

**Disclosure Report 2018**  
pursuant to Part Eight  
of the Capital Requirements Regulation (CRR)

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## Definitions

### Reporting period

The report is based on figures as of 31 December 2018. In case tables include information on more periods, figures belonging to each period are properly marked.

### Exposure for the regulatory purpose

Regulatory exposure corresponds to exposure amount applied in credit risk Standardised approach (Part Three, Title II, Chapter 2, Article 111 of the CRR) or to exposure at default (EAD) in case of Internal Rating Based approach (Part Three, Title II, Chapter 3, Article 166-168 of the CRR).

### Exposure classes

The breakdown by exposure class is presented in accordance with Part Three, Title II, Chapter 2, Article 112 (referred to as Standardised Approach) and in accordance with Part Three, Title II, Chapter 3, Section 1, Article 147 (referred to as IRB Approach) of the Capital Requirements Regulation (CRR).

### Gross carrying amount

For financial assets at amortised cost the gross carrying amount includes the contractual amount outstanding at the reporting period, adjusted by any interest accrued for the period based on the effective interest rate of the asset. For financial instruments measured at fair value through other comprehensive income (FVTOCI), gross carrying amount is fair value after adding back the accumulated impairment recognized against OCI. For performing debt instruments measured at fair value, gross carrying amount is fair value, while for non-performing debt instruments is fair value after adding back accumulated negative fair value changes.

### Accounting values

The accounting values correspond to the book values (carrying amount) reported in financial statements. Carrying amounts in case of assets measured at amortised cost are the gross carrying amounts after deduction of the loss allowance. For financial instruments measured at fair value through other comprehensive income (FVTOCI) and fair value through profit and loss portfolio is fair value. Off-balance represent nominal values of off-balance item (guarantees given, loan commitments, other commitments), before application of the CCF. Net value in case of off-balance are nominal values after deduction of provisions for off-balance items.

### Credit risk adjustments

Credit risk adjustments include loss allowances and provisions calculated in line with the relevant accounting standards. Credit risk adjustments presented in the report are calculated in line with the IFRS 9 and IAS 37 standards. Loss allowances, according to IFRS 9, represent 12 months or lifetime expected loss for financial assets measured at amortised cost (including lease and trade receivables), financial assets measured at FVTOCI and provisions for off balance items (loan commitments and financial guarantees). Other commitments, booked as off balance items, are subject to provisioning in line with IAS37.

### Write-offs

Derecognition of financial instruments as the bank has no reasonable expectation of recovering the contractual cash flows. Write-offs include (1) decrease of book value directly recognised in profit and loss and (2) utilisation of allowances (decrease of book value based on allowances created in previous period).

## Disclosures in other published reports

A number of CRR disclosure requirements are covered by Erste Group's annual report. The respective articles of the CRR and the corresponding page number(s) of the annual report for 2018 can be found in the last column of the table below.

CRR article		Disclosure requested in the CRR article	Reference to annual report	Sub-chapter in annual report	Page
435-1(b)	Risk management objectives and policies	Structure and organisation of the relevant risk management function including information on its authority and statute, or other appropriate arrangements	Note 54. Risk management	Risk management organisation	195-200
435-1(c)	Risk management objectives and policies	Scope and nature of risk reporting and measurement systems	Note 54. Risk management		200-238
435-2(a)	Governance arrangements	Number of directorships held by members of the management body	Corporate governance report		78-81
435-2(b)	Governance arrangements	Recruitment policy for the selection of members of the management body and their actual knowledge, skills and expertise	Corporate governance report		78
435-2(c)	Governance arrangements	Policy on diversity with regard to selection of members of the management body, its objectives and any relevant targets set out in that policy, and the extent to which these objectives and targets have been achieved	Corporate governance report		88
436(b)	Scope of application	Differences in the basis of consolidation for accounting and prudential purposes	Note 62. Own funds and capital requirements	Comparison of consolidation for accounting purposes and regulatory purposes	254-256
436(c)	Scope of application	Material practical or legal impediment to the prompt transfer of own funds or repayment of liabilities	Note 62. Own funds and capital requirements	Impediments to the transfer of own funds	256
436(d)	Scope of application	Aggregate amount by which the actual own funds are less than required in all subsidiaries not included in the consolidation	Note 62. Own funds and capital requirements	Total capital shortfall of all subsidiaries not included in the consolidation	256
436(e)	Scope of application	Circumstance of making use of the provisions	Note 62. Own funds and capital requirements	Total capital shortfall of all subsidiaries not included in the consolidation	256
437-1(a)	Own funds	Full reconciliation of Common Equity Tier 1 items, Additional Tier 1 items, Tier 2 items and filters and deductions applied pursuant to Articles 32 to 35, 36, 56, 66 and 79 to own funds of the institution and the balance sheet in the audited financial statements of the institution	Note 62. Own funds and capital requirements	Own funds reconciliation	261-265
437-1(d)	Own funds	Separate disclosure of the nature and amounts of each prudential filter each deduction made and of items not deducted	Note 62. Own funds and capital requirements	Own funds template during the transitional period	265-272
437-1(e)	Own funds	Description of all restrictions applied to the calculation of own funds in accordance with this regulation and the instruments, prudential filters and deductions to which those restrictions apply	Note 62. Own funds and capital requirements	Own funds template during the transitional period	265-272

Table 1: Overview of CRR disclosure requirements covered by Erste Group's annual report

Metrics that are identical to the figures published in the annual report, financial statements represent audited data, while the remaining information in the Pillar 3 Disclosure Report is unaudited by external audit.

### Own Funds - Capital Instruments – DISCLOSURE REQUIREMENTS Art. 437 (1) (b) AND (c) CRR

On the website of Erste Group <https://www.erstegroup.com/en/investors/reports/regulatory-reports>, all capital instruments that are eligible at Erste Group consolidated level are listed in a separate document based on the template published in the Official Journal of the EU No. 1423/2013 on 20 December 2013. Furthermore, the full terms and conditions of the capital instruments are available on Erste Group's website or on the website of each of the issuing credit institutions respectively.

### Indicators of Global Systemic Importance – DISCLOSURE REQUIREMENTS Art. 441 CRR

The data template for the indicators of Global Systemic Importance is disclosed in a separate document, which is published on Erste Group's website under <https://www.erstegroup.com/en/investors/reports/regulatory-reports>

### Remuneration Policy – DISCLOSURE REQUIREMENTS Art. 450 CRR

Information on the remuneration policy and practices at Erste Group is disclosed in a separate document, which is published on Erste Group's website under <https://www.erstegroup.com/en/investors/reports/regulatory-reports>.

### Outline of the differences in the scopes of consolidation by entity level – DISCLOSURE REQUIREMENTS Art. 436 CRR

Description of the differences in the scope of the consolidation at the level of each entity based on Guidelines on disclosure requirements under Part Eight of the Regulation (EU) No 575/2013 is available at the Erste Group's website under <https://www.erstegroup.com/en/investors/reports/regulatory-reports>.

## Overview of non-applicable disclosures

The following table provides an overview of the Articles of the CRR not covered by the Disclosure Report or included in other disclosures as mentioned above with an explanation of reasons for non-disclosure in this report.

CRR article		Disclosure requested in the CRR article	Reason for non-applicable disclosure
437 -1 (f)	Own funds	Where institutions disclose capital ratios calculated using elements of own funds determined on a basis other than that laid down in this Regulation, a comprehensive explanation of the basis on which those capital ratios are calculated	Erste Group does not disclose capital ratios calculated using elements of own funds determined on a basis other than that laid down in the CRR.
438 (b)	Capital requirements	Upon demand from the relevant competent authority, the result of the institution's internal capital adequacy assessment process including the composition of the additional own funds requirements based on the supervisory review process as referred to in point (a) of Article 104-1 of Directive 2013/36/EU	There is no demand from the relevant competent authority.
439 (i)	Exposure to counterparty credit risk	Estimate of $\alpha$ if the institution has received the permission of the competent authorities to estimate $\alpha$	Erste Group does not apply any own estimates of the scaling factor.
449 (i)	Exposure to securitisation positions	Disclosure of types of SSPE that the institution, as sponsor, uses to securitise third-party exposures	Erste Group is not acting as a sponsor of an asset-backed commercial paper programme or another securitisation scheme according to Article 4 -1 -14 CRR.
449 (j) (vi)	Exposure to securitisation positions	Policies for recognising liabilities on the balance sheet for arrangements that could require the institution to provide financial support for securitised assets	No implicit support according to Art. 248 (1) CRR was provided to Edelweiss 2013-1 and BEE SME 2018-1 securitisation transactions by Erste Group.
449 (l)	Exposure to securitisation positions	Description of the Internal Assessment Approach for calculation of the risk weighted exposure amounts	The Internal Assessment Approach for calculation of the risk weighted exposure amounts is not applied by Erste Group
449 (n) (iv)	Exposure to securitisation positions	Separately for the trading and the non-trading book, the following information broken down by exposure type: for securitised facilities subject to the early amortisation treatment, the aggregate drawn exposures attributed to the originator's and investors' interests respectively, the aggregate capital requirements incurred by the institution against the originator's interest and the aggregate capital requirements incurred by the institution against the investor's shares of drawn balances and undrawn lines	Erste Group does not act as originator of securitised facilities subject to the early amortisation treatment.
449 (o) (ii)	Exposure to securitisation positions	Separately for the trading and the non-trading book, the aggregate amount of re-securitisation exposures retained or purchased and the exposure to financial guarantors	Erste Group does not hedge its re-securitisation positions.
449 (q)	Exposure to securitisation positions	For the trading book, the total outstanding exposures securitised by the institution and subject to a capital requirement for market risk, broken down into traditional/synthetic and by exposure type	There are no exposures in the trading book securitised by Erste Group.
449 (r)	Exposure to securitisation positions	Whether the institution has provided support within the terms of Article 248-1 and the impact on own funds	No implicit support according to Art. 248 (1) CRR has been provided to Edelweiss 2013-1 and BEE SME 2018-1 securitisation transactions by Erste Group.
455 (a) (ii)	Use of Internal Market Risk Models	Where applicable, for the internal models for incremental default and migration risk and for correlation trading, the methodologies used and the risks measured through the use of an internal model including a description of the approach used by the institution to determine liquidity horizons, the methodologies used to achieve a capital assessment that is consistent with the required soundness standard and the approaches used in the validation of the model	Erste Group does not use internal models for incremental default and migration risk and for correlation trading.
455 (d) (iii)	Use of Internal Market Risk Models	Highest, lowest and mean of risk numbers for incremental default and migration risk and for the specific risk of the correlation trading portfolio over the reporting period and as per the period-end	Erste Group does not use internal models for incremental default and migration risk and does not have a correlation trading portfolio.
455 (f)	Use of Internal Market Risk Models	Weighted average liquidity horizon for each sub-portfolio covered by the internal models for incremental default and migration risk and for correlation trading.	Erste Group does not use internal models for incremental default and migration risk and for correlation trading.

Table 2: Overview of non-applicable disclosures

## List of abbreviations

<b>AC</b>	Amortised Cost	<b>IMM</b>	Internal Model Method
<b>ALCO</b>	Asset Liability Committee	<b>IRB</b>	Internal Ratings Based
<b>ALM</b>	Asset Liability Management	<b>ISDA</b>	International Swaps and Derivatives Association
<b>AMA</b>	Advanced Measurement Approach	<b>LCR</b>	Liquidity Coverage Ratio
<b>BaSAG</b>	Bundesgesetz über die Sanierung und Abwicklung von Banken; Austrian Banking Recovery and Resolution Law	<b>LGD</b>	Loss Given Default
<b>BIA</b>	Basic Indicator Approach	<b>MRC</b>	Market Risk Committee
<b>CCF</b>	Credit Conversion Factor	<b>MRS</b>	Market Risk Solution
<b>CCP</b>	Central Counterparty	<b>MVoE</b>	Market Value of Equity
<b>CEE</b>	Central and Eastern Europe	<b>NFR</b>	Non-Financial Risks
<b>CFP</b>	Contingency Funding Plan	<b>NSFR</b>	Net Stable Funding Ratio
<b>CLA</b>	Credit Loss Allowances	<b>NPV</b>	Net Present Value
<b>COREP</b>	Common Reporting Framework	<b>OeNB</b>	Oesterreichische Nationalbank; Austrian National Bank
<b>CRD IV</b>	Capital Requirements Directive IV	<b>OLC</b>	Operational Liquidity Committee
<b>CRM</b>	Credit Risk Mitigation	<b>OTC</b>	Over-the-counter
<b>CRO</b>	Chief Risk Officer	<b>PD</b>	Probability of Default
<b>CRR</b>	Capital Requirements Regulation	<b>POCI</b>	Purchased or originated credit-impaired
<b>EAD</b>	Exposure at Default	<b>PPU</b>	Permanent Partial Use
<b>EBA</b>	European Banking Authority	<b>QCCP</b>	Qualifying Central Counterparty
<b>EBOe</b>	Erste Bank der Oesterreichischen Sparkassen AG	<b>QIS</b>	Quantitative Impact Study
<b>ECB</b>	European Central Bank	<b>RAS</b>	Risk Appetite Statement
<b>ECL</b>	Expected Credit Loss	<b>RCC</b>	Risk-bearing Capacity Calculation
<b>EEPE</b>	Effective expected positive exposure	<b>RTS</b>	Regulatory Technical Standards
<b>EHQLA</b>	Extremely High Quality Liquid Assets	<b>RW</b>	Risk Weight
<b>ERM</b>	Enterprise-wide Risk Management	<b>RWA</b>	Risk-Weighted Assets
<b>EU</b>	European Union	<b>ROCC</b>	Regional Operational Conduct Committee
<b>EVE</b>	Economic Value of Equity	<b>SFT</b>	Securities Financing Transactions
<b>FINREP</b>	Financial Reporting	<b>SICR</b>	Significant Increase in Credit Risk
<b>FMA</b>	Austrian Financial Market Authority	<b>SL</b>	Specialised Lending
<b>FTP</b>	Funds Transfer Pricing	<b>S&amp;P</b>	Standard & Poor's
<b>FVTOCI</b>	Fair Value through Other Comprehensive Income	<b>SME</b>	Small and Medium-sized Enterprises
<b>FVTPL</b>	Fair Value through Profit and Loss	<b>SPA</b>	Survival Period Analysis
<b>FX</b>	Foreign exchange	<b>SRC</b>	Standard Risk Costs
<b>GLMRM</b>	Group Liquidity and Market Risk Management	<b>SRM</b>	Single Resolution Mechanism
<b>HMC</b>	Holding Model Committee	<b>SSPE</b>	Securitisation Special Purpose Entity
<b>HQLA</b>	High quality liquid assets	<b>STA</b>	Standardised Approach
<b>IAS</b>	International Accounting Standards	<b>sVaR</b>	Stressed Value at Risk
<b>ICAAP</b>	Internal Capital Adequacy Assessment Process	<b>TPU</b>	Temporary Partial Use
<b>IFRS</b>	International Financial Reporting Standards	<b>VaR</b>	Value at Risk
<b>ILAAP</b>	Internal Liquidity Adequacy Assessment Process		
<b>IMA</b>	Internal Models Approach		

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# Introduction

## DISCLOSURE REQUIREMENTS Art. 436 (a) CRR

The provisions of Part Eight of the Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012, hereinafter referred to as the Capital Requirements Regulation (CRR) apply to Erste Group Bank AG, hereinafter referred to as Erste Group, on a consolidated basis. Erste Group was founded in 1819 as the first Austrian savings bank. In 1997, Erste Group went public on the Vienna Stock Exchange with a strategy to expand its retail business into the part of Central and Eastern Europe (CEE) that had realistic prospects of joining the European Union. Against the backdrop of emerging European integration and limited potential for growth in Austria, Erste Group acquired savings banks and financial institutions in countries adjacent to Austria from the late 1990s onwards. Today, Erste Group has an extensive presence in its core markets of Austria, the Czech Republic, Slovakia, Romania, Hungary and Croatia – all of which are members of the European Union. In Serbia, which has been assigned European Union candidate status, Erste Group maintains a minor presence. Besides the core markets, direct and indirect majority and minority banking participations are held in Slovenia, Montenegro, Bosnia and Herzegovina, North Macedonia and Moldova. Erste Group's shares are listed on the Vienna Stock Exchange, on the Prague Stock Exchange (since October 2002) and on the Bucharest Stock Exchange (since February 2008).

