99% VaR at UBS is defined as a risk measure that operates on the lower tail of the P&L distribution, 99% backtesting VaR is a negative number. Backtesting revenues exclude non-trading revenues, such as valuation reserves, fees and commissions and revenues from intraday trading, to provide for a like-for-like comparison. A backtesting exception occurs when backtesting revenues are lower than the previous day's backtesting VaR.

Statistically, given the confidence level of 99%, two or three backtesting exceptions per year can be expected. More than four exceptions could indicate that the VaR model is not performing appropriately, as could too few exceptions over a prolonged period of time. However, as noted in the VaR limitations section above, a sudden increase or decrease in market volatility relative to the five-year window could lead to a higher or lower number of exceptions, respectively. Accordingly, Group-level backtesting exceptions are investigated, as are exceptional positive backtesting revenues, with results being reported to senior business management, the Group Chief Risk Officer and the Chief Risk Officer Market & Treasury Risk. Backtesting exceptions are also reported to internal and external auditors and to the relevant regulators.

The "Group: development of regulatory backtesting revenues and actual trading revenues against backtesting VaR" chart on the page below shows the 12-month development of backtesting VaR against the Group's backtesting revenues and actual trading revenues for 2018. The chart shows both the 99% and the 1% backtesting VaR. The asymmetry between the negative and positive tails is due to the long gamma risk profile that has been run historically in the Investment Bank.

The actual trading revenues include, in addition to backtesting revenues, intraday revenues.

The number of negative backtesting exceptions within a 250-business-day window increased from one to two by the end of the year. The FINMA VaR multiplier for market risk RWA remained unchanged at 3.0 as of 31 December 2018. p

Semiannual |

p

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Risks-not-in-VaR

Risks-not-in-VaR definition

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

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

Risks-not-in-VaR quantification

Annual | The RniV quantification is conducted on the basis of a quantitative approach that was developed within the Risk Methodology department, and that has been approved by FINMA. We quantify RniV on a monthly basis. The revised framework applies to both categories of RniV: P&L representation RniV as well as risk factor RniV. p

Risks-not-in-VaR mitigation

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

Derivation of RWA add-on for risks-not-in-VaR

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

The RniV VaR and SVaR capital ratios applicable during the fourth quarter are 107% for each.

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

Annual |

Calculation of RniV-based RWA as of 31 December 2018

	Period-end RWA	RniV add-on	**RniV RWA**
USD million	(A)	(B)	**(A x B)**

Regulatory VaR	2,454	107%	**2,632**
Stressed VaR	5,866	107%	**6,284**
Total RniV RWA			**8,915**

p

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Incremental risk charge

Annual | Incremental risk charge (IRC) is the potential loss due to the defaults or credit migrations of issuers of non-securitized credit instruments in the trading book. IRC is calculated as the portfolio loss at the 99.9% percentile of the portfolio loss distribution over a one-year time horizon. It uses a multi-factor model applying the constant position assumption for all positions in the IRC portfolio: all positions are kept unchanged over the one-year time period.

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

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

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

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

Derivation of IRC-based RWA

Annual | IRC is calculated weekly and the results are used to derive the IRC-based component of the market risk Basel III RWA, as shown in the “Regulatory exposures and risk-weighted assets” table on pages 16–18 of this report. The derivation is similar to that for VaR- and SVaR-based RWA, but without a VaR multiplier, and is shown below. p

Annual |

Calculation of IRC-based RWA as of 31 December 2018

	Period-end IRC	Average of last 12 weeks IRC	**Max (A, B)**	Risk weight factor	**Basel III RWA**
USD million	(A)	(B)	**(C)**	(D)	**(C x D)**
	99	184	**184**	1,250%	**2,299**

p

Comprehensive risk measure

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

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

Derivation of CRM-based RWA

Annual | CRM is calculated weekly, and the results are used to derive the CRM-based component of the market risk Basel III RWA, as shown in the "Regulatory exposures and risk-weighted assets" table on pages 16–18 of this report. The calculation is subject to a floor equal to 8% of the equivalent capital charge under the specific risk measure (SRM) for the correlation trading portfolio. The calculation is shown below. p

Annual |

Calculation of CRM-based RWA as of 31 December 2018

USD million	Period-end CRM (A)	Average of last 12 weeks CRM (B)[1]	**Max (A, B) (C)**	Risk weight factor (D)	**Basel III RWA (C x D)**
	0	1	**1**	1,250%	**7**

1 CRM = Max (CRM model result, 8% of equivalent charge under the SRM).

p

Section 9 Operational risk

Annual | The table below presents an overview of Pillar 3 disclosures separately provided in our Annual Report 2018. p

Annual |

ORA: Operational risk

Pillar 3 disclosure requirement	Annual Report 2018 section	Disclosure	Annual Report 2018 page number
Details of the approach for operational risk capital assessment for which the bank qualifies	Risk, treasury and capital management	– Operational risk framework	171
Description of the advanced measurement approaches (AMA) for operational risk	Risk, treasury and capital management	– Advanced measurement approach model	172

p

Section 10 Interest rate risk in the banking book

Annual | Interest rate risk in the banking book arises from balance sheet positions such as *Loans, Financial assets at fair value not held for trading, Financial assets measured at amortized cost, Customer deposits, Debt issued measured at amortized cost* and derivatives, including those used for cash flow hedge accounting purposes. These positions may affect *Other comprehensive income (OCI)* or the income statement, depending on their accounting treatment.

The table below presents an overview of Pillar 3 disclosures separately provided in our Annual Report 2018. p

Annual |

Interest rate risk in the banking book

Pillar 3 disclosure requirement	**Annual Report 2018 section**	**Disclosure**	**Annual Report 2018 page number**
The nature of interest rate risk in the banking book and key assumptions applied	Risk, treasury and capital management	– Interest rate risk in the banking book	159–163

p

Interest rate risk sensitivity to parallel shifts in yield curves

Annual | Interest rate risk in the banking book is not underpinned for capital purposes, but is subject to a regulatory threshold. As of 31 December 2018, the economic-value effect of an adverse parallel shift in interest rates of ±200 basis points on our banking book interest rate risk exposures was significantly below both the current threshold of 20% of eligible capital recommended by regulators and the new threshold of 15% of Tier 1 capital applicable as of 2019.

The interest rate risk sensitivity figures presented in the "Interest rate sensitivity – banking book" table on the next page represent the effect of +1, ±100 and ±200-basis-point parallel moves in yield curves on present values of future cash flows, irrespective of accounting treatment. In the prevailing negative interest rate environment for the Swiss franc in particular, and to a lesser extent for the euro and the Japanese yen, interest rates for Global Wealth Management and Personal & Corporate Banking client transactions are generally floored at 0%. Accordingly, for the purposes of this disclosure table, downward moves of 100 / 200 basis points are floored to ensure that the resulting shocked interest rates do not turn negative. The flooring results in non-linear sensitivity behavior.

The sensitivity of the banking book to rising rates was positive USD 1.0 million per basis point compared with approximately nil at prior year-end. This was mainly due to changes in US dollar sensitivity. In the third quarter of 2018, we implemented a transfer process of the interest rate risk from our Global Wealth Management in the Americas into Corporate Center – Group ALM, and adopted a replication model for the non-maturing deposits held in the US. This decreased the exposure to rising rates in Global Wealth Management to negative USD 0.1 million per basis point from negative USD 1.8 million per basis point.

The sensitivity of the banking book to rising rates includes the interest rate sensitivities arising from debt investments classified as *Financial assets measured at fair value through other comprehensive income*. The sensitivity of these positions to a 1-basis-point parallel increase in the yields of the respective instruments was approximately negative USD 2 million, unchanged from the prior year.

The sensitivity of the banking book to rising interest rates also includes interest rate sensitivities arising from interest rate swaps designated in cash flow hedges. Fair value gains or losses associated with the effective portion of these hedges are recognized directly in other comprehensive income (OCI) in equity. When the hedged forecast cash flows affect profit or loss, the associated gains or losses on the hedging derivatives are reclassified from OCI to profit or loss. These swaps are predominantly denominated in US dollars, euros and Swiss francs. A 1-basis-point parallel increase of underlying LIBOR curves would have decreased OCI by approximately USD 22 million, excluding adjustments for tax. p

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Annual |

Interest rate sensitivity – banking book[1]

31.12.18

USD million	**–200 bps**	**–100 bps**	**+1 bp**	**+100 bps**	**+200 bps**
CHF	**(8.5)**	**(8.5)**	**0.8**	**78.6**	**158.6**
EUR	**(167.9)**	**(141.3)**	**0.1**	**6.9**	**15.6**
GBP	**(88.2)**	**(56.0)**	**0.1**	**11.1**	**20.5**
USD	**(355.3)**	**(96.5)**	**0.0**	**(73.6)**	**(202.3)**
Other	**8.8**	**3.7**	**0.1**	**10.4**	**21.3**
Total effect on fair value of interest rate-sensitive banking book positions	**(611.1)**	**(298.5)**	**1.0**	**33.4**	**13.6**

31.12.17

USD million	–200 bps	–100 bps	+1 bp	+100 bps	+200 bps
CHF	(32.7)	(32.7)	1.0	100.2	196.2
EUR	(145.8)	(92.9)	0.2	15.6	31.9
GBP	(59.1)	(56.8)	0.1	11.5	21.8
USD	27.3	14.8	(1.4)	(138.5)	(287.8)
Other	4.4	0.8	0.1	5.2	10.7
Total effect on fair value of interest rate-sensitive banking book positions	(205.8)	(166.8)	0.0	(6.1)	(27.3)

1 In the prevailing negative interest rate environment for the Swiss franc in particular, and to a lesser extent for the euro, interest rates for Global Wealth Management (excluding Americas) and Personal & Corporate Banking client transactions are generally floored at non-negative levels. Accordingly, for the purposes of this disclosure table, downward moves of 100 / 200 basis points are floored to ensure that the resulting shocked interest rates do not turn negative. The flooring results in non-linear sensitivity behavior.

p

Section 11 Going and gone concern requirements and eligible capital

The table below provides detail on the Swiss SRB going and gone concern requirements as required by FINMA. Further information on capital management is provided on pages 194–208 of our Annual Report 2018.

Quarterly |

Swiss SRB going and gone concern requirements and information[1]

As of 31.12.18	Swiss SRB, including transitional arrangements				Swiss SRB as of 1.1.20			
USD million, except where indicated	RWA		LRD		RWA		LRD	
Required loss-absorbing capacity	in %		in %		in %		in %	
Common equity tier 1 capital	**9.75**	**25,711**	**2.90**	**26,233**	**10.29**	**27,135**	**3.50**	**31,661**
of which: minimum capital	*5.40*	*14,242*	*1.90*	*17,187*	*4.50*	*11,869*	*1.50*	*13,569*
of which: buffer capital	*4.06*	*10,708*	*1.00*	*9,046*	*5.50*	*14,506*	*2.00*	*18,092*
of which: countercyclical buffer[2]	*0.29*	*761*			*0.29*	*761*		
Maximum additional tier 1 capital	**3.40**	**8,967**	**1.10**	**9,951**	**4.30**	**11,341**	**1.50**	**13,569**
of which: high-trigger loss-absorbing additional tier 1 minimum capital	*2.60*	*6,857*	*1.10*	*9,951*	*3.50*	*9,231*	*1.50*	*13,569*
of which: high-trigger loss-absorbing additional tier 1 buffer capital	*0.80*	*2,110*			*0.80*	*2,110*		
Total going concern capital	**13.15**	**34,678**	**4.00**	**36,184**	**14.59[3]**	**38,476**	**5.00[3]**	**45,230**
Base gone concern loss-absorbing capacity, including	7.48[4]	19,718	2.52[4]	22,796	12.01[5]	31,681	4.20[5]	37,993