The core activities of Erste Group, in addition to the traditional focus on serving private individuals, include advisory services and support for corporate clients in financing, investment and access to international capital markets, public sector funding and interbank market operations.

This disclosure report gives readers a comprehensive overview of the current risk profile and risk management of Erste Group and covers the following areas:

- \_ risk management;
- \_ capital structure;
- \_ capital adequacy;
- \_ risk management systems and procedures;
- \_ risk management with respect to each type of risk;
- \_ risks assumed; and
- \_ credit risk mitigation techniques

## Disclosure policy and structure

The current Disclosure Report of Erste Group meets the disclosure requirements of Part Eight of the CRR, which took effect on 1 January 2014. In addition, report complies with the requirements set in Guidelines on disclosure requirements under Part Eight of the Regulation (EU) No 575/2013 (EBA/GL/2016/11, version 2, published on 09 June 2017) and other disclosure related guidelines.

The Disclosure Report provides comprehensive disclosures on risks, risk management and capital management. The main document is published once a year in English, even though specific information is published more often pursuant to the Guidelines on the materiality, proprietary nature and confidentiality of information, and on disclosure frequency under Article 432(1), 432(2) and 433 of Regulation (EU) 575/2013 issued by EBA in December 2014.

Erste Group has opted for the Internet as the medium for publishing its disclosures under Article 434 (1) CRR. Details are available on the website of Erste Group at <https://www.erstegroup.com/en/investors>. Relevant disclosures are either included in the annual report in the section "Financial reporting" or published as separate documents in the section "Regulatory reporting".

The preparation of the Disclosure Report and the formal review for completeness and compliance with the applicable requirements is carried out by Enterprise wide Risk Management. The Disclosure Report is subject to review by internal audit.

The Group Disclosure Policy, supplemented by a series of operating procedures, sets out the overarching principles and guidelines used by the Group in order to fulfil its disclosure requirements under Part Eight of the CRR as well as the processes in place to establish, review and approve the actual disclosures.

# The regulatory framework of Basel 3

## Implementation of Basel 3 in the European Union (EU)

On 16 April 2013, the European Parliament adopted the new capital and liquidity requirements for the implementation of Basel 3 in the EU. On 27 June 2013, the final Capital Requirements Directive IV (CRD IV) and the final Capital Requirements Regulation (CRR) were published in the Official Journal of the EU. The application of the new regulatory requirements for credit institutions and investment firms became effective as of 1 January 2014. As of this time, Erste Group has been calculating regulatory capital and regulatory capital requirements according to Basel 3.

The “Three Pillars” were introduced for the first time under Basel 2. The objectives of this framework are: a more risk sensitive capital allocation (Pillar 1 – Minimum Capital Requirements), a more detailed regulatory assessment of material risk categories (Pillar 2 - Supervisory Review Process) and increased market transparency (Pillar 3 – Market Discipline). Basel 3 enlarged the scope of these requirements.

### Pillar 1 – Minimum requirements

As introduced by Basel 2, Pillar 1 covers the calculation of capital requirements for credit risk, market risk and operational risk. As such, it details the different methods available for calculating risk weighted assets for the three risk types and provides information on the eligibility criteria for the constituents of the capital base. Under Basel 3, a leverage exposure requirement was introduced to complement the minimum risk-based capital requirements; however, the leverage ratio is not yet a binding requirement for EU institutions.

Basel 3 extended minimum requirements to also cover liquidity in addition to capital. In this regard, Pillar 1 specifies the requirements for the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR), with the latter not yet a binding requirement in the EU.

### Pillar 2 – Supervisory review process

Pillar 2 requires banks to conduct an internal capital adequacy assessment process (ICAAP) to demonstrate that they have implemented methods and procedures to safeguard capital adequacy with due attention to all material risks. The ICAAP supplements the minimum regulatory requirements of Pillar 1. It considers a broader range of risk types as well as Erste Group’s risk and capital management capabilities.

In parallel to the introduction of Pillar 1 requirements for liquidity through the Basel 3 framework, the ICAAP was complemented with an internal liquidity adequacy assessment process (ILAAP) to ensure banks have implemented processes and tools to safeguard the adequacy of their funding and liquidity.

Furthermore, Pillar 2 requires supervisors to conduct a Supervisory Review and Evaluation Process (SREP) to assess the soundness of banks’ ICAAP and ILAAP and take any appropriate actions that may be required.

### Pillar 3 – Market discipline

Taking account of Pillar 1 (Minimum Capital Requirements) and Pillar 2 (Supervisory Review Process), Pillar 3 aims to increase market transparency by providing information on the scope of application, regulatory capital, risk positions, risk measurement approaches and therefore, the capital adequacy of a bank.

# Risk management at Erste Group

DISCLOSURE REQUIREMENTS Art. 435 (1) CRR and Art. 435 (2) CRR

## Risk policy and strategy

A core function of a bank is taking risks in a conscious and selective manner and professionally steering those risks. Adequate risk policy and risk strategy is essential to a bank's fundamental financial health and operational business success.

Erste Group has developed a risk management framework that is forward-looking and tailored to its business and risk profile. This framework is based on a clear risk strategy that sets out general principles according to which risk taking must be performed across the group. The risk strategy is consistent with the business strategy and incorporates the expected impact of external environment on the planned business and risk development.

The risk strategy describes the current risk profile, defines risk management principles, strategic goals and initiatives for the main risk types as well as sets strategic limits for the significant financial and non-financial risk types as defined in the Risk Materiality Assessment. The risk strategy is executed within a clear defined governance structure. This structure also applies to monitoring risk appetite, additional metrics, as well as to the escalation of limit breaches.

In 2018, management has continued to steer critical portfolios, including active management of non-performing exposures to further strengthen the risk profile. This has been demonstrated in particular by the continuous improvement of credit quality and the ongoing decrease of non-performing loans and negative risk costs.

## Risk management organisation

Risk monitoring and control is achieved through a clear organisational structure with defined roles and responsibilities, delegated authorities and risk limits.

Erste Group's risk management organisation is presented in detail in Erste Group's annual report 2018, Note 54. to the Group financial statements.

### GROUP GOVERNANCE FOR RISK MANAGEMENT ACTIVITIES

The management board regularly deals with risk issues of all risk types in its regular board meetings. Actions are discussed and taken when needed.

Furthermore, certain cross-divisional committees were established with the purpose of carrying out risk management activities in Erste Group. They are shown in the following diagram:

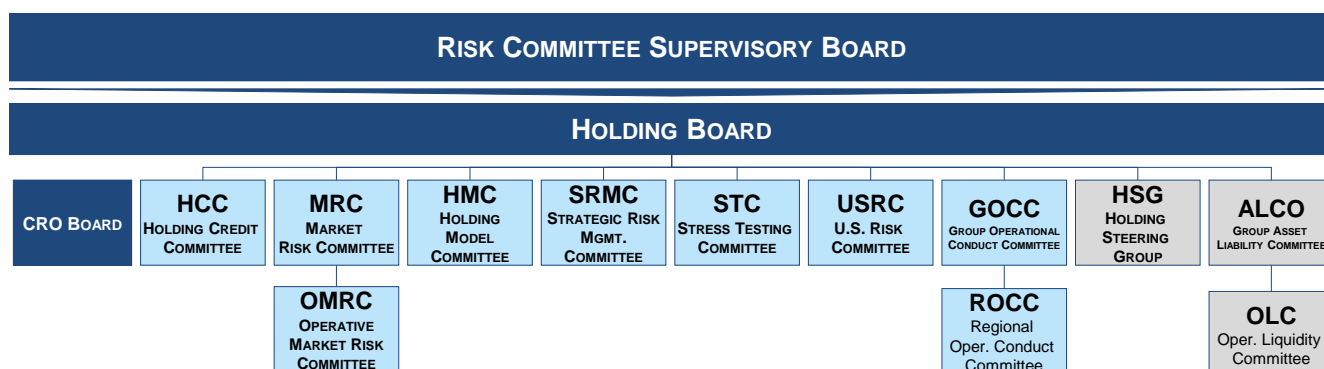


Figure 1: Risk Management Committees

The **Risk Committee of the Supervisory Board** is responsible for granting approval in all cases in which loans and exposures reach an amount exceeding the approval authority of the management board according to the Credit Risk Approval Authority Regulations. It is in charge of granting approval to large exposures pursuant to Article 392 CRR, if such a claim is equal to or exceeds 10% of the eligible capital of a credit institution. Within the competence assigned to it, the committee may grant advance approvals to the extent permitted by law. In

addition, it is responsible for supervising the risk management of Erste Group Bank AG. The risk committee meets regularly. As the central risk control body, the risk committee is regularly briefed on the risk status across all risk types.

The **CRO Board** is responsible for the consistent coordination and implementation of risk management activities within Erste Group. The CRO Board consists of the Group CRO, the chief risk officers of major subsidiaries within Erste Group and the senior area managers of the CRO division of Erste Group Bank AG. Chaired by the Group CRO, the CRO Board is the primary body for aligning on strategically relevant topics of the risk division across Erste Group entities, including (but not limited to) the group-wide strategic planning, the project portfolio and Change the Bank (CtB) investments. The CRO Board ensures a consistent flow of information from and to the group functions and supports the setting of the overall risk agenda.

The **Holding Credit Committee** (HCC) is the highest operative decision-making body for approvals of credit risks according to the valid credit risk approval authority regulations. Based on the advice of HCC, decisions of significant exposures and extended risks are decided by the risk management board of the supervisory committee. It also approves the relevant corporate industry strategies. The HCC is headed by the Group CRO and comprises the board member of Corporates & Markets, the head of Group Credit Risk Management and the head of the requesting business line. Each subsidiary has their own local credit committee established by the same principles.

The **Market Risk Committee** (MRC) is the main steering body for market risk and trading book related issues of Erste Group. MRC approves group-wide market risk limits and elaborates on the current market situation. Furthermore, it approves market risk methodologies and models, model changes, and related validation results.

The **Operative Market Risk Committee** (OMRC) prepares decisions for the MRC and approves sensitivity and notional limits which do not require VaR/SVaR limit adjustments.

The **Holding Model Committee** (HMC) is the steering and control body for IRB and Pillar 2 EL model development, validation and monitoring. All new or changed models and model related aspects (e.g. risk parameters, group-wide methodology standards) are reviewed by the Holding Model Committee and require its approval.

The **Strategic Risk Management Committee** (SRMC) holds the delegated decision authority from the management board with respect to strategic risk management functions. Its responsibility area covers the approach to credit RWA calculation and economic capital calculation methodology, the back-testing of credit loss allowances, the remedy actions resulting from reporting of credit risk control units on rating system performance.

The **Stress Testing Committee** (STC) is the sole forum for all joint resolutions, decisions and acknowledgements in the stress testing area for group-wide stress testing activities.

The **United States Risk Committee** (USRC) has been established to meet the requirements of the United States Federal Reserve Board (FRB) regulation, which has been in force since 1 July 2016. The objective is to involve the management board as key governance and control function for the U.S. trade portfolio which has been specified in the Combined U.S. Operations (CUSO) guidance.

The **Group Operational Conduct Committee** (GOCC) is an executive-level committee responsible for enforcement of the Code of Conduct as well as the management of non-financial risks. Moreover, the GOCC serves as an escalation and decision-making committee for the Regional Operational Conduct Committee (ROCC).

The **Regional Operational Conduct Committee** (ROCC) decides on business applications and implements group-wide corrective measures to steer non-financial risks (NFR). This is done based on a risk-return evaluation. Furthermore, ROCC defines group-wide standards for non-financial risk topics. The ROCC is a forum for joint alignments, decisions, and escalations in non-financial risk areas across Erste Group entities and Erste Group Bank AG itself.

The **Holding Steering Group** (HSG) is responsible for monitoring the group's Risk Appetite Statement (especially with regard to capital and liquidity adequacy, under both normal and stressed conditions), the review of proposed group and local capital measures and the proposal of remediation actions. Furthermore, it monitors recovery triggers and indicators and, when appropriate advises the management board on trigger recovery governance. The oversight of the implementation of the risk-return strategy and the proposal of actions to reinforce the risk-return steering also belong to the HSG's tasks and responsibilities.