applicable add-ons and rebate								
Total gone concern loss-absorbing capacity	**7.48**	**19,718**	**2.52**	**22,796**	**12.01**	**31,681**	**4.20**	**37,993**
Total loss-absorbing capacity	**20.62**	**54,396**	**6.52**	**58,980**	**26.60**	**70,158**	**9.20**	**83,223**
Eligible loss-absorbing capacity								
Common equity tier 1 capital	**12.94**	**34,119**	**3.77**	**34,119**	**12.94**	**34,119**	**3.77**	**34,119**
High-trigger loss-absorbing additional tier 1 capital[6,7]	**6.89**	**18,167**	**2.01**	**18,167**	**4.61**	**12,160**	**1.34**	**12,160**
of which: high-trigger loss-absorbing additional tier 1 capital	*3.71*	*9,790*	*1.08*	*9,790*	*3.71*	*9,790*	*1.08*	*9,790*
of which: low-trigger loss-absorbing additional tier 1 capital	*0.90*	*2,369*	*0.26*	*2,369*	*0.90*	*2,369*	*0.26*	*2,369*
of which: low-trigger loss-absorbing tier 2 capital	*2.28*	*6,008*	*0.66*	*6,008*				
Total going concern capital	**19.82**	**52,287**	**5.78**	**52,287**	**17.55**	**46,279**	**5.12**	**46,279**
Gone concern loss-absorbing capacity	**11.93**	**31,452**	**3.48**	**31,452**	**14.20**	**37,460**	**4.14**	**37,460**
of which: TLAC-eligible senior unsecured debt	*11.37*	*29,988*	*3.32*	*29,988*	*11.37*	*29,988*	*3.32*	*29,988*
Total gone concern loss-absorbing capacity	**11.93**	**31,452**	**3.48**	**31,452**	**14.20**	**37,460**	**4.14**	**37,460**
Total loss-absorbing capacity	**31.75**	**83,738**	**9.26**	**83,738**	**31.75**	**83,738**	**9.26**	**83,738**

Risk-weighted assets / leverage ratio denominator				
Risk-weighted assets	**263,747**		**263,747**	
Leverage ratio denominator		**904,598**		**904,598**

1 This table includes a rebate equal to 40% of the maximum rebate on the gone concern requirements, which was granted by FINMA and will be phased in until 1 January 2020. This table does not include a rebate for the usage of low-trigger loss-absorbing additional tier 1 or tier 2 capital instruments to meet the gone concern requirements. 2 Going concern capital ratio requirements include countercyclical buffer requirements of 0.29%. 3 Includes applicable add-ons of 1.44% for RWA and 0.5% for leverage ratio denominator (LRD). 4 Includes applicable add-ons of 0.72% for RWA and 0.25% for LRD and a rebate of 1.42% for RWA and 0.48% for LRD. 5 Includes applicable add-ons of 1.44% for RWA and 0.5% for LRD and a rebate of 2.29% for RWA and 0.8% for LRD. 6 Includes outstanding low-trigger loss-absorbing additional tier 1 (AT1) capital instruments, which are available under the transitional rules of the Swiss SRB framework to meet the going concern requirements until their first call date, even if the first call date is after 31 December 2019. As of their first call date, these instruments are eligible to meet the gone concern requirements. 7 Includes outstanding high- and low-trigger loss-absorbing tier 2 capital instruments, which are available under the transitional rules of the Swiss SRB framework to meet the going concern requirements until the earlier of (i) their maturity or first call date or (ii) 31 December 2019, and to meet gone concern requirements thereafter. Outstanding low-trigger loss-absorbing tier 2 capital instruments are subject to amortization starting five years prior to their maturity, with the amortized portion qualifying as gone concern loss-absorbing capacity. Instruments available to meet gone concern requirements are eligible until one year before maturity, with a haircut of 50% applied in the last year of eligibility.

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Semiannual | The table below provides detail on the underlying exposures and RWA used in the computation of countercyclical buffer of UBS Group. Further information on the methodology of geographical allocation used is provided on page 166 of our Annual Report 2018 under the “Country risk exposure allocation” section. During the fourth quarter of 2018, the countercyclical buffer rate for the United Kingdom increased from 0.5% to 1.0%, resulting in an increase of 3 basis points in our countercyclical capital buffer rate to 0.08%.p

Semiannual |

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

USD million, except where indicated

Geographical breakdown	Countercyclical capital buffer rate, %	Exposure values and / or risk-weighted assets used in the computation of the countercyclical capital buffer: Exposure values[1]	Exposure values and / or risk-weighted assets used in the computation of the countercyclical capital buffer: Risk-weighted assets	Bank-specific countercyclical capital buffer rate, %	Countercyclical amount
Hong Kong	1.875	6,206	2,058		
Sweden	1.875[2]	1,095	301		
United Kingdom	1.000	39,111	8,132		
Sum		**46,412**	**10,490**		
Total		**529,500**	**156,972**	**0.08**	**211**

1 Includes private sector exposures under categories “Credit risk”, “counterparty credit risk”, “equity positions in the banking book”, “settlement risk”, “securitization exposures in the banking book” and “amounts below thresholds for deduction” as shown in the “Regulatory exposures and risk-weighted assets” table in section 2 of this report. 2 The current countercyclical buffer rate of 2% for Sweden is subject to phase-in arrangements.

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Semiannual | The table below provides a reconciliation of the IFRS balance sheet to the balance sheet according to the regulatory scope of consolidation as defined by BCBS and FINMA. Lines in the balance sheet under the regulatory scope of consolidation are expanded and referenced where relevant to display all components that are used in the table "CC1: Composition of regulatory capital." Refer to the "Linkage between financial statements and regulatory exposures" section of this report for more information on the most significant entities consolidated under IFRS, but not included in the regulatory scope of consolidation. p

Semiannual |

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

As of 31.12.18	**Balance sheet in accordance with IFRS scope of consolidation**	**Effect of deconsolidated entities for regulatory consolidation**	**Effect of additional consolidated entities for regulatory consolidation**	**Balance sheet in accordance with regulatory scope of consolidation**	**References[1]**
USD million					
Assets					
Cash and balances at central banks	**108,370**	0		**108,370**	
Loans and advances to banks	**16,868**	(213)		**16,655**	
Receivables from securities financing transactions	**95,349**			**95,349**	
Cash collateral receivables on derivative instruments	**23,602**			**23,602**	
Loans and advances to customers	**320,352**	53		**320,405**	
Other financial assets measured at amortized cost	**22,563**	(221)		**22,342**	
Total financial assets measured at amortized cost	**587,104**	(381)	0	**586,723**	
Financial assets at fair value held for trading	**104,370**	(474)		**103,897**	
	32,121			***32,121***	

of which: assets pledged as collateral that may be sold or repledged by counterparties					
Derivative financial instruments	**126,210**	10		**126,219**	
Brokerage receivables	**16,840**			**16,840**	
Financial assets at fair value not held for trading	**82,690**	(21,449)		**61,241**	
Total financial assets measured at fair value through profit or loss	**330,110**	(21,913)	0	**308,197**	
Financial assets measured at fair value through other comprehensive income	**6,667**	0	0	**6,667**	
Consolidated participations	**0**	77		**77**	
Investments in associates	**1,099**			**1,099**	
of which: goodwill	***176***			***176***	*4*
Property, equipment and software	**9,348**	(50)		**9,297**	
Goodwill and intangible assets	**6,647**	0		**6,647**	
of which: goodwill	***6,392***	*0*		***6,392***	*4*
of which: intangible assets	***254***			***254***	*5*
Deferred tax assets	**10,105**	0		**10,105**	
of which: deferred tax assets recognized for tax loss carry-forwards	***6,099***	*0*	*0*	***6,099***	*6*
of which: deferred tax assets on temporary differences	***4,006***	*0*	*0*	***4,006***	*10*
Other non-financial assets	**7,410**	(10)		**7,400**	
of which: net defined benefit pension and other post-employment assets	***0***			***0***	*8*
Total assets	**958,489**	**(22,277)**	**0**	**936,212**	

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

As of 31.12.18 *USD million*	**Balance sheet in accordance with IFRS scope of consolidation**	**Effect of deconsolidated entities for regulatory consolidation**	**Effect of additional consolidated entities for regulatory consolidation**	**Balance sheet in accordance with regulatory scope of consolidation**	**References[1]**
Liabilities					
Amounts due to banks	**10,962**			**10,962**	
Payables from securities financing transactions	**10,296**			**10,296**	
Cash collateral payables on derivative instruments	**28,906**			**28,906**	
Customer deposits	**419,838**	(51)		**419,787**	
Debt issued measured at amortized cost	**132,271**	(7)		**132,264**	
of which: amount eligible for high-trigger loss-absorbing additional tier 1 capital[2]	***7,785***			***7,785***	*9*
of which: amount eligible for low-trigger loss-absorbing additional tier 1 capital[2]	***2,369***			***2,369***	*9*
of which: amount eligible for low-trigger	***6,008***			***6,008***	*11*

loss-absorbing tier 2 capital[3]					
of which: amount eligible for capital instruments subject to phase-out from tier 2 capital[4]	***693***			***693***	*12*
Other financial liabilities measured at amortized cost	**6,885**	(504)		**6,381**	
Total financial liabilities measured at amortized cost	**609,158**	(562)	0	**608,597**	
Financial liabilities at fair value held for trading	**28,943**	0		**28,943**	
Derivative financial instruments	**125,723**	5		**125,727**	
Brokerage payables designated at fair value	**38,420**			**38,420**	
Debt issued designated at fair value	**57,031**	0		**57,031**	
Other financial liabilities designated at fair value	**33,594**	(21,679)		**11,915**	
Total financial liabilities measured at fair value through profit or loss	**283,711**	(21,674)	0	**262,037**	
Provisions	**3,494**	0		**3,494**	
Other non-financial liabilities	**9,022**	(15)		**9,007**	
of which: amount eligible for high-trigger loss-absorbing capital	***1,403***			***1,403***	*9*

(Deferred Contingent Capital Plan (DCCP))[5]					
of which: deferred tax liabilities related to goodwill	***54***			***54***	*4*
of which: deferred tax liabilities related to other intangible assets	***3***			***3***	*5*
Total liabilities	**905,386**	(22,251)	0	**883,134**	
Equity					
Share capital	**338**			**338**	1
Share premium	**20,843**			**20,843**	1
Treasury shares	**(2,631)**			**(2,631)**	3
Retained earnings	**30,448**	(26)		**30,422**	2
Other comprehensive income recognized directly in equity, net of tax	**3,930**	0		**3,931**	3
of which: unrealized gains / (losses) from cash flow hedges	***109***	*0*		***109***	*7*
Equity attributable to shareholders	**52,928**	**(26)**	**0**	**52,902**	
Equity attributable to non-controlling interests	**176**			**176**	
Total equity	**53,103**	**(26)**	**0**	**53,078**	
Total liabilities and equity	**958,489**	**(22,277)**	**0**	**936,212**	

1 References link the lines of this table to the respective reference numbers provided in the "References" column in the "Composition of capital" table. 2 Represents IFRS carrying value. 3 IFRS carrying value is USD 6,808 million. 4 IFRS carrying value is USD 703 million. 5 IFRS carrying value is USD 1,983 million. Refer to the "Compensation" section of our Annual Report

2018 for more information on the DCCP.