The **Group Asset/Liability Committee** (ALCO) manages the consolidated Erste Group balance sheet, focusing on trade-offs between all affected consolidated balance sheet risks (interest rate, exchange rate and liquidity risk), and takes care of the setting of group stand-

ards and limits for the members of Erste Group. In addition, it approves policies and strategies for controlling liquidity risk as well as interest rate risk (net interest income) and examines proposals, statements and opinions of ALM, risk management, controlling and accounting functions. The approved investment strategy complies with the guidelines agreed with Risk Management.

The **Operational Liquidity Committee (OLC)** is responsible for the day-to-day management of the global liquidity position of Erste Group. It analyses the liquidity situation of Erste Group on a regular basis and reports directly to the ALCO. It also proposes measures to ALCO within the scope of the management policies and principles laid down in the Liquidity Risk Management Rule Book. Furthermore, members of the OLC are points of contact for other departments or Erste Group members for liquidity-related matters. Each local bank has its own local operational liquidity committee.

In addition, committees are established at local level, such as the “Team Risikomanagement” in Austria. It is responsible for a common risk approach with the Austrian savings banks.

## GROUP-WIDE RISK AND CAPITAL MANAGEMENT

Enterprise wide Risk Management (ERM) includes as its fundamental component the Internal Capital Adequacy Assessment Process (ICAAP) required under Pillar 2 of the Basel framework.

The ERM framework is designed to support the bank’s management in managing the risk portfolios as well as the coverage potential to ensure that the bank holds adequate capital for the nature and magnitude of its risk profile at all times. The framework is tailored to the Erste Group’s business and risk profile and reflects the strategic goal of protecting shareholders and senior debt holders while ensuring the sustainability of the organisation.

ERM framework is a modular and comprehensive management and steering system within Erste Group and is an essential part of the overall steering and management instruments. The ERM components necessary to ensure all aspects, in particular to fulfil regulatory requirements and to provide an effective internal steering tool, can be clustered as follows:

- \_ Risk Appetite Statement (RAS), limits and risk strategy;
- \_ portfolio and risk analytics including Risk Materiality Assessment (RMA), concentration risk management, and stress testing;
- \_ Risk-bearing Capacity Calculation (RCC);
- \_ planning of key risk indicators;
- \_ recovery and resolution planning.

In addition to the ICAAP’s ultimate goal of assuring capital adequacy and sustainability at all times, the ERM components serve to support the bank’s management in pursuing its strategy.

### Risk appetite

Erste Group defines the maximum level of risk it is willing to accept in order to meet its business objectives within the Group’s risk appetite (Group RAS). The Group RAS acts as a binding constraint to Erste Group’s business activities within its overall risk appetite via triggers and limits approved by the management board. The Group RAS consists of a set of core risk metrics providing quantitative direction for overall risk-return steering and qualitative statements in the form of key risk principles that are part of the guidelines for managing risks. The core risk metrics are set as ultimate boundaries for the group risk-return target setting. They are also a key part of the annual strategic planning / budgeting process and give an overall picture of capital, liquidity and risk-return trade-offs. The key objective of the RAS is to:

- \_ ensure that Erste Group has sufficient resources to support its business at any given point in time and absorb stress events;
- \_ set boundaries for the group’s risk target setting;
- \_ support the group’s financial strength and the robustness of its systems and controls.

To foster risk-return steering and ensure proactive management of the risk profile, Erste Group creates its RAS on a forward-looking basis. External constraints such as regulatory requirements create the ceiling for the RAS and therefore the amount of risk Erste Group is willing to accept. In order to ensure that the group remains within the targeted risk profile, a traffic light system was established and assigned to the core metrics. This approach allows a timely delivery of information to the respective governance and the implementation of effective remediation measures. The RAS traffic light system is defined as follows:

- \_ RAS is green: The target risk profile is inside the specified boundaries.
- \_ RAS is amber: The undershooting or overshooting of a pre-defined threshold leads to an escalation to the designated governance and the discussion of potential remediation actions.



\_ RAS is red: The undershooting or overshooting of a pre-defined limit initiates an immediate escalation to the designated governance and a prompt implementation of remediation actions.

Moreover, stress indicators are defined for selected core metrics and integrated into the assessment of the stress test results. They are reported as early warning signals to the management board to support proactive management of the risk and capital profile.

In addition, supporting metrics and principles are defined by material risk type in the group risk strategy based on Group RAS. These support implementation of the mid- to long-term strategy. Risk management governance ensures full oversight of risk decisions and sound execution of the group risk strategy. Mitigating actions are undertaken as part of the regular risk management process to ensure that the group remains within its RAS.

Group RAS for 2018 was approved by the management board and the supervisory board. The group further developed an aggregated and consolidated risk appetite dashboard (Risk Dashboard) illustrating the group's and local entities' risk profile developments by comparing the risk exposure and risk limits. The Risk Dashboard is regularly presented to the management board, risk committee of the supervisory board and to the supervisory board to support its review, oversight, and monitoring of the group risk profile and the risk profile of its local entities. The table below provides an overview of the Group performance at year-end 2018 against the approved Group RAS:

RAS core metrics	Category	Year-end 2018 Status	Governance
Solvency Ratio (fully loaded)	Capital	18.1% ●	Holding Steering Group / Holding Board
Tier 1 Ratio (fully loaded)	Capital	14.3% ●	Holding Steering Group / Holding Board
Common Equity Tier 1 Ratio (fully loaded)	Capital	13.5% ●	Holding Steering Group / Holding Board
Economic Capital Adequacy Ratio	Capital	59.2% ●	Holding Steering Group / Holding Board
Leverage Ratio (fully loaded)	Capital	6.6% ●	Holding Steering Group / Holding Board
Survival Period Analysis (SPA)	Liquidity	buffers kept under all scenarios ●	Operational Liquidity Committee / Group Asset Liability Committee / Holding Steering Group / Holding Board
Liquidity Coverage Ratio (LCR)	Liquidity	150.0% ●	Operational Liquidity Committee / Group Asset Liability Committee / Holding Steering Group / Holding Board
Net Stable Funding Ratio (NSFR)	Liquidity	138.0% ●	Operational Liquidity Committee / Group Asset Liability Committee / Holding Steering Group / Holding Board
Risk-Earnings Ratio	Earnings / Profitability	0.0% ●	Holding Steering Group / Holding Board

Table 3: Group Risk Appetite Assessment

For further information on governance see chapter 'Group Governance for Risk Management Activities'.

Group RAS is also broken down into local entities. Local RAS is approved by the management board to ensure compliance with the Group RAS and also approved by the local management board to ensure alignment with local regulatory requirements. The group may also decide to include further compulsory constraints and limits in local RAS to ensure alignment with Group RAS and Group Risk Strategy. Group RAS framework streamlines core capital, liquidity, and risk/earnings metrics as well as reinforces key risk principles that form part of the guidelines for managing risks. In addition, Group RAS strengthens internal governance responsible for oversight of risk profile development, embeds RAS into strategic planning and budgeting processes as well as day-to-day management, and ensures timely management actions in case of adverse developments.

## Portfolio and risk analytics

Erste Group uses dedicated infrastructure, systems and processes to actively identify, measure, control, report and manage risks within its portfolio. Portfolio and risk analytics processes are designed to quantify, qualify and discuss risks in order to raise awareness to management in a timely manner.

## Risk materiality assessment

The Risk Materiality Assessment (RMA) determines the materiality of risk types and consequently the risk profile across Erste Group and its entities. RMA is an annual process with the purpose of systematically identifying new and assessing all existing material risks for Erste Group. As such, the RMA is an integral part of the ICAAP and serves as a steering tool for senior management.

Insights generated by the assessment are used to improve risk management practices and further mitigate risks within the group. The assessment also serves as input for the design and definition of the group's Risk Strategy and Risk Appetite Statement. Key outputs and recommendations of the RMA are considered in the scenario design and selection of the comprehensive and reverse stress tests.

## Risk concentration analysis

Erste Group has implemented a process to identify measure, control and manage risk concentrations. This process is essential to ensure the long-term viability of Erste Group, especially in times of an adverse business environment and stressed economic conditions.

The risk concentration analysis at Erste Group is performed on an annual basis covering credit risk, market risk, operational risk, liquidity risk and inter-risk concentrations. Identified risk concentrations are considered in the scenario design of the comprehensive stress test and measured under stressed conditions. The output of the risk concentration analysis additionally contributes to the identification of material risks within the RMA and to the setting/calibration of Erste Group's limit system.

### Stress testing

Modelling sensitivities of the group's assets, liabilities and profit or loss provide management steering impetus and help to optimise Erste Group's risk-return profile. Stress tests help to factor in severe but plausible scenarios providing further robustness to measurement, steering and management. Risk modelling and stress testing are vital forward-looking elements of the ICAAP. Finally, sensitivities and stress scenarios are considered within the group's planning process.

Erste Group's most complex stress testing activities are scenario stress tests that take a comprehensive account of the impact of various economic scenarios, including second-round effects on all risk types (credit, market, liquidity and operational) and effects on the associated volumes of assets and liabilities as well as on profit and loss sensitivities. In addition to the standard scenario-driven stress testing exercises, reverse stress tests are performed to identify a scenario or a combination of scenarios in which viability of the current business model can be questioned.

Erste Group has developed specific tools to translate macroeconomic variables (e.g. GDP or unemployment rate) into risk parameters in order to support the stress testing process, which combines bottom-up and top-down approaches. For adapting the stress parameters, Erste Group additionally leverages the experience of its local professionals and uses, where appropriate, their statistical models to simulate the impacts of macroeconomic variables on the probabilities of default in the respective markets. Special attention is given to account for adequate granularity and special characteristics (i.e. countries and industries) when determining the segmentation in which the stressed parameters are defined.

Results from Erste Group's internal stress tests are analysed in order to decide on appropriate measures. The internal test performed in 2018 indicated no breach of stressed RAS triggers.

Erste Group participated in the stress test executed by the European Central Bank (ECB) in cooperation with the European Banking Authority (EBA) in 2018. The phase-in CET 1 ratio decreased to 8.6% in the adverse scenario (8.5% fully loaded) and reached 13.3% (13.1% fully loaded) in the baseline scenario.

### Risk-bearing capacity calculation

The Risk-bearing Capacity Calculation (RCC) defines the level of capital adequacy required by the ICAAP. In contrast to the regulatory view of Pillar 1, the RCC is based on an economic view and determines whether the bank has sufficient capital for covering all risks it is exposed to. Based on the results of the RMA, economic capital is considered for all relevant risk types. The aggregated capital requirements are then compared to internally available capital, as reflected by the coverage potential

The management board and risk management committees are briefed quarterly on the results of the capital adequacy calculation. The report includes risks movements, available capital and coverage potential, consideration of potential losses in stress situations, the degree of the risk limit utilisation and the overall status of capital adequacy.

Besides the Pillar 1 risk types (credit, market and operational risk), interest rate risk in the banking book, foreign exchange risk arising from equity investments, credit spread risk in the banking book, risk from foreign currency loans (i.e. FX induced credit risk), risk from repayment vehicles as well as business and strategic risk are explicitly considered within the economic capital requirements via internal models in the context of Pillar 2. At the end of 2018, the utilisation of economic capital was at 59.2%. The methodologies applied to the different risk types are diverse and range from historical simulations and other value at risk approaches to the regulatory approach for residual portfolios. Moreover, calculations for most of the portfolios under the standardised approach for credit risk are extended by risk parameters from the internal ratings-based approach in order to give a better economic view.

Credit risk accounts for 66.9% of total economic capital requirements. Reflecting Erste Group's conservative risk management policy and strategy, the group does not offset diversification effects between the risk types. The economic capital requirements for unexpected losses are computed on a one-year time horizon with a 99.95% confidence level.

The capital or coverage potential required to cover economic risks / unexpected losses is based on Basel 3 fully loaded regulatory own funds adjusted by amortised cost reserves and the year-to-date profit (if not already considered in Pillar 1 capital). The coverage potential must be sufficient to absorb unexpected losses resulting from the group's operations at any point in time.

## Risk planning

Group Risk Planning framework is essential for the capital allocation and overall financial planning processes and supports the adequate reflection of risks within the strategy, steering and management processes of the group.

### Methods and instruments applied

Key risk indicators covered by the Risk Planning framework include indicators that provide an overview of incurred or potential risks, with respect to both portfolio and economic environment developments. Indicators include RWA (and related indicators), portfolio quality indicators (impairments, NPL/NPE and relevant performance indicators etc.), as well as indicators required by the regulatory authorities under the responsibility of the Risk division.

Planning activities are performed in close cooperation with all stakeholders in the group's overall process, and follow a clear governance structure to ensure sound risk planning process.

## Capital allocation

An important task integral to the risk planning process is the allocation of capital to entities, business lines and segments. This is done with close cooperation between Risk Management and Controlling. Methodology for allocation reflects risk and controlling processes in order to allocate capital with risk-return considerations.

## Recovery and resolution plans

In compliance with the Austrian Banking Recovery and Resolution Law ('Bundesgesetz über die Sanierung und Abwicklung von Banken – BaSAG') Erste Group submits an updated Group Recovery Plan to ECB every year.

The Group Recovery Plan identifies options for restoring financial strength and viability in case Erste Group comes under severe economic stress. The plan specifies potential options for the replenishment of capital and liquidity resources of the bank in order to cope with a range of scenarios including both idiosyncratic and market-wide stress. The recovery governance described in the plan ensures timely identification and proper management of any recovery situation.

Erste Group collaborates with the resolution authorities in the drawing up of resolution plans based on BaSAG and EU Regulation No 806/2014 establishing the Single Resolution Mechanism (SRM Regulation).

## RISK MONITORING

All risks the Group is exposed to and the relevant exposures are monitored on a continuous basis and managed on the following levels: portfolio, organisational and risk type level. The following figure presents an overview of the risk monitoring framework at Group level consisting of both strategic and operational oversight as set out below.

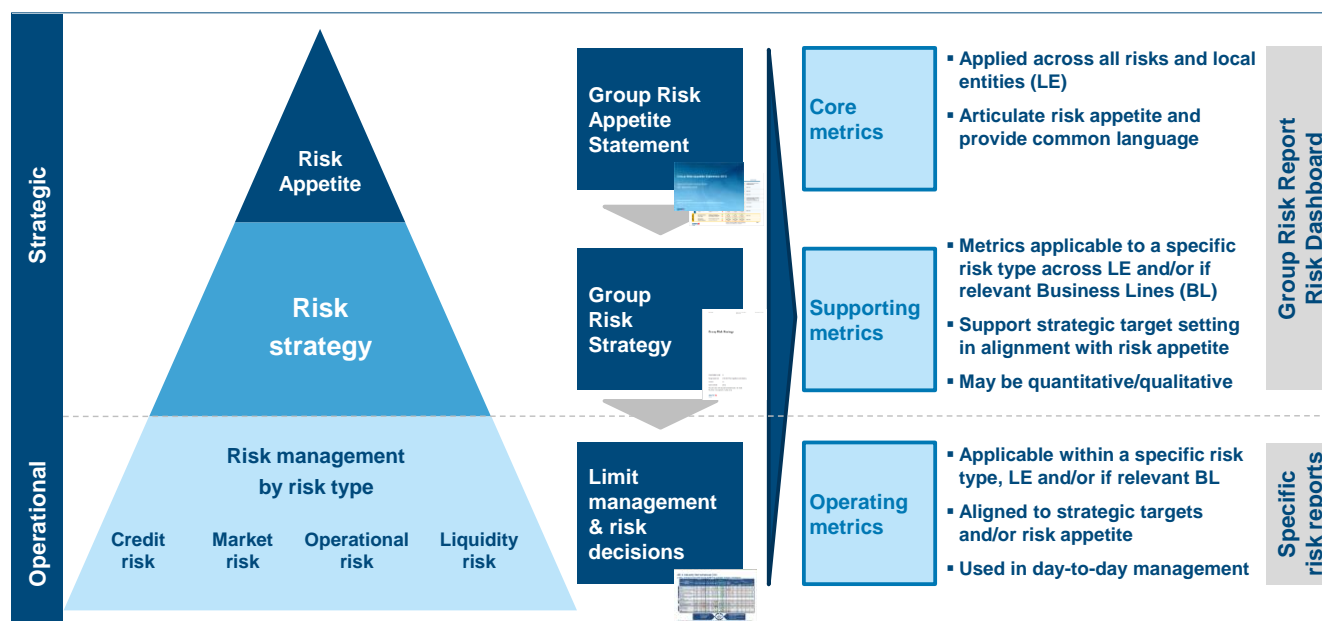


Figure 2: Strategic and operational risk oversight and management at Erste Group

### Strategic oversight

The RAS sets the boundary for the maximum risk the bank is willing to accept in order to pursue its business objectives; this includes a set of core steering metrics with trigger levels providing strategic guidelines for risk management and planning.

The risk strategy sets strategic risk targets based on the target risk profile and RAS, and provides a balanced risk-return view considering the strategic focus and business plans.

Both are regularly monitored and reported in the Group Risk Report including a traffic light overview together with respective measures to address deviations from strategic plans or objectives identified. Group and local RAS are also reported in the Risk Dashboard. The Group Risk Report and the Risk Dashboard are presented and discussed in the management board, the risk committee of the supervisory board, as well as the supervisory board on a quarterly basis.

### Operational oversight

Risk management by risk type ensures that the risk-specific profile remains in line with the risk strategy and operational limits support achievement of the strategic targets. The development of the specific risk profile (i.e. retail credit, corporate credit, operational risk, etc.) is reported through dedicated risk reports in a more granular way and supports risk decision-making of the dedicated risk functions to ensure the risk profile remains within the risk strategy (i.e. operational risk report, retail risk report, etc.). These reports also include specific monitoring metrics that provide an early warning signal for adverse developments of, e.g., portfolio quality (client, segment, countries and industries) or risk drivers.

## Management bodies

Erste Group has a two-tier governance structure with a management board and a supervisory board as management bodies. Details on the supervisory board mandates or similar functions, on the recruitment policy for the selection and assessment of members of management bodies, as well as on the policy on diversity are contained in the corporate governance report, which is part of the annual report. Details on career and education of the management board and the supervisory board members are available on Erste Group's website under <https://www.erstegroup.com/en/about-us>.

### RISK COMMITTEE OF THE SUPERVISORY BOARD

The risk committee is one of six committees set up by the supervisory board of Erste Group. It advises the management board with regard to Erste Group's current and future risk appetite and risk strategy and monitors the implementation of this risk strategy. The committee also reviews whether the services and products offered are adequately priced in accordance with the bank's business model and risk strategy. Without prejudice to the duties of the remuneration committee, the risk committee is also responsible for reviewing whether the incentives offered by the internal remuneration system adequately take into account risk, capital, liquidity and the probability and timing of profit realisation. The risk committee is responsible for granting approval in all those cases in which loans and exposures reach an amount exceeding the approval authority of the management board defined in the approval authority regulation. The approval of the risk committee is required for any exposure as defined in section 28b of the Austrian Banking Act. In addition, it may grant advance approvals to the extent permitted by law.

The risk committee is responsible for monitoring the risk management of Erste Group Bank AG. The supervisory board has delegated to the risk committee the right to approve the establishment and closure of branches and to grant special statutory power of attorney (Prokura) or commercial power (Handlungsvollmacht) for all business operations. The committee is responsible for monitoring the Group's portfolio of participations except in cases where this is the responsibility of the audit committee. The tasks of the risk committee include the acknowledgement of reports on legal disputes as well as on important audits of subsidiaries conducted by regulatory authorities. In addition, the risk committee is responsible for reviewing potential stress scenarios in order to assess how the bank's risk profile reacts to external and internal events. Furthermore, the risk committee assesses recommendations of internal and external auditors and monitors the appropriate implementation of measures taken that are not covered by reports of other committees. It also advises and supports the supervisory board in monitoring current and future risk appetite and the risk strategy and submits recommendations on required adjustments to the risk strategy to the supervisory board.

The risk committee held seventeen meetings in 2018, at which it regularly took decisions within its duties and powers as outlined above and was briefed on loans granted within the scope of authorization of the management board.

## Material risks at Erste Group

At Erste Group, the risk materiality assessment is performed for risk types to which a credit institution is or could be potentially exposed. This Disclosure Report presents the qualitative and quantitative features of the following material risk types in detail:

- \_ Credit risk (including counterparty and country risk)
- \_ Market risk (including interest rate and credit spread risks in the banking book)
- \_ Operational risk
- \_ Liquidity risk
- \_ Macroeconomic risk
- \_ Credit risk concentration
- \_ Strategic risk
- \_ Reputational risk
- \_ Cross-guarantee risk
- \_ Compliance risk
- \_ Model risk (Credit risk, Market risk and Operational risk related)

In addition, this report also provides details on interest rate risk, counterparty credit risk and the risks arising from securitisation positions and equity exposures, which form an integral part of the risk types mentioned above.

# Scope of application

## DISCLOSURE REQUIREMENTS Art. 436 CRR

In the application of the Article 436 (b) CRR, Erste Group is disclosing the differences due to scope of consolidation, followed by the differences between carrying amounts available in financial statements and exposure used for the regulatory purpose.

### Differences in scope of consolidation and mapping with regulatory risk categories – Assets

in EUR million	Carrying amounts of the items						Not subject to capital requirements or subject to deduction from capital
	IFRS	CRR	Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to the securitisation framework	Subject to the market risk framework	
<b>Cash and cash balances</b>	<b>17,549</b>	<b>17,543</b>	<b>16,014</b>	<b>54</b>	<b>0</b>	<b>1,529</b>	<b>0</b>
Cash on hand	5,688	5,688	5,688	0	0	0	0
Cash balances at central banks	10,853	10,853	9,766	0	0	1,086	0
Other demand deposits	1,009	1,003	560	54	0	443	0
<b>Financial assets held for trading</b>	<b>5,584</b>	<b>5,581</b>	<b>0</b>	<b>3,038</b>	<b>0</b>	<b>5,404</b>	<b>29</b>
Derivatives	3,037	3,039	0	3,038	0	2,862	0
Other financial assets held for trading	2,547	2,542	0	0	0	2,542	29
<b>Non-trading financial assets at fair value through profit or loss</b>	<b>3,310</b>	<b>2,870</b>	<b>2,840</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>21</b>
Equity instruments	372	362	362	0	0	0	0
Debt securities	2,651	2,222	2,192	0	30	0	21
Loans and advances to customers	287	287	287	0	0	0	0
<b>Financial assets at fair value through other comprehensive income</b>	<b>9,272</b>	<b>9,272</b>	<b>9,272</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>
Equity investments	239	239	239	0	0	0	0
Debt securities	9,033	9,033	9,033	0	0	0	28
<b>Financial assets at amortised cost</b>	<b>189,106</b>	<b>189,655</b>	<b>171,306</b>	<b>16,555</b>	<b>1,288</b>	<b>12,816</b>	<b>32</b>
Debt securities	26,050	26,049	26,049	0	0	0	0
Loans and advances to banks	19,103	19,092	2,157	16,449	0	12,755	0
Loans and advances to customers	143,953	144,514	143,101	106	1,288	61	32
<b>Finance lease receivables</b>	<b>3,763</b>	<b>3,727</b>	<b>3,710</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>0</b>
<b>Hedge accounting derivatives</b>	<b>132</b>	<b>132</b>	<b>0</b>	<b>132</b>	<b>0</b>	<b>13</b>	<b>0</b>
<b>Property and equipment</b>	<b>2,293</b>	<b>2,037</b>	<b>2,037</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Investment property</b>	<b>1,159</b>	<b>787</b>	<b>787</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Intangible assets</b>	<b>1,507</b>	<b>1,496</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,496</b>
<b>Investments in joint ventures and associates</b>	<b>198</b>	<b>510</b>	<b>510</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Tax assets</b>	<b>504</b>	<b>497</b>	<b>477</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>
Current tax assets	101	100	100	0	0	0	0
Deferred tax assets	402	397	376	0	0	0	21
<b>Assets held for sale</b>	<b>213</b>	<b>103</b>	<b>103</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Trade and other receivables</b>	<b>1,318</b>	<b>1,305</b>	<b>1,305</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Other assets</b>	<b>882</b>	<b>746</b>	<b>746</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total assets</b>	<b>236,792</b>	<b>236,261</b>	<b>209,106</b>	<b>19,779</b>	<b>1,335</b>	<b>19,762</b>	<b>1,626</b>

Table 4.1: Differences between accounting and regulatory scope of consolidation of assets and mapping with regulatory risk categories (EU LI1 - EBA/GL/2016/11)

## Differences in scope of consolidation and mapping with regulatory risk categories – Liabilities

in EUR million	Carrying amounts of the items						
	IFRS	CRR	Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital
<b>Financial liabilities held for trading</b>	<b>2,508</b>	<b>2,509</b>	<b>0</b>	<b>2,001</b>	<b>0</b>	<b>2,194</b>	<b>0</b>
Derivatives	2,000	2,001	0	2,001	0	1,686	0
Other financial liabilities	508	508	0	0	0	508	0
<b>Financial liabilities designated at fair value through profit or loss</b>	<b>14,122</b>	<b>13,672</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13,672</b>
Deposits from banks	0	0	0	0	0	0	0
Deposits from customers	212	212	0	0	0	0	212
Debt securities in issue	13,446	13,460	0	0	0	0	13,460
Other financial liabilities	464	0	0	0	0	0	0
<b>Financial liabilities measured at amortised cost</b>	<b>196,863</b>	<b>196,973</b>	<b>0</b>	<b>2,879</b>	<b>0</b>	<b>2,879</b>	<b>194,094</b>
Deposits from banks	17,658	17,638	0	1,421	0	1,421	16,216
Deposits from customers	162,426	162,583	0	1,458	0	1,458	161,125
Debt securities in issue	16,293	16,274	0	0	0	0	16,274
Other financial liabilities	486	479	0	0	0	0	479
<b>Finance lease liabilities</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Hedge accounting derivatives</b>	<b>277</b>	<b>277</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>277</b>
<b>Fair value changes of the hedged items in portfolio hedge of interest rate risk</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Provisions</b>	<b>1,705</b>	<b>1,696</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,696</b>
<b>Tax liabilities</b>	<b>122</b>	<b>105</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>105</b>
Current tax liabilities	99	97	0	0	0	0	97
Deferred tax liabilities	23	7	0	0	0	0	7
<b>Liabilities included in disposal groups classified as held for sale</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>Other liabilities</b>	<b>2,323</b>	<b>2,190</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,190</b>
<b>Total equity</b>	<b>18,869</b>	<b>18,836</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18,836</b>
Equity attributable to non-controlling interests	4,494	4,528	0	0	0	0	4,528
Equity attributable to the owners of the parent - additional equity instruments	993	993	0	0	0	0	993
Equity attributable to the owners of the parent	13,381	13,315	0	0	0	0	13,315
Equity attributable to the owners of the parent - subscribed capital	860	860	0	0	0	0	860
Equity attributable to the owners of the parent - additional paid-in capital	1,477	1,477	0	0	0	0	1,477
Equity attributable to the owners of the parent - retained earnings and other reserves	11,045	10,978	0	0	0	0	10,978
<b>Total liabilities and equity</b>	<b>236,792</b>	<b>236,261</b>	<b>0</b>	<b>4,880</b>	<b>0</b>	<b>5,073</b>	<b>230,873</b>

Table 4.2: Differences between accounting and regulatory scope of consolidation of liabilities and mapping with regulatory risk categories (EU LII-EBA/GL/2016/11)

Information on the differences between IFRS and CRR scope of consolidation is disclosed in Erste Group's annual report, as stated in table 1 of this report. Break down of carrying amounts refer to the risk frameworks under which capital requirement is calculated in accordance with Part Three of the CRR. Overlapping between risk frameworks exist for trading book derivatives and repo transactions, as they are part of both counterparty credit risk and market risk framework. Another overlap exists between deduction and securitisation framework for the part of securitisation exposure with risk weight of 1250% (as explained in more detail in securitisation part of this report). Therefore the sum of different frameworks is not equal to the total carrying values presented under CRR scope of consolidation. In the last column, on-balance positions deducted from own funds in accordance with Part Two of the CRR are presented. As a part of deductions, additional value adjustments in accordance with Article 34 of the CRR are included for the assets measured at FV. Detailed information on deductions from own funds are disclosed in annual report, as presented in table 1 of this report.