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Semiannual | The table below and on the following pages provides the composition of capital as defined by BCBS and FINMA, and based on BCBS Basel III phase-in rules, unless stated otherwise. Reference is made to items reconciling to the balance sheet under the regulatory scope of consolidation as disclosed in the table “CC2: Reconciliation of accounting balance sheet to balance sheet under the regulatory scope of consolidation.”

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

Semiannual |

CC1: Composition of regulatory capital

As of 31.12.18 *USD million except where indicated*		**Amounts**	**References[1]**
	Common Equity Tier 1 capital: instruments and reserves		
1	Directly issued qualifying common share (and equivalent for non-joint stock companies) capital plus related stock surplus	21,180	1
2	Retained earnings	30,422	2
3	Accumulated other comprehensive income (and other reserves)	1,299	3
4	Directly issued capital subject to phase-out from CET1 (only applicable to non-joint stock companies)	0	
5	Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	0	
6	Common Equity Tier 1 capital before regulatory adjustments	52,902	
	Common Equity Tier 1 capital: regulatory adjustments		
7	Prudent valuation adjustments	(120)	
8	Goodwill (net of related tax liability)	(6,514)	4
9	Other intangibles other than mortgage servicing rights (net of related tax liability)	(251)	5
10	Deferred tax assets that rely on future profitability, excluding those arising from temporary differences (net of related tax liability)[2]	(6,107)	6

11	Cash flow hedge reserve	(109)	7
12	Shortfall of provisions to expected losses	(368)	
13	Securitization gain on sale	0	
14	Gains and losses due to changes in own credit risk on fair valued liabilities	(397)	
15	Defined benefit pension fund net assets	0	8
16	Investments in own shares (if not already subtracted from paid-in capital on reported balance sheet)[3]	(1,652)	9
17	Reciprocal cross-holdings in common equity	0	
17a	Qualified holdings where a significant influence is exercised with other owners (CET1 instruments)	0	
17b	Insignificant holdings (CET1 instruments)	0	
18	Investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, where the bank does not own more than 10% of the issued share capital (amount above 10% threshold)	0	
19	Significant investments in the common stock of banking, financial and insurance entities that are outside the scope of regulatory consolidation (amount above 10% threshold)	0	
20	Mortgage servicing rights (amount above 10% threshold)	0	
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability)	(586)	10
22	Amount exceeding the 15% threshold	0	
23	*Of which: significant investments in the common stock of financials*	*0*	
24	*Of which: mortgage servicing rights*	*0*	
25	*Of which: deferred tax assets arising from temporary differences*	*0*	
26	Expected losses on equity investment under the PD / LGD approach	0	
26a	Further adjustments to financial statements in accordance with a recognized international accounting standard	(4)	
26b	Other adjustments	(2,674)	
27	Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions	0	

28	**Total regulatory adjustments to Common Equity Tier 1**	**(18,783)**
29	**Common Equity Tier 1 capital (CET1)**	**34,119**

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CC1: Composition of regulatory capital (Continued)

As of 31.12.18 *USD million except where indicated*		**Amounts**	**References[1]**
	Additional Tier 1 capital: instruments		
30	Directly issued qualifying additional Tier 1 instruments plus related stock surplus	12,160	
31	*Of which: classified as equity under applicable accounting standards*	*0*	
32	*Of which: classified as liabilities under applicable accounting standards*	*12,160*	*9*
33	Directly issued capital instruments subject to phase-out from additional Tier 1	0	
34	Additional Tier 1 instruments (and CET1 instruments not included in row 5) issued by subsidiaries and held by third parties (amount allowed in group AT1)	0	
35	*Of which: instruments issued by subsidiaries subject to phase-out*	*0*	
36	**Additional Tier 1 capital before regulatory adjustments**	**12,160**	
	Additional Tier 1 capital: regulatory adjustments		
37	Investments in own additional Tier 1 instruments	0	
38	Reciprocal cross-holdings in additional Tier 1 instruments	0	
38a	Qualified holdings where a significant influence is exercised with other owners (AT1 instruments)	0	
38b	Immaterial investments (AT1 instruments)	0	
39	Investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, where the bank does not own more than 10% of the issued common share capital of the entity (amount above 10% threshold)	0	
40	Significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation	0	
41	Other adjustments	0	
42	Regulatory adjustments applied to additional Tier 1 due to insufficient Tier 2 to cover deductions	0	
42a		0	

	Regulatory adjustments applied to CET1 capital due to insufficient additional Tier 1 to cover deductions		
43	Total regulatory adjustments to additional Tier 1 capital	0	
44	Additional Tier 1 capital (AT1)	12,160	
45	**Tier 1 capital (T1 = CET1 + AT1)**	**46,279**	
	Tier 2 capital: instruments and provisions		
46	Directly issued qualifying Tier 2 instruments plus related stock surplus	6,010	11
47	Directly issued capital instruments subject to phase-out from Tier 2	710	12
48	Tier 2 instruments (and CET1 and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties (amount allowed in group Tier 2)	0	
49	*Of which: instruments issued by subsidiaries subject to phase-out*	*0*	
50	Provisions	0	
51	**Tier 2 capital before regulatory adjustments**	**6,720**	
	Tier 2 capital: regulatory adjustments		
52	Investments in own Tier 2 instruments[4]	(17)	11, 12
53	Reciprocal cross-holdings in Tier 2 instruments and other TLAC liabilities	0	
53a	Qualified holdings where a significant influence is exercised with other owners (T2 instruments and other TLAC instruments)	0	
53b	Immaterial investments (T2 instruments and other TLAC instruments)	0	
54	Investments in the capital and other TLAC liabilities of banking, financial and insurance entities that are outside the scope of regulatory consolidation, where the bank does not own more than 10% of the issued common share capital of the entity (amount above 10% threshold)	0	
55	Significant investments in the capital and other TLAC liabilities of banking, financial and insurance entities that are outside the scope of regulatory consolidation (net of eligible short positions)	0	
56	Other adjustments	0	
56a		0	