The aim of table below is to provide information on the main sources of difference between the financial statements carrying amounts and exposure values used for regulatory purposes by relevant risk frameworks.

in EUR million	Total	Items subject to		
		Credit risk framework	Counterparty credit risk framework	Securitisation framework
Assets carrying value amount under regulatory scope of consolidation	236,261	209,106	19,779	1,335
Liabilities carrying value amount under regulatory scope of consolidation	217,425	0	4,880	0
Total net amount under regulatory scope of consolidation	236,261	209,106	19,779	1,335
Off-balance sheet amount	43,407	20,586	0	0
Effect of CCF to off-balance	-22,822	0	0	0
Differences in valuations	0	0	0	0
Differences due to SFT	5,341	0	5,341	0
Differences due to derivatives	-311	0	-311	0
Differences due to consideration of allowances for on-balance exposure	3,590	3,590	0	0
Specific credit risk adjustment for exposure in STA	-978	-978	0	0
Differences due to securitisation	-53	0	0	-53
Other	1,371	1,425	-54	0
<b>Exposure amount considered for regulatory purposes before CRM</b>	<b>259,768</b>	<b>233,730</b>	<b>24,756</b>	<b>1,282</b>

Table 5: Main sources of differences between regulatory exposure amount and carrying value amount in financial statements (EU LI2- EBA/GL/2016/11)

Assets carrying value amount represents total assets of the bank under the regulatory scope of consolidation, while in respective columns portion related to relevant risk frameworks is presented. Exposures subject to market risk include only positions booked in the trading book (see table 4), hence are not included in the table above. As on-balance items subject to deductions are not considered in regulatory exposure, they are as well not included in the table above. Derivative liabilities are not considered in the total net amount, while the netting benefit from derivative liabilities is included in the line Differences due to derivatives.

In the column total, off-balance sheet amount represent the nominal value of the off-balance items under the regulatory scope of consolidation, while in the column credit risk framework, off-balance amount after application of credit conversion factors is disclosed. Effect of CCF to off-balance is shown separately in the following row.

Differences in valuations represent consideration of credit value adjustments (CVA) for derivatives in the carrying value. Differences due to SFTs refer to regulatory exposures from reverse repo transactions. Differences due to derivatives stem from different treatment of netting, i.e. balance sheet netting vs. regulatory netting, as well as from regulatory add-ons according to Article 274 CRR that increase the regulatory exposure.

In the subsequent row, differences due to consideration of allowances for on-balance exposure assigned are disclosed. In order to present exposure value after specific credit risk adjustments for the exposure under STA, allowances are deducted in following row.

Differences due to securitisation refer to the net effect of (1) tranches placed with the investors; (2) reserve fund and synthetic excess spread that are not collateralized with the assets; and (3) redemptions between last payment date for Notes Edelweiss 2 as of 11 Oct. 2018 and assets of Edelweiss 2 as of 31 Dec. 2018.

Other differences in credit risk are mainly driven by Trustee loans considered in regulatory exposure and differences due to FX rates used for non-EUR portfolios.

Total regulatory exposure is shown before application of credit risk mitigation.



# Capital requirements

## DISCLOSURE REQUIREMENTS Art. 438 CRR

Based on the business activities of Erste Group, capital requirements are derived for the Pillar 1 risk types credit risk, market risk and operational risk. In the context of Pillar 2, interest rate risk in the banking book, foreign exchange risk arising from equity investments, credit spread risk in the banking book, risk from foreign currency loans as well as business and strategic risk are explicitly considered within economic capital requirements by means of internal models. The capital requirements were complied with at all times during the reporting period.

### Overview of RWAs and capital requirements calculated in accordance with Article 92 of the CRR

in EUR million	RWAs		Minimum capital requirements
	Dec 18	Dec 17	Dec 18
Credit risk (excluding CCR)	89,079	83,398	7,126
of which the standardised approach	15,263	15,003	1,221
of which the foundation IRB (FIRB) approach	54,553	49,806	4,364
of which the advanced IRB (AIRB) approach	17,629	17,093	1,410
of which equity IRB under the simple risk-weighted approach or the IMA	1,634	1,496	131
CCR	2,155	2,022	172
of which mark to market	1,400	1,096	117
of which original exposure	29	29	2
of which the standardised approach	0	0	0
of which internal model method (IMM)	0	0	0
of which comprehensive method	65	274	0
of which risk exposure amount for contributions to the default fund of a CCP	0	0	0
of which CVA	661	622	53
Settlement risk	0	1	0
Securitisation exposures in the banking book (after the cap)	89	101	7
of which IRB approach	0	0	0
of which IRB supervisory formula approach	89	101	7
of which internal assessment approach	0	0	0
of which standardised approach	0	0	0
Market risk	3,434	2,914	275
of which the standardised approach	981	1,022	79
of which IMA	2,453	1,891	196
Large exposures	0	0	0
Operational risk	15,241	17,911	1,219
of which basic indicator approach	3,403	3,219	272
of which standardised approach	0	0	0
of which advanced measurement approach	11,838	14,692	947
Amounts below the thresholds for deduction (subject to credit risk 250% risk weight)	1,886	1,264	151
Floor adjustment	0	0	0
Other exposure amounts	2,715	2,419	217
<b>Total</b>	<b>114,599</b>	<b>110,028</b>	<b>9,168</b>

Table 6: Overview of RWAs and capital requirement (EU OV1- EBA/GL/2016/11)

Position amounts below the threshold for deduction (subject to credit risk 250% risk weight) is shown as a separate figure, although it represents part of capital requirement under credit risk.

Since the end of the second quarter of 2017, Erste Group reports on consolidated level a RWA add-on in view of the calculation of risk-weighted assets for credit risk in Banca Comercială Română (BCR) in the amount of around EUR 2.4 billion. This RWA increase frontloads the expected difference in BCR between the treatment of exposures under the Standardised Approach compared to the treatment under IRB Approach and is limited in time until the authorization of the IRB Approach in BCR. This figure is shown in table above in the row Other exposure amounts. Erste Group was informed by the ECB in the third quarter of 2018 about the final decision in view of credit risk models, which became effective at the end of September 2018. The decision had effect on risk weighted assets (RWA) on consolidated level of around EUR 300 million.

## CREDIT AND COUNTERPARTY CREDIT RISK

The Austrian Financial Market Authority (FMA) together with the Austrian National Bank (OeNB) approved the application to use the IRB Approach for the majority of the credit risk positions of Erste Group in January 2007. The Supervisory Slotting Approach is applied to Specialised Lending (SL). The remaining risk positions are covered by the Standardised Approach. Further information on the topic is included in the chapters “Use of ECAIs”, “Use of the IRB Approach to Credit Risk” and “Counterparty Credit Risk”. More details on

securitisations are included in the chapter “Exposure to Securitisation Positions”, and for equity exposures in the chapter “Exposures in Equities not included in the Trading Book”.

The table below shows an overview of capital requirements to cover credit risk, counterparty credit risk and securitisation. The capital requirements under the IRB Approach and the Standardised Approach respectively are broken down into the relevant exposure classes.

#### Capital requirements for credit, counterparty credit risk and securitisation by exposure class

in EUR million	Capital requirements	Capital requirements (% of total)
<b>IRB Approach</b>		
Central Governments and Central Banks	139	1.9%
Institutions	303	4.1%
Corporates	3,797	51.3%
Specialised lending	1,130	15.3%
Retail	1,410	19.0%
SME	314	4.2%
Secured by immovable property collateral	535	7.2%
Other retail	561	7.6%
Equity	222	3.0%
Simple Risk Weight Approach	131	1.8%
PD/LGD Approach	56	0.8%
Significant Investments with RW of 250%	35	0.5%
Securitisation Positions	7	0.1%
Other non-credit obligation assets	201	2.7%
<b>IRB Approach Total</b>	<b>6,080</b>	<b>82.1%</b>
<b>Standardised Approach</b>		
Central Governments and Central Banks	110	1.5%
Regional Governments or Local Authorities	28	0.4%
Public Sector Entities	22	0.3%
Multilateral Development Banks	0	0.0%
International Organisations	0	0.0%
Institutions	15	0.2%
Corporates	555	7.5%
Retail	260	3.5%
Exposures secured by mortgages on immovable property	120	1.6%
Exposures in default	26	0.4%
Exposures associated with particular high risk	16	0.2%
Covered Bonds	0	0.0%
Securitisation Positions	0	0.0%
Exposures to institutions and corporates with a short-term credit assessment	0	0.0%
Collective Investment Undertakings	6	0.1%
Equity	35	0.5%
Institutions in Standardised Approach	35	0.5%
Permanent Partial Use	1	0.0%
Other items	132	1.8%
<b>Standardised Approach Total</b>	<b>1,324</b>	<b>17.9%</b>
<b>Total</b>	<b>7,404</b>	<b>100.0%</b>

Table 7: Capital requirements for credit risk by exposure class under the Standardised Approach and the IRB Approach (Art. 438 (c) (d) CRR)

## Additional disclosure of specialised lending and equity under the simple risk-weight approach

### Specialised lending by regulatory categories

in EUR million	Remaining maturity	On-balance sheet amount	Off-balance sheet amount	Risk weight	Exposure amount	RWA	Expected loss
Category 1	Less than 2.5 years	892	221	50%	1,040	581	0
	Equal to or more than 2.5 years	5,324	471	70%	5,678	4,488	23
Category 2	Less than 2.5 years	1,285	414	70%	1,557	1,156	6
	Equal to or more than 2.5 years	4,208	827	90%	4,806	4,709	38
Category 3	Less than 2.5 years	528	175	115%	648	801	18
	Equal to or more than 2.5 years	925	208	115%	1,077	1,345	30
Category 4	Less than 2.5 years	104	53	250%	139	384	11
	Equal to or more than 2.5 years	218	37	250%	247	666	20
Category 5	Less than 2.5 years	114	6	-	118	0	59
	Equal to or more than 2.5 years	493	62	-	541	0	271
<b>Less than 2.5 years</b>		<b>2,923</b>	<b>869</b>		<b>3,502</b>	<b>2,922</b>	<b>94</b>
<b>Total</b>	<b>Equal to or more than 2.5 years</b>	<b>11,168</b>	<b>1,604</b>		<b>12,349</b>	<b>11,208</b>	<b>382</b>

### Equities under the simple risk-weight approach by categories

in EUR million	On-balance sheet amount	Off-balance sheet amount	Risk weight	Exposure amount	RWA	Capital requirements
Exchange-traded equity exposures	48	14	190%	62	119	9
Private equity exposures	101	0	290%	101	292	23
Other equity exposures	331	0	370%	331	1,223	98
<b>Total</b>	<b>479</b>	<b>14</b>		<b>494</b>	<b>1,634</b>	<b>131</b>

Table 8: Calculation of RWA in accordance with Article 153 (5) and Article 155 (2) of CRR for specialised lending and equity (EU CR10 EBA/GL/2016/11)

Erste Group is reporting on consolidated level since Q3 2017 – due to a decision of the European Central Bank in the context of its supervisory assessments in view of deficiencies in credit risk models – a RWA add-on of around EUR 1.7 billion until these deficiencies will be addressed in the course of an update of these models.

## MARKET RISK

### Capital requirements to cover position risk, commodities risk, foreign-exchange risk and settlement risk.

in EUR million	Capital requirements	Capital requirements (% of total)
Standardised Approach	79	28.6%
position risk with interest rate instruments	51	18.6%
position risk in equity instruments	6	2.0%
commodities risk	0	0.0%
foreign-exchange risk (incl. gold)	22	8.0%
Internal Model	196	71.4%
Settlement Risk	0	0.0%
<b>Total</b>	<b>275</b>	<b>100.0%</b>

Table 9: Capital requirements of position, foreign-exchange, commodities and settlement risk (Art. 438 (c) CRR)

The main driver for the decrease of own funds requirements for market risk is due to changed exposures towards governments. Position changes led to higher diversification and a decrease of stressed VaR also translating to lower internal model contribution in 2018.

## OPERATIONAL RISK

For the calculation of regulatory capital requirements for operational risk at Erste Group, the Advanced Measurement Approach (AMA) has been used since approval by the OeNB in the first half of 2009. In subsidiaries which do not yet use the AMA, the Basic Indicator Approach (BIA) is used. The table below shows the capital requirements for operational risk under the AMA and the BIA. Details on the management of operational risk at Erste Group are presented in the chapter “Operational Risk”.

in EUR million	Capital requirements	Capital requirements (% of total)
Advanced Measurement Approach	947	77.7%
Basic Indicator Approach	272	22.3%
<b>Total</b>	<b>1,219</b>	<b>100.0%</b>

Table 10: Capital requirements for operational risk (Art. 438 (f) CRR)

## NON-Deducted PARTICIPATIONS IN INSURANCE UNDERTAKINGS

Table below provides information on not deducted holdings of own funds instruments of an insurance undertaking, a re-insurance undertaking or insurance holding company in which the bank has a significant investment (according to Article 49 (1) CRR).

in EUR million	Dec 18
Carrying amount of holdings of own funds instruments of a financial sector entity where the institution has a significant investment not deducted from own funds (before risk weighting)	318
RWAs	796

Table 11: Non-deducted participations in insurance undertakings (Article 438 (c) (d) CRR & EU INS1 - EBA/GL/2016/11)

## INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS

### DISCLOSURE REQUIREMENTS Art. 438 (a) CRR

The Internal Capital Adequacy Assessment Process (ICAAP) and the Risk-bearing Capacity Calculation (RCC) form integral parts of Pillar 2 requirements pursuant to the Basel regime. Erste Group’s RCC measures the economic risks across all relevant risk types and compares them to the capital or the coverage potential Erste Group holds for covering such risks. More specifically, the risk side of the calculation serves to determine the economic capital requirement from unexpected losses in respect of credit, market, operational and other risks. The risk is calculated at a confidence level of 99.95%. This economic capital requirement is then compared to the capital held as coverage potential, which is based on regulatory own funds and additional coverage reserves available, thus determining the bank’s ability to absorb potential unexpected losses.

The calculation of RCC is designed in accordance with the business strategy and risk profile of Erste Group and is accounted for in the Risk Appetite Statement (RAS) of the Group. The RAS defines, from a strategic perspective, the risk level that the Group is willing to expose itself to. The RAS specifies restrictions and limits required for daily operations. In general, the entire coverage potential has to be higher than or equal to the bank’s overall risk exposure.

The Group has defined Economic Capital Adequacy limits as one of several measures to express and monitor the Group’s risk appetite. To determine the Group’s capital adequacy, Erste Group deploys a forward-looking traffic light system. In this manner, management may assess at any time the extent to which the economic capital adequacy of the Group is appropriate and sufficient. This process enables the management to respond in time to changes, and, if necessary, to take the relevant measures on either the risk/economic capital side or the available capital/coverage potential side.

The management board and risk management committees are briefed regularly, at least quarterly, on the results of the risk-bearing capacity determined, including the movements in risk/economic capital and in available capital/coverage potential, the degree of utilisation of limits, and modelled risks/economic capital and available capital/coverage potential going forward. The calculation of the RCC forms a vital part of the management of risk and capital at Erste Group.

The figure below shows the distribution of risk types which make up the economic capital requirement of Erste Group. Other risks encompass business and strategic risk.

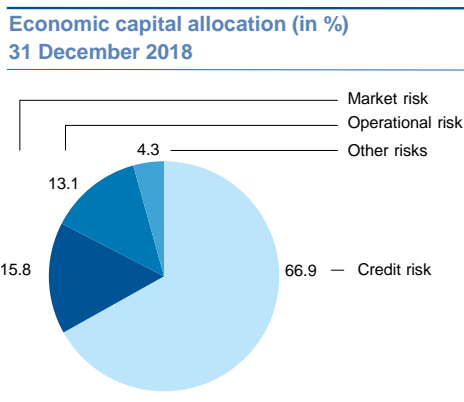


Figure 3: Economic capital composition

### Risk bearing capacity calculation

in EUR million	Dec 18
Economic capital requirement	13,039
Coverage potential	22,040
<b>Excess</b>	<b>9,002</b>

Table 12: Risk-bearing capacity calculation

## RISK STEMMING FROM FOREIGN CURRENCY LOANS AND LOANS WITH REPAYMENT VEHICLE

Pursuant to FMA Minimum Standards for the Risk Management and Granting of Foreign Currency Loans and Loans with Repayment Vehicles (FMA- FXTT-MS), published in June 2017, institutions are obliged to disclose risk arising from foreign currency loans and loans with repayment vehicle.

Funding gap for loans with repayment vehicles is over prescribed threshold for enhanced monitoring and reporting of 20%, therefore Erste Group is providing in the tables below information on the loan portfolio with repayment vehicles on consolidated basis. The share of loans with repayment vehicles of total loan portfolio amounts to 2.5%, while the share of non-performing loans of loans with repayment vehicles amounts to 4.5%. The forecasted rate for repayment vehicles has been determined by 1 % since September 2017. It is valid for all products without any distinctions. The forecast value is based on the surrender value or the current market value. The remaining time as well as the saving premium are also considered in this calculation.

### Loans with repayment vehicle

in EUR million	Loans with repayment vehicle	of which bullet loans	of which amortising loans
up to 1 year	193	123	70
from 1 to 5 years	675	549	126
from 5 to 10 years	1,196	885	311
from 10 to 15 years	1,610	1,145	465
above 15 years	531	157	374
<b>Total</b>	<b>4,205</b>	<b>2,859</b>	<b>1,347</b>

Table 13: Breakdown of loans with repayment vehicle by residual maturity and repayment type

### Asset quality of loans with repayment vehicle

in EUR million	Loans with repayment vehicle
Total loans	4,205
of which non-performing loans	189
Total LLP	104
of which LLP on non-performing loans	84

Table 14: Asset quality of loans with repayment vehicle

Calculation of the funding gap is based on portfolio booked in Austria, which encompasses 83.1% of total loans with repayment vehicle in Erste Group.

#### **Funding gap of the loan portfolio with repayment vehicle**

<b>Currency of the loan</b>	<b>Gap</b>
EUR	20.9%
USD	39.9%
CHF	33.3%
Other	30.7%
<b>Total</b>	<b>30.7%</b>

Table 15: Funding gap of the loan portfolio with repayment vehicle by currencies

# Capital buffers

## DISCLOSURE REQUIREMENTS Art. 440 CRR

Erste Group calculates countercyclical buffer requirements at consolidated level in accordance with Title VII, Chapter 4 of Directive 2013/36/EU (CRD IV). A small number of jurisdictions (United Kingdom, Hong Kong, Norway, Sweden, Lithuania, Czech Republic, Slovak Republic, Iceland) applied countercyclical buffer rates of more than 0%, resulting in an overall countercyclical buffer rate for the Group of 0.3144%.

Tables below set out the geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer as well as the institution-specific countercyclical buffer rate for the Group. The disclosure follows templates prescribed by Commission Delegated Regulation (EU) 2015/1555 with regard to regulatory technical standards for the disclosure of information in relation to the compliance of institutions with the requirement for a countercyclical capital buffer.

The table detailing the distribution of credit exposures has been simplified by listing individually only those countries which either represent core markets for the Group or have communicated countercyclical buffer rates other than zero. All other countries are shown in aggregated country groupings that reflect the geographical segmentation used in other tables in this report.

in EUR million	General credit exposures		Trading book exposures		Securitisations exposures		Own funds requirements				Own funds requirements weight	Counter-cyclical capital buffer rate	Institution specific countercyclical capital buffer rate
	STA	IRB	Sum of long and short positions of trading book exposure for STA	Value of trading book exposure for internal models	STA	IRB	General credit exposure	Trading book exposure	Securitisations exposure	Total			
Czech Republic	1,027	32,588	0	0	0	0	1,276	0	0	1,276	20.7%	1.0%	0.21%
Slovakia	410	14,483	0	0	0	0	483	1	0	483	7.9%	1.3%	0.10%
Sweden	6	201	0	0	0	0	12	0	0	12	0.2%	2.0%	0.00%
Hong Kong	0	60	0	0	0	0	3	0	0	3	0.0%	1.9%	0.00%
Norway	1	13	0	0	0	0	1	0	0	1	0.0%	2.0%	0.00%
Iceland	0	0	0	0	0	0	0	0	0	0	0.0%	1.3%	0.00%
Austria	3,229	84,599	0	0	0	1,251	2,402	5	7	2,414	39.2%	-	-
Croatia	900	5,905	0	0	0	0	323	0	0	323	5.2%	-	-
Hungary	229	5,138	0	0	0	0	322	0	0	322	5.2%	-	-
Romania	8,360	571	0	0	0	0	431	0	0	431	7.0%	-	-
Serbia	1,459	355	85	0	0	0	95	1	0	96	1.6%	-	-
Asia	6	336	15	15	0	0	16	1	0	17	0.3%	-	-
Latin America	6	56	0	0	0	0	4	0	0	4	0.1%	-	-
MiddleEast/Africa	7	718	0	0	0	0	22	0	0	22	0.3%	-	-
SE Europe/CIS	840	155	2	0	0	0	54	0	0	54	0.9%	-	-
Other EU Countries	2,339	8,181	0	0	0	0	519	0	0	519	8.4%	1.5%	0.00%
Other Industrialised Countries	174	2,754	19	19	0	0	179	2	0	180	2.9%	-	-
<b>Total</b>	<b>18,994</b>	<b>156,113</b>	<b>121</b>	<b>34</b>	<b>0</b>	<b>1,251</b>	<b>6,141</b>	<b>9</b>	<b>7</b>	<b>6,157</b>	<b>100.0%</b>	<b>0.0%</b>	<b>0.31%</b>

Table 16: Geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer (Art. 440 (1) (a) CRR)

Czech Republic, Slovakia, Austria, Croatia, Hungary, Romania and Serbia are Core market countries. Emerging markets are following geographical areas: Asia, Latin America, Middle East/Africa and SE Europe/CIS. In position Other EU Countries, in the column Countercyclical capital buffer rate is included Great Britain (1%) and Lithuania (0.5%)

in EUR million	Dec 18
Total risk exposure amount	114,599
Institution specific countercyclical capital buffer rate	0.3144%
<b>Institution specific countercyclical buffer requirement</b>	<b>360</b>

Table 17: Amount of institution-specific countercyclical capital buffer (Art. 440 (1) (b) CRR)

# Credit risk

## Goals and principles of risk management

### DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) CRR

Credit risk arises in the traditional lending and capital market business and includes losses incurred due to the default of a borrower or the impairment of a credit exposure due to the downgrading of a debtor. Country risk is implicitly considered when assessing credit risk.

Credit risk in retail lending arises from the probability that customers may fail to settle their financial obligations as stipulated by the contractual terms. Managing credit risk in retail involves dealing with a large number of relatively small exposures extended to private individuals, independent/free professionals, entrepreneurs or to micro companies in line with the Basel definitions. These exposures can be clustered into different risk segments with similar characteristics based on their rating and/or payment behaviour and treated accordingly by applying a rule-based approach. Credit risk related to retail loan portfolios is managed at the Group and local entity level with a common interest to ensure regulatory compliant risk management practices and to provide customers with manageable loan facilities that are within their financial capacities supported by underlying profitability.

At the Group level, retail credit risk is managed by the Group retail lending framework that sets out specific risk management policy requirements. All local entities engaged in lending activities must comply with these requirements. In addition, a standardised retail risk specific reporting platform is in place throughout the Group. This ensures that loan portfolio dynamics can be monitored and analysed regularly, identifying potential adverse developments early on and developing targeted mitigating actions.

Local banks develop their local lending strategy in which input from local risk management plays a key role. Local retail risk management supports the local business lines by identifying which customer segments should be in focus in terms of new lending initiatives. Moreover, local retail risk management ensures that any new products or changes in lending criteria are in line with the Group lending framework requirements and are adequately supported by the existing risk infrastructure. Local risk management also has the primary responsibility for ensuring that country-specific know-how is incorporated into risk management practices and that implications of the local environment (market, competitive, economic, political and legal/regulatory) are appropriately addressed.

In the non-retail business, the Group Risk Strategy sets Credit Risk Management Principles to ensure sound risk management and responsible banking in corporate lending. It sets quantitative credit risk portfolio limits and qualitative risk principles to ensure that the credit risk profile remains in line with the Group Risk Strategy. Further limits are derived from the credit risk portfolio limits and include industries, countries, single names and products. These are established to manage credit risk concentration and align the portfolio composition to the approved relevant business and risk strategies and the related documents (Policies and Procedures). For single names, the business and risk strategies are defined jointly by business and risk managers. The underlying principle is to ensure that lending activities are in compliance with the client rating based maximum (including uncollateralised) credit limit, are based on expert opinions and analyses and involve relevant cross-functional support from other departments. In addition, as and when available, peer group analyses and information from industry leaders/losers are used to identify industry consolidation trends early on and to adjust the business and risk strategies accordingly.

At the Group level, credit risk of the non-retail business is furthermore managed through the Group credit risk management framework that sets out specific credit risk management policy requirements and lending standards. All local entities engaged in credit business have to comply with these requirements.

No transaction can be executed without prior approval by credit risk management in accordance with the procedural requirements and explicitly delegated approval authorities. No credit decision is taken without a thorough assessment of the industry each borrower operates in, its risk profile, repayment capability and the assignment of an internal rating.

Collateral and credit enhancements are evaluated pursuant to internally defined rules. Depending on a rating grade, purpose and tenor, risk-bearing products are protected against losses by stipulating adequate collateral that is fully and indisputably legally enforceable and sufficiently documented for the bank. Nevertheless, collateral and credit enhancements can never substitute repayment capability.

The credit monitoring process is used to ensure consistency between the credit decision and the loan agreement, and to monitor the fulfilment of contractual obligations of a client. The process encompasses pre-drawn checks (i.e. fulfilment of all conditions precedent and other contractual conditions) and ongoing monitoring (i.e. fulfilment of conditions subsequent and operationalised covenants). Counterparty credit risk limits are monitored daily in an internal limit management system with remedial actions taken in case limits are exceeded. Group-wide standardised early warning monitoring process is implemented to proactively identify negative developments. When early warning signals are identified, adequate risk mitigating actions are taken as defined in the Group Early Warning Signal Monitoring Policy.



## ORGANISATION

Group Credit Risk Management is the operative risk management function covering underwriting and workout activities for both the retail (private individual and micro customers) and the non-retail portfolio (medium-sized enterprises, large corporate and real estate customers, corporate finance, institutional clients and counterparties, sovereigns and countries). It reports directly to the Group Chief Risk Officer (CRO) of the Management Board of Erste Bank Group AG.

Group Credit Risk Management is responsible for setting standards and steering the Group's retail and non-retail lending portfolios, including defining the lending and portfolio analytical framework, and operating the group-wide credit decision-making process, early warning system and credit monitoring requirements for the corporate portfolio. It recommends the unconditional approval authorities of the local management boards for approval by the Management Board of Erste Bank Group AG and fosters group-wide credit know-how and culture through regular training activities and sharing lessons learnt. It ensures that only credit risk that is in line with the risk appetite, the risk strategy and limits set by Group Enterprise-wide Risk Management is taken on the books of Erste Group. In addition, this function is the first line risk management for business booked in Erste Group Bank AG, and, above defined thresholds, the second line risk management for business booked in Erste Group's subsidiaries and the 'Haftungsverbund'. In its capacity as second line risk management, it provides the local management boards with recommendations for credit decisions that take into account the Group perspective. It is also responsible for monitoring and reporting relevant credit risk limit utilizations. Furthermore it conducts regular in-depth portfolio reviews with local risk management to understand portfolio dynamics and identify potential adverse portfolio developments early on. As third line of defence, Internal Audit ensures an independent and objective view and assurance of credit risk management activities.

Group Credit Risk Management is represented in several relevant governance committees as described in the section on Group Governance for risk management activities.

## RISK MEASUREMENT AND CONTROL

Prior to granting a loan, the creditworthiness of a retail client is determined and verified in view of the risk-return trade-off supported by clients' rating. Loans can only be granted if the repayment capacity of the borrower is sufficient to service the regular repayments. Risk-adjusted pricing ensures a balanced relationship between risk and return. Following the loan origination, clients are monitored and in case of adverse developments serviced by the Collection units.

For non-retail clients, the creditworthiness and repayment capacity is determined via in-depth financial analyses and individual rating, based on the clients' financials, projections, industry analyses and assessments of the clients' business model. Defined lending standards apply and credit decision are taken in line with the currently valid internal credit risk approval authority rules. Counterparty limits are set towards a client / client group and monitored on a daily basis to ensure that the credit risk remains within the approved limits. For each client / client group a credit review is performed at least once a year. In addition, early warning signals are regularly monitored in order to timely recognise adverse developments and immediately take appropriate mitigating actions. In case of further negative developments, clients are handled in specialised Workout units with the aim to minimize potential losses.