	Excess of the adjustments, which are allocated to the AT1 capital	
57	**Total regulatory adjustments to Tier 2 capital**	**(17)**
58	**Tier 2 capital (T2)**	**6,702**
59	**Total regulatory capital (TC = T1 + T2)**	**52,981**
60	**Total risk-weighted assets**	**263,747**

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CC1: Composition of regulatory capital (Continued)

As of 31.12.18 *USD million except where indicated*		**Amounts**	**References[1]**
	Capital ratios and buffers		
61	Common Equity Tier 1 (as a percentage of risk-weighted assets)	12.94	
62	Tier 1 (as a percentage of risk-weighted assets)	17.55	
63	Total capital (as a percentage of risk-weighted assets)	20.09	
64	Institution-specific buffer requirement (CET1 requirements plus capital conservation buffer plus countercyclical buffer requirements plus capital buffer requirement for SRBs, expressed as a percentage of risk-weighted assets) [5]	2.71	
65	*Of which: capital conservation buffer requirement*	*1.88*	
66	*Of which: bank-specific countercyclical buffer requirement*	*0.08*	
67	*Of which: higher loss absorbency requirement*	*0.75*	
68	Common Equity Tier 1 (as a percentage of risk-weighted assets) available after meeting the bank's minimum capital requirements	8.44	
	Amounts below the thresholds for deduction (before risk weighting)		
72	Non-significant investments in the capital and other TLAC liabilities of other financial entities	1,129	
73	Significant investments in the common stock of financial entities	955	
74	Mortgage servicing rights (net of related tax liability)	0	
75	Deferred tax assets arising from temporary differences (net of related tax liability)	4,094	
	Applicable caps on the inclusion of provisions in Tier 2		
76	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to standardized approach (prior to application of cap)	0	
77	Cap on inclusion of provisions in Tier 2 under standardized approach	0	
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to	0	

	application of cap)	
79	Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	0
	Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2018 and 1 Jan 2022) according to ERV Art. 141	
80	Current cap on CET1 instruments subject to phase-out arrangements	0
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	0
82	Current cap on AT1 instruments subject to phase-out arrangements	0
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	0
84	Current cap on T2 instruments subject to phase-out arrangements	2,233
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	0

1 References link the lines of this table to the respective reference numbers provided in the "References" column in the "CC2: Reconciliation of accounting balance sheet to balance sheet under the regulatory scope of consolidation" table. 2 IFRS netting for deferred tax assets and liabilities is reversed for items deducted from CET1 capital. 3 Includes USD 602 million in DCCP-related charge for regulatory capital purposes. 4 Consists of own instruments for phase-out tier 2 capital of USD 17.2 million. 5 BCBS requirements are exceeded by our Swiss SRB requirements. Refer to the "Capital management" section of our Annual Report 2018 for more information on the Swiss SRB requirements.

p

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Prudent valuation

Annual | The table below provides a breakdown of prudent valuation adjustments to CET1 capital. These adjustments are incremental to the ones made under IFRS, which include adjustments for liquidity and model uncertainty as well as credit, funding and debit valuation adjustments.

Instruments that are measured as part of a portfolio of combined long and short positions are valued at mid-market levels to ensure consistent valuation of the long- and short component risks. A liquidity valuation adjustment is then made to the overall net long or short exposure to move the fair value to bid or offer as appropriate, reflecting current levels of market liquidity.

Uncertainties associated with the use of model-based valuations are incorporated into the measurement of fair value through the use of model reserves. These reserves reflect the amounts that the Group estimates should be deducted from valuations produced directly by models to incorporate uncertainties in the relevant modeling assumptions, in the model and market inputs used, or in the calibration of the model output to adjust for known model deficiencies.

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

Further details on the valuation adjustments in the financial accounts and related governance are provided in Note 24 Fair value measurement on pages 437–439 of our Annual Report 2018. p

Annual |

PV1: Prudent valuation adjustments (PVA)
As of 31.12.18

	USD million	Equity	Interest rates	FX	Credit	Commodities	Total	Of which: In the trading book	Of which: In the banking book
1	Closeout uncertainty, of which:	(29)	(75)	0	(16)	0	*(120)*	*(46)*	*(74)*
2	*Mid-market value*								
3	*Closeout cost*								
4	*Concentration*	*(29)*	*(75)*	0	*(16)*	0	*(120)*	*(46)*	*(74)*
5	Early termination								

6	Model risk								
7	Operational risk								
8	Investing and funding costs								
9	Unearned credit spreads								
10	Future administrative costs								
11	Other								
12	**Total adjustment[1]**	**(29)**	**(75)**	**0**	**(16)**	**0**	***(120)***	***(46)***	***(74)***

1 Valuation adjustments recognized already under the financial accounting standards reflect an estimated total life-to-date loss of USD 890 million as of 31 December 2018, of which valuation adjustments account for an estimated life-to-date loss of USD 388 million for liquidity and of USD 327 million for model uncertainty. Refer to "Note 24 Fair value measurement" in the "Consolidated financial statements" section on pages 437–439 of our Annual Report 2018 for more information.

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Section 12 Leverage ratio

Basel III leverage ratio

Quarterly | The Basel Committee on Banking Supervision (BCBS) leverage ratio is calculated by dividing the period-end tier 1 capital by the period-end leverage ratio denominator (LRD). The LRD consists of IFRS on-balance sheet assets and off-balance sheet items. Derivative exposures are adjusted for a number of items, including replacement value and eligible cash variation margin netting, the current exposure method add-on and net notional amounts for written credit derivatives. The LRD also includes an additional charge for counterparty credit risk related to securities financing transactions. In addition, balance sheet assets deducted from our tier 1 capital are excluded from LRD, which led to a difference between phase-in and fully applied LRD for deferred tax assets and net defined benefit pension plan assets until 31 December 2017.