Regular group-wide credit risk reports are prepared and contain relevant information for the risk management committees, Management Board and Supervisory Board. These reports inform about development of the credit portfolios in all segments, and provide detailed risk-relevant information on customers at risk of default or already defaulted. To further manage credit risk concentration in the portfolio, limits are also set on products, industries and countries, regularly monitored and reported in the group-wide credit risk reports. These reports also include specific monitoring metrics that provide an early warning signal for adverse developments of, e.g. portfolio quality (client, segment, countries and industries) and risk drivers. In instances where certain risk portfolios or clients / client groups are identified as potentially in distress, these are closely monitored by the dedicated risk functions (i.e. Group Credit Risk Management and Group Enterprise-wide Risk Management) to manage the risk impact and to develop effective strategies to minimize potential losses. This process facilitates early risk detection and reaction. In addition, these reports serve as the basis for reviewing the credit lending standards and the risk strategy.

Complementing the group-wide credit risk report, Group Credit Risk Management prepares a consolidated, group-wide retail risk management report that shows retail loan portfolio dynamics across local entities with monthly frequency. This report, building on up-to-date portfolio monitoring techniques (vintage analysis, delinquency trends, segment analyses, correlation analysis, etc.) shows the key drivers behind specific portfolio developments. The report covers new loan bookings as well as the main developments (including FX share trends) in the existing portfolio. In case of the non-retail customers (i.e. SME), the report includes information on rating and industry segmentation, debt and collateral coverage, etc.

A management summary of the key developments is distributed at least quarterly to senior management and key decision makers. In addition, key lending criteria relaxations planned by the local entities are also reviewed and aligned with Group Credit Risk Management prior to implementation.

It is the interest of Erste Group not to put customers into a position in which they are no longer able to meet their contractual obligations. This also includes the principle of matching the term of the debt to the object financed, in particular, as regards the relationship between operating output, cash flow, repayment capability and financing need; the recoverability of the loan and its use must be plausible and verifiable. Transactions with financial holding companies are entered into only in well-defined cases based on detailed (also intragroup) cash flow analyses. Foreign currency loans depend on regional market conditions and customer class. Generally, financing in local currency is given preference, especially if the customer does not have any income in foreign currency. However, market practices vary in the different CEE markets along with different business strategies. Interest rate hedging is provided to the extent necessary. Erste Group has established clear policies with respect to FX lending across countries and businesses. This includes appropriate monitoring and governance in place with distinct limits set as part of the Group Risk Strategy to manage and ensure proper oversight of FX lending risk.

Erste Group strictly follows a cash-flow based corporate lending approach. Any financing is based on a corporate client's ability to generate future cash-flows. Lending based exclusively on collateral is avoided as collateral only serves to reduce potential losses caused by unexpected cash-flow shortfalls. All corporate lending activities (including leverage financing) are regulated by the lending policies applied to the entire Group, prescribing limits and minimum requirements.

## RISK MITIGATION

Erste Group has implemented a sound risk management framework for identification, assessment, monitoring and mitigation of credit risks, including policies and procedures for credit application and approval process, fraud prevention, early warning and credit monitoring, collateral management, risk materiality assessment and determination of controls to mitigate the material risks in the credit process.

Apart from economic creditworthiness, the provision of collateral is a central element of risk mitigation and is particularly important for specialised lending. However, collateral is no substitute for lacking creditworthiness. The eligibility of collateral is determined in accordance with the bank's internal collateral catalogue. Non-collateralised portions of debt are usually not accepted for new customers below a certain credit quality as expressed by rating grades. In addition, risk mitigation for retail and non-retail clients is based, above all, on prudent lending criteria.

In non-retail lending Maximum and Rating Based Lending framework is established to proactively manage and limit single name/ group of connected clients concentrations and to ensure monitoring, reporting and steering of single name concentrations in line with the approved Risk Appetite Statement and Risk Strategy. These frameworks are operationalized through the Operating Lending Limit framework that is applied in the credit application and approval process.

Single clients belonging to a group of connected clients are financed only if the lending principles of Erste Group are met (any deviations needs to be brought to special attention). All single clients belonging to a group of connected clients are considered in a rating process. In such cases, the group rating and the "corporate ceiling" are taken into account. Beyond a predefined total debt level, single clients or groups of connected clients that have credit relations with more than one fully consolidated company of Erste Group are classified as limit relevant customers, with the limit cap being determined in the respective limit application. In the case of sector clusters, once a certain size is reached, joint business strategies are defined following the GO/HOLD/STOP logic.

In retail lending, the debt-to-income and loan-to-value ratios have to be limited to a percentage that allows for a sufficient buffer in case of stressed conditions. Furthermore, FX loans (i.e. loans that are at least partially receivable in currencies other than the legal tender of the country in which the borrower is domiciled) are not allowed – with the exception of the following:

- \_ customers have a natural hedge (i.e. no FX risk involved)
- \_ the loan is fully secured with matching currency liquid collateral
- \_ explicitly approved in the Group Risk Strategy

Retail and non-retail customers experiencing financial difficulties are managed by Collection and Workout units. These units proactively support customers with payment difficulties as appropriate by applying different collection and workout strategies in order to maintain a healthy portfolio, increase recoveries and save costs.

## Definition of past due, substandard, defaulted and impaired

### DISCLOSURE REQUIREMENTS Art. 442 (a) CRR

The Group's ongoing assessment of the customers' capacity to fulfil their obligations is carried out using a large number of risk management instruments. This includes the constant monitoring of the Group's portfolio of past due, substandard and defaulted exposures.

#### Past due

In the case of payments in arrears, payments are considered past due as of the date when the borrower exceeded an approved credit limit, or the borrower was advised of a lower limit than the current outstanding, or drew on an unauthorised credit facility, or did not make a contractually agreed payment in due time, and the amount concerned is significant. Unpaid credit card debt is deemed past due from the earliest due date.

#### Substandard

The borrower is vulnerable to negative financial and economic impacts; as a rule, such loans are managed in specialised risk management departments.

#### Defaulted

There is a default if one or more of the default criteria under the Basel capital adequacy framework apply:

- \_ full repayment unlikely,
- \_ interest or principal payments on a material exposure more than 90 days past due,
- \_ restructuring resulting in a loss to the lender,
- \_ realisation of a loan loss,
- \_ initiation of bankruptcy proceedings or
- \_ the customer is regarded as impaired.

#### Impaired

Credit-impaired is defined as the occurrence of one or more events that have a detrimental impact on the estimated future cash flows of a financial asset.

Implementation of IFRS 9 Financial instruments standard as of 1.1.2018 led to harmonization of defaulted and impaired definitions in Erste Group. A financial instrument is credit-impaired if the customer is in default; internal rating "R" is assigned. This means that all financial instruments of a defaulted customer are credit-impaired. If a customer is upgraded to a non-defaulted rating grade, then all his financial assets will not be credit-impaired any longer.

## Credit risk adjustments

### DISCLOSURE REQUIREMENTS Art. 442 (a) (b) (i) (ii) CRR

The following paragraphs provide a description of the approaches and methods adopted for determining value adjustments and credit risk adjustments.

### CREDIT RISK ADJUSTMENT CALCULATION

The general principles and standards for credit risk adjustments within Erste Group are described in internal policies. The bank evaluates the need for credit risk adjustments in line with regulatory and accounting standards and allocates them accordingly. Credit risk adjustments are calculated according to IFRS 9 Financial instruments standard and include:

- \_ Assets in the form of cash with central banks and other demand deposits with credit institutions, as defined in the section 1.1, Part 2, of the Annex V to the FINREP instructions
- \_ Loans, trade receivables and investments in debt securities measured at Amortised Costs (AC) or Fair Value Through Other Comprehensive Income (FVTOCI) based on the IFRS 9 Classification & Measurement requirements.
- \_ Loan commitments issued, that are not measured at Fair Value through Profit or Loss (FVTPL)
- \_ Financial guarantees issued, that are not measured at FVTPL and
- \_ Lease receivables in the scope of IAS 17, as well as trade receivables or contract assets that result from transactions that are in the scope of IFRS 15.

The general principles and standards for credit risk adjustments are governed by internal policies in Erste Group.

According to IFRS9 there are three main stages outlined for credit risk adjustments, defined as expected credit loss (ECL), determination:

- \_ A financial instrument that is not credit-impaired on initial recognition is classified in Stage 1. Financial instruments in Stage 1 have their ECL measured at an amount equal to the portion of lifetime expected credit losses that result from default events possible within the next 12 months.
- \_ If a significant increase in credit risk (SICR) since initial recognition is identified but is not yet deemed to be credit-impaired, the financial instrument is moved to Stage 2. Instruments in Stage 2 have their ECL measured based on expected credit losses on a lifetime basis. If the financial instrument is credit-impaired, the financial instrument is then moved to Stage 3. Instruments in Stage 3 have their ECL measured based on expected credit losses on a lifetime basis.
- \_ Purchased or originated credit-impaired (POCI) financial instruments are those financial instruments that are credit-impaired on initial recognition. Their ECL is always measured on a lifetime basis.

Pursuant to Commission Delegated Regulation (EU) No 183/2014 in connection with EBA/RTS/2013/04<sup>1</sup>, all credit risk adjustments are treated as specific credit risk adjustments in COREP.

Erste Group regularly reviews its expected credit risk adjustments. These exercises include the parameters and methodologies used in the credit risk adjustment calculation. Adjustments can take place in the context of specific reviews (cash flow assessment in case of individually assessed credit risk adjustments), routine maintenance of parameters (such as regular calibration) or in the case of specific events (e.g. improved knowledge about recovery behaviour, back-testing results).

## SIGNIFICANT INCREASE IN CREDIT RISK DETERMINATION

In the area of ECL modelling and calculation of ensuing credit risk adjustments, Erste Group has concluded that one of the key drivers of the impact from applying the ECL model required by IFRS 9 is the assessment of SICR based on whether an instrument's credit risk as at the reporting date has increased significantly to the date it was initially originated, for exposures that are not identified as credit-impaired as at the date of initial application of IFRS 9 (for retrospective application) or as at any given reporting period after transition to IFRS 9 (for prospective application). In this respect, across portfolios and product types, quantitative and qualitative indicators are defined for assessing SICR, including the indicator of 30 days-past-due.

Quantitative criteria represent combination of relative and absolute changes measured mainly on level of annualized life-time PDs. Such changes are compared to the pre-determined thresholds. SICR is recognized if relative and absolute increase is higher than the threshold. Relative thresholds are determined on country, portfolio and rating level. Absolute threshold is set to 0.5%.

Qualitative SICR indicators include forbearance-type flags (identification of regulatory forbearance), workout transfer flag (when account starts being monitored by workout department), information from early-warning-system (if it is not sufficiently considered in rating) and fraud indicators. The assignment of some of the qualitative indicators inherently relies on experienced credit risk judgement being exercised adequately and timely. The related group-wide and entity-level credit risk controlling policies and procedures (adapted as necessary in the light of transition to IFRS 9) ensure the necessary governance framework. These indicators are used internally for identification of insolvency or increased probability that a borrower will enter bankruptcy and there is increased risk of default in the foreseeable future. Besides the qualitative indicators defined on client level, the assessment of significant increase in credit risk is performed on portfolio level if the increase in credit risk on individual instrument or client level is only available with a certain time lag or is observable exclusively on portfolio level.

There are no additional cure periods established for either quantitative or qualitative criteria for migration back to Stage 1 other than those already established in general credit risk practice.

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<sup>1</sup> Recital (9) of Commission Delegated Regulation (EU) No 183/2014 states "Whereas the treatment of losses exclusively related to credit risk recognised under applicable accounting frameworks depends on the fulfilment of those criteria, the large majority of those amounts should normally be classified as Specific Credit Risk Adjustments given the restrictive nature of the criteria for General Credit Risk Adjustments".<sup>1</sup> EBA Final draft Regulatory Technical Standards on specification of the calculation of specific and general credit risk adjustments, 26 July 2013 states in answer 3 to Question 1 of the consultation "impairments recognised in accordance with current IAS 39 rules, also referred to as an 'incurred loss' model, would be considered as Specific Credit Risk Adjustments. For the IFRS framework as it currently stands, no example for General Credit Risk Adjustments can be given.

## GROUPING OF INSTRUMENTS AND CALCULATION OF CREDIT RISK ADJUSTMENTS

Collective allowances are calculated for exposures to non-defaulted customers, i.e. in Stage 1 and Stage 2, according to a rule-based approach irrespective of the significance of the customer

The calculation of collective allowances requires grouping the related exposures into homogenous clusters on the basis of shared risk characteristics. The grouping criteria may differ on the customer segment (retail, corporate) and include product type, collateral type, repayment type, loan to value band or credit rating band.

The calculation of credit loss allowances is done on a monthly basis on a single exposure level and in the contractual currency of the exposure. To compute the credit loss allowance, Erste Group applies an expected credit loss (ECL) model based on a three stages approach that either leads to a twelve-month ECL or to a lifetime ECL. ECL is discounted product of exposure at default (EAD) that also includes a credit conversion factor in case of off-balance sheet exposures, probability of default (PD) and loss given default (LGD).

Parameters are determined to reflect the risk as a “point-in-time” measure and with consideration of forward-looking information, which resulted in introducing a baseline forecast and a number of alternative scenarios for selected macroeconomic variables. The scenarios are derived, together with their probabilities of occurrence, as a deviation from baseline forecasts, where the baseline forecasts are, with a few exceptions, internally determined by Erste Group’s research department. Given multiple scenarios, the “neutral” PDs (and, with a few exceptions, also LGDs) are adjusted through macro models which link relevant macroeconomic variables with risk drivers. The same macro-shift models as for external and internal stress test are employed. Forward-looking information is incorporated for first three years of ECL measurement. Measurement of the parameters for the remaining lifetime returns back to through-the-cycle observations immediately in the year four.

Credit loss allowances on Stage 3 or POCI exposures are calculated individually or collectively. The individual approach is applied in case of exposures to significant defaulted customers and consists of the individual assessment of the difference between the gross carrying amount and the net present value of the expected cash flows which are estimated by workout or risk managers. The discounting of the cash flows is based on the effective interest rate (POCI: credit-adjusted effective interest rate). However, for financial guarantees the discount rate shall reflect the current market assessment of the time value of money and the risks that are specific to the cash flows which in Erste Group’s implementation means using a risk free rate as a proxy.