The "Reconciliation of IFRS total assets to BCBS Basel III total on-balance sheet exposures excluding derivatives and securities financing transactions" table below shows the difference between total IFRS assets per IFRS consolidation scope and the BCBS total on-balance sheet exposures, which are the starting point for calculating the BCBS LRD as shown in the "BCBS Basel III leverage ratio common disclosure" table on the next page. The difference is due to the application of the regulatory scope of consolidation for the purpose of the BCBS calculation. In addition, carrying values for derivative financial instruments and securities financing transactions are deducted from IFRS total assets. They are measured differently under BCBS leverage ratio rules and are therefore added back in separate exposure line items in the "BCBS Basel III leverage ratio common disclosure" table on the next page.

As of 31 December 2018, our BCBS Basel III leverage ratio was 5.1% and the BCBS Basel III LRD was USD 905 billion. p

Difference between the Swiss SRB and BCBS leverage ratio

Quarterly | The LRD is the same under Swiss SRB and BCBS rules. However, there is a difference in the capital numerator between the two frameworks. Under BCBS rules, only common equity tier 1 and additional tier 1 capital are included in the numerator. Under Swiss SRB we are required to meet going as well as gone concern leverage ratio requirements. Therefore, depending on the requirement, the numerator includes tier 1 capital instruments, tier 2 capital instruments and / or TLAC-eligible senior unsecured debt. p

Quarterly |

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

USD million	**31.12.18**	30.9.18	31.12.17
On-balance sheet exposures			
IFRS total assets	**958,351**	950,193	939,322
Adjustment for investments in banking, financial, insurance or commercial	**(22,277)**	(24,532)	(12,456)

entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation			
Adjustment for investments in banking, financial, insurance or commercial entities that are outside the scope of consolidation for accounting purposes but consolidated for regulatory purposes	**0**	0	0
Adjustment for fiduciary assets recognized on the balance sheet pursuant to the operative accounting framework but excluded from the leverage ratio exposure measure	**0**	0	0
Less carrying value of derivative financial instruments in IFRS total assets[1]	**(149,821)**	(138,247)	(145,337)
Less carrying value of securities financing transactions in IFRS total assets[2]	**(123,154)**	(115,083)	(117,866)
Adjustments to accounting values	**0**	0	0
On-balance sheet items excluding derivatives and securities financing transactions, but including collateral	**663,099**	672,330	663,664
Asset amounts deducted in determining BCBS Basel III tier 1 capital	**(13,831)**	(13,380)	(12,950)
Total on-balance sheet exposures (excluding derivatives and securities financing transactions)	**649,268**	658,950	650,714

1 Consists of derivative financial instruments and cash collateral receivables on derivative instruments in accordance with the regulatory scope of consolidation. 2 Consists of receivables from securities financing transactions, margin loans, prime brokerage receivables and financial assets at fair value not held for trading related to securities financing transactions in accordance with the regulatory scope of consolidation.

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Quarterly | During the fourth quarter of 2018, LRD decreased by USD 10 billion to USD 905 billion due to decreases in currency effects of USD 2 billion and in asset size and other movements of USD 8 billion. The LRD movements described below exclude currency effects. On-balance sheet exposures (excluding derivatives and securities financing transactions (SFTs)) decreased by USD 8 billion. A decrease in exposures in the Investment Bank, mainly resulting from client-driven reductions and trade unwinds within the Equities business, was partly offset by an increase in cash and balances in central banks in Corporate Center – Group Asset and Liability Management (Group ALM) as client-driven activity affected funding consumption by the business divisions. Derivative exposures decreased by USD 4 billion, reflecting decreased notional amounts and add-on exposures under the current exposure method from a net increase of client-driven trade terminations and maturities across all businesses within the Investment Bank. These decreases were partly offset by an increase in SFTs of USD 6 billion, primarily driven by reinvestment of cash and cash equivalents in

Corporate Center – Group ALM and partly offset by lower prime brokerage receivables in the Investment Bank’s Equities business.p

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Quarterly |

LR2: BCBS Basel III leverage ratio common disclosure

USD million, except where indicated		**31.12.18**	30.9.18	31.12.17
	On-balance sheet exposures			
1	On-balance sheet items excluding derivatives and SFTs, but including collateral	663,099	672,330	663,664
2	(Asset amounts deducted in determining Basel III tier 1 capital)	(13,831)	(13,380)	(12,950)
3	**Total on-balance sheet exposures (excluding derivatives and SFTs)**	**649,268**	658,950	650,714
	Derivative exposures			
4	Replacement cost associated with all derivatives transactions (i.e., net of eligible cash variation margin)	43,007	39,529	43,225
5	Add-on amounts for PFE associated with all derivatives transactions	85,503	91,344	91,512
6	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the operative accounting framework	0	0	0
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(13,717)	(11,870)	(12,804)
8	(Exempted CCP leg of client-cleared trade exposures)	(21,556)	(21,706)	(23,427)
9	Adjusted effective notional amount of all written credit derivatives[1]	76,901	78,885	96,463
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)[2]	(74,771)	(76,657)	(94,329)
11	**Total derivative exposures**	**95,366**	99,525	100,640
	Securities financing transaction exposures			
12	Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions	213,710	194,940	196,654
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(90,555)	(79,856)	(78,788)
14	CCR exposure for SFT assets	7,774	10,389	9,509
15	Agent transaction exposures	0	0	0
16		**130,928**	125,473	127,375

	Total securities financing transaction exposures			
	Other off-balance sheet exposures			
17	Off-balance sheet exposure at gross notional amount	88,075	91,197	95,498
18	(Adjustments for conversion to credit equivalent amounts)	(59,039)	(60,078)	(63,636)
19	**Total off-balance sheet items**	**29,035**	31,118	31,862
	Total exposures (leverage ratio denominator), phase-in	**904,598**	915,066	910,591
	(Additional asset amounts deducted in determining Basel III tier 1 capital fully applied)			(1,559)
	Total exposures (leverage ratio denominator), fully applied	**904,598**	915,066	909,032
	Capital and total exposures (leverage ratio denominator), phase-in			
20	Tier 1 capital			44,562
21	Total exposures (leverage ratio denominator)			910,591
	Leverage ratio			
22	**Basel III leverage ratio phase-in (%)**			4.9
	Capital and total exposures (leverage ratio denominator), fully applied			
20	Tier 1 capital	46,279	45,972	42,995
21	Total exposures (leverage ratio denominator)	904,598	915,066	909,032
	Leverage ratio			
22	**Basel III leverage ratio fully applied (%)**	**5.1**	5.0	4.7

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

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LR1: BCBS Basel III leverage ratio summary comparison

USD million		**31.12.18**	30.9.18	31.12.17
1	Total consolidated assets as per published financial statements	958,351	950,193	939,322
2	Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation[1]	(36,108)	(37,912)	(25,406)
3	Adjustment for fiduciary assets recognized on the balance sheet pursuant to the operative accounting framework but excluded from the leverage ratio exposure measure	0	0	0
4	Adjustments for derivative financial instruments	(54,454)	(38,722)	(44,696)
5	Adjustment for securities financing transactions (i.e., repos and similar secured lending)	7,774	10,389	9,509
6	Adjustment for off-balance sheet items (i.e., conversion to credit equivalent amounts of off-balance sheet exposures)	29,035	31,118	31,862
7	Other adjustments	0	0	0
8	**Leverage ratio exposure (leverage ratio denominator), phase-in**	**904,598**	915,066	910,591

1 This item includes assets that are deducted from tier 1 capital.

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Quarterly |

BCBS Basel III leverage ratio

USD million, except where indicated					
Phase-in	**31.12.18**	30.9.18	30.6.18	31.3.18	31.12.17
Total tier 1 capital					44,562
BCBS total exposures (leverage ratio denominator)					910,591
BCBS Basel III leverage ratio (%)					4.9

Fully applied	**31.12.18**	30.9.18	30.6.18	31.3.18	31.12.17
Total tier 1 capital	**46,279**	45,972	45,353	46,180	42,995
BCBS total exposures (leverage ratio denominator)	**904,598**	915,066	910,383	925,651	909,032
BCBS Basel III leverage ratio (%)	**5.1**	5.0	5.0	5.0	4.7

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UBS Group AG consolidated

Section 13 Liquidity coverage ratio

Liquidity risk management

The table below presents an overview of risk management disclosures related to risks resulting from liquidity and funding activities that are provided separately in our Annual Report 2018.

LIQA – Liquidity risk management

Pillar 3 disclosure requirement	Annual Report 2018 section	Disclosure	Annual Report 2018 page number
Liquidity risk management including risk tolerance and target / limit setting, monitoring and reporting including policies and practices as well as governance and governance structure	Treasury management	– Strategy, objectives and governance	173
Funding risk strategy and management: objective, diversification of funding sources, limits and targets approach	Treasury management	– Liabilities and funding management	182
Liquidity risk management and strategy: objective, diversification of liquid assets, limits and targets approach	Treasury management	– Assets and liquidity management	174–181
Stress testing approach and stress scenario description	Treasury management	– Stress testing	181
		–	181

Contingency funding plan	Treasury management		Contingency funding plan	
Asset encumbrance	Treasury management	–	Asset encumbrance	178–181
(encumbered, unencumbered and assets that cannot be pledged as collateral);			Unencumbered assets available to secure funding on a Group and / or legal entity level by currency	176
unencumbered assets by currency, limitations on the transferability of liquidity			Trapped liquidity at Group level (High-quality liquid assets paragraph)	
Maturity of assets and liabilities to provide a view on the balance sheet and off-balance sheet structure	Treasury management	–	Maturity analysis of assets and liabilities	186–188

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LIQ1 – Liquidity risk management

Pillar 3 disclosure requirement	Annual Report 2018 section	Disclosure	Annual Report 2018 page number
Concentration of funding sources	Treasury management	– Funding by product and currency	184
Currency mismatch in the LCR	Treasury management	– Liquidity coverage ratio	177

High-quality liquid assets

Quarterly | High-quality liquid assets (HQLA) must be easily and immediately convertible into cash at little or no loss of value, especially during a period of stress. HQLA are assets that are of low risk and are unencumbered. Other characteristics of HQLA are ease and certainty of valuation, low correlation with risky assets, listing on a developed and recognized exchange, an active and sizable market and low volatility. Based on these characteristics, HQLA are categorized as Level 1 (primarily central bank reserves and government bonds) or Level 2 (primarily US and European agency bonds as well as non-financial corporate covered bonds). Level 2 assets are subject to regulatory haircuts and caps.p

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High-quality liquid assets

	Average 4Q18[1]			Average 3Q18[1]			Average 4Q17[1]		
USD billion	**Level 1 weighted liquidity value[2]**	**Level 2 weighted liquidity value[2]**	**Total weighted liquidity value[2]**	Level 1 weighted liquidity value[2]	Level 2 weighted liquidity value[2]	Total weighted liquidity value[2]	Level 1 weighted liquidity value[2]	Level 2 weighted liquidity value[2]	Total weighted liquidity value[2]
Cash balances[3]	**96**	**0**	**96**	102	0	102	104	0	104
Securities	**65**	**12**	**78**	64	11	74			