A defaulted customer is classified as individually significant if the total on- and off-balance exposure exceeds a predefined materiality limit. Otherwise, the customer is considered as insignificant and a rule-based approach is used for the calculation of the related credit loss allowance. Under this approach, credit loss allowances are calculated as the product of gross carrying amount and LGD, where the LGD depends on characteristics such as time in default or the stage of the workout process.

## Quantitative disclosure on credit risk

### DISCLOSURE REQUIREMENTS Art. 442 (c) (d) (e) (f) (g) (h) (i) CRR

In the following table total and average credit risk exposure over the period by significant exposure classes is provided. The table comprises all asset positions and off-balance items relevant for credit risk framework and based on the accounting values reported in financial statements. Exposure is reported net of credit risk adjustments. Exposures related to counterparty credit risk and securitisation are not subject of this chapter.

#### Exposure classes and net exposure subject to credit risk framework

in EUR million	Net exposure at the end of the period	Average net exposure over the period
Central Governments and Central Banks	3,617	3,169
Institutions	6,694	6,031
Corporate	84,825	82,480
of which Specialised Lending	15,993	15,768
of which SME	36,382	34,611
Retail	79,723	77,719
of which Retail SME secured by immovable property	7,545	7,471
of which Retail SME non-secured by immovable property	6,867	6,745
of which Retail secured by immovable property	43,795	42,418
of which Retail revolving	0	17
of which Other retail	21,515	21,068
Equity	1,016	791
Other	6,561	5,996
<b>IRB Approach Total</b>	<b>182,435</b>	<b>176,187</b>
Central Governments and Central Banks	37,072	37,396
Regional governments or local authorities	5,024	5,019
Public Sector Entities	3,298	3,327
Multilateral Development Banks	248	259
International Organisations	314	310
Institutions	559	470
Corporates (including secured by immovable property)	10,322	9,923
of which SME	3,370	2,992
Retail (including secured by immovable property)	9,240	8,592
of which SME	1,276	1,276
Exposures in default	352	414
Equity exposures	150	277
Other items	3,151	2,704
<b>Standardised Approach Total</b>	<b>69,731</b>	<b>68,690</b>
<b>Total</b>	<b>252,166</b>	<b>244,876</b>

Table 18: Credit Risk – Total and average net amount of credit exposure (Art. 442 (c) (e) CRR and in line with EU CRB-B EBA/GL/2016/11)

In order to present the clear view of the credit risk in the following tables, loans and advances, finance lease receivables, trade and other receivables and debt securities are presented. On top of the asset relevant positions, off-balance items are included.

#### Disclosed and undisclosed balance sheet positions in credit risk tables

in EUR million	Subject to credit risk framework	Undisclosed positions	Credit risk tables
<b>Cash and cash balances</b>	<b>16,014</b>	<b>5,688</b>	<b>10,326</b>
Cash on hand	5,688	5,688	-
Cash balances at central banks	9,766	-	9,766
Other demand deposits	560	-	560
<b>Financial assets held for trading</b>	<b>0</b>	<b>-</b>	<b>0</b>
Derivatives	0	-	0
Other financial assets held for trading	-	-	-
<b>Non-trading financial assets at fair value through profit or loss</b>	<b>2,840</b>	<b>362</b>	<b>2,479</b>
Equity instruments	362	362	-
Debt securities	2,192	0	2,192
Loans and advances to customers	287	-	287
<b>Financial assets at fair value through other comprehensive income</b>	<b>9,272</b>	<b>239</b>	<b>9,033</b>
Equity investments	239	239	-
Debt securities	9,033	-	9,033
<b>Financial assets at amortised cost</b>	<b>171,306</b>	<b>-</b>	<b>171,306</b>
Debt securities	26,049	-	26,049
Loans and advances to banks	2,157	-	2,157
Loans and advances to customers	143,101	-	143,101
<b>Finance lease receivables</b>	<b>3,710</b>	<b>-</b>	<b>3,710</b>
<b>Hedge accounting derivatives</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Property and equipment</b>	<b>2,037</b>	<b>2,037</b>	<b>-</b>
<b>Investment property</b>	<b>787</b>	<b>787</b>	<b>-</b>
<b>Intangible assets</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Investments in joint ventures and associates</b>	<b>510</b>	<b>510</b>	<b>-</b>
<b>Tax assets</b>	<b>477</b>	<b>477</b>	<b>-</b>
Current tax assets	100	100	-
Deferred tax assets	376	376	-
<b>Assets held for sale</b>	<b>103</b>	<b>103</b>	<b>-</b>
<b>Trade and other receivables</b>	<b>1,305</b>	<b>-</b>	<b>1,305</b>
<b>Other assets</b>	<b>746</b>	<b>746</b>	<b>-</b>
<b>Total assets</b>	<b>209,106</b>	<b>10,947</b>	<b>198,159</b>

Table 19: Overview on disclosed and undisclosed balance sheet positions in credit risk tables

Positions that are not included in following quantitative disclosures are cash on hand, equity instruments and equity investments, property and equipment, investment property, investment in joint ventures and associates, current tax assets, deferred tax assets not subject to deduction, assets held for sale and other assets, which in total comprise 5.3% of assets under the credit risk framework.

Table below presents net credit risk exposure (net value of the on-balance and off-balance sheet exposure corresponding to accounting values) by significant geographical areas based on country of residence of the counterparty. Geographical areas are defined by the operating country markets based on locations of the banking and other financial institution participations.

### Exposure classes and significant areas

in EUR million	Core Markets							Emerging Markets	Other EU Countries	Other Industrialised Countries	Total
	Austria	Croatia	Czech Republic	Hungary	Romania	Serbia	Slovakia				
Central Governments and Central Banks	0	1,086	0	102	137	0	79	404	1,002	525	3,334
Institutions	902	29	1,610	528	2	0	304	824	1,522	969	6,691
Corporate	47,494	3,559	14,166	2,904	592	367	4,881	858	8,663	2,492	85,976
Retail	43,984	2,377	18,243	2,487	7	9	10,218	95	857	187	78,466
Equity	100	2	12	0	0	0	3	0	32	0	150
Other	81	0	1	0	0	0	13	0	0	2	97
<b>IRB Approach Total</b>	<b>92,561</b>	<b>7,053</b>	<b>34,032</b>	<b>6,021</b>	<b>739</b>	<b>376</b>	<b>15,499</b>	<b>2,182</b>	<b>12,077</b>	<b>4,174</b>	<b>174,714</b>
Central Governments and Central Banks	6,938	1,343	9,505	2,674	5,625	400	4,219	361	5,776	0	36,842
Regional governments or local authorities	3,483	158	1	164	676	13	255	42	232	0	5,024
Public Sector Entities	2,433	320	0	68	24	14	1	3	435	0	3,297
Multilateral Development Banks	0	0	0	0	0	1	0	0	247	0	248
International Organisations	0	0	0	0	0	0	0	0	314	0	314
Institutions	209	5	77	31	38	8	0	13	143	32	557
Corporates (including secured by immovable property)	1,614	414	867	280	4,108	977	308	761	817	145	10,292
Retail (including secured by immovable property)	699	505	603	103	5,006	732	113	608	871	3	9,244
Exposures in default	9	39	35	20	146	6	25	15	50	7	352
Equity exposures	2	0	0	0	0	0	0	0	0	0	2
Other items	109	19	5	84	105	1	0	0	12	0	334
<b>Standardised Approach</b>	<b>15,495</b>	<b>2,802</b>	<b>11,094</b>	<b>3,423</b>	<b>15,728</b>	<b>2,153</b>	<b>4,922</b>	<b>1,804</b>	<b>8,897</b>	<b>188</b>	<b>66,505</b>
<b>Total</b>	<b>108,055</b>	<b>9,856</b>	<b>45,126</b>	<b>9,445</b>	<b>16,467</b>	<b>2,529</b>	<b>20,421</b>	<b>3,985</b>	<b>20,974</b>	<b>4,362</b>	<b>241,219</b>

Table 20: Credit Risk – Net credit risk exposure by significant area and exposure class (Art. 442 (d) CRR and in line with EU CRB-C EBA/GL/2016/11)

Emerging markets include Asia, Latin America, Middle East and Africa and other (the non-EU countries in South-Eastern Europe as well as countries that were formerly part of the Soviet Union (e.g. Russia, Belarus, Georgia, Armenia, Kazakhstan, Ukraine, Uzbekistan, etc.)).



The table below provides the breakdown of the net credit risk exposure by significant industries. Industry breakdown is based on the NACE codes, and includes following:

(A) Agriculture, forestry and fishing; (C) Manufacturing; (D) Electricity, gas, steam and air conditioning supply; (F) Construction; (G) Wholesale and retail trade; (H) Transport and storage; (I) Accommodation and food service activities; (K) Financial and insurance services; (L) Real estate activities; (M) Professional, scientific and technical activities; (O) Public administration and defence, compulsory social security; (T) Private households.

All industries that are below 1% of total credit risk exposure are aggregated in the position Other and together represent 4.8% of total. Other includes the following industries: (B) Mining and quarrying; (E) Water supply; (J) Information and communication; (N) Administrative and support service activities; (P) Education; (Q) Human health services and social work activities; (R) Arts, entertainment and recreation; (S) Other services and (U) extraterritorial organisations and bodies.

### Exposure classes and significant industries

in EUR million	A	C	D	F	G	H	I	K	L	M	O	T	Other	Total
Central Governments and Central Banks	0	0	0	0	0	0	0	107	0	3	3,213	0	12	3,334
Institutions	0	0	0	0	0	0	0	5,700	0	0	988	0	4	6,691
Corporate	1,208	15,003	2,992	8,798	8,742	2,997	3,268	6,445	22,623	7,396	23	71	6,410	85,976
Retail	1,029	778	65	1,211	1,754	354	1,171	152	2,859	1,175	0	65,423	2,493	78,466
Equity	0	0	0	0	0	0	0	146	0	4	0	0	0	150
Other	0	0	0	0	0	0	0	7	45	6	8	8	24	97
<b>IRB Approach Total</b>	<b>2,238</b>	<b>15,781</b>	<b>3,057</b>	<b>10,009</b>	<b>10,497</b>	<b>3,351</b>	<b>4,439</b>	<b>12,557</b>	<b>25,526</b>	<b>8,584</b>	<b>4,232</b>	<b>65,502</b>	<b>8,942</b>	<b>174,714</b>
Central Governments and Central Banks	0	0	0	0	0	0	0	10,088	0	0	26,659	0	95	36,842
Regional governments or local authorities	0	0	3	0	0	0	0	4	0	0	4,894	0	123	5,024
Public Sector Entities	5	0	3	277	0	608	0	414	380	1	979	0	630	3,297
Multilateral Development Banks	0	0	0	0	0	0	0	248	0	0	0	0	0	248
International Organisations	0	0	0	0	0	0	0	0	0	0	0	0	314	314
Institutions	0	0	0	0	0	0	0	373	0	0	5	0	178	557
Corporates (including secured by immovable property)	443	2,133	510	1,030	1,828	565	60	750	1,308	187	33	148	1,298	10,292
Retail (including secured by immovable property)	291	255	13	165	358	239	71	28	91	117	0	7,372	241	9,244
Exposures in default	27	43	9	51	27	5	26	2	49	12	1	65	35	352
Equity exposures	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Other items	0	0	0	6	0	0	0	103	1	3	0	62	159	334
<b>Standardised Approach Total</b>	<b>767</b>	<b>2,432</b>	<b>538</b>	<b>1,529</b>	<b>2,213</b>	<b>1,418</b>	<b>156</b>	<b>12,010</b>	<b>1,830</b>	<b>321</b>	<b>32,571</b>	<b>7,646</b>	<b>3,074</b>	<b>66,505</b>
<b>Total</b>	<b>3,004</b>	<b>18,213</b>	<b>3,595</b>	<b>11,539</b>	<b>12,709</b>	<b>4,769</b>	<b>4,595</b>	<b>24,566</b>	<b>27,356</b>	<b>8,905</b>	<b>36,803</b>	<b>73,148</b>	<b>12,016</b>	<b>241,219</b>

Table 21: Credit Risk – Net credit risk exposure by industry group and exposure class (Art. 442 (c) CRR and in line with EU CRB-D EBA/GL/2016/11)

Table below provides information on the breakdown of the net credit risk exposure to residual maturity by significant exposure classes.

### Exposure classes and residual maturity

in EUR million	On demand	<=1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total
Central Governments and Central Banks	13	636	1,414	1,260	12	3,334
Institutions	407	1,899	2,674	1,643	69	6,691
Corporate	6,616	15,937	26,918	35,657	847	85,976
Retail	7,771	3,855	6,531	60,308	0	78,466
Equity	39	0	1	110	0	150
Other	70	14	14	0	0	97
<b>IRB Approach Total</b>	<b>14,916</b>	<b>22,341</b>	<b>37,552</b>	<b>98,978</b>	<b>929</b>	<b>174,714</b>
Central Governments and Central Banks	8,790	5,759	12,439	9,610	245	36,842
Regional governments or local authorities	214	442	1,250	3,117	0	5,024
Public Sector Entities	137	719	689	1,751	2	3,297
Multilateral Development Banks	1	16	210	22	0	248
International Organisations	0	36	153	125	0	314
Institutions	76	138	247	22	74	557
Corporates (including secured by immovable properties)	1,364	3,425	2,880	2,409	215	10,292
Retail (including secured by immovable properties)	207	914	2,756	5,121	246	9,244
Exposures in default	115	75	97	63	2	352
Equity exposures	0	0	2	0	0	2
Other items	63	6	181	41	43	334
<b>Standardised Approach Total</b>	<b>10,966</b>	<b>11,527</b>	<b>20,903</b>	<b>22,282</b>	<b>827</b>	<b>66,505</b>
<b>Total</b>	<b>25,882</b>	<b>33,868</b>	<b>58,455</b>	<b>121,259</b>	<b>1,755</b>	<b>241,219</b>

Table 22: Credit Risk – Net credit risk exposure by residual maturity and exposure class (Art. 442 (f) CRR and in line with EU CRB-E EBA/GL/2016/11)

In the following tables, detailed split of gross credit exposure, specific credit risk adjustments, write-offs and credit relevant charges are presented, by the significant exposure classes, industries and geographical areas. Charges for credit risk adjustments are reported as a difference between allocation and release of credit risk adjustments (net allocation) booked over the year. Write-offs shown in the tables represent both, reductions of exposure recognised directly in profit or loss and reductions in allowances, over the period, including amounts below threshold for triggering the default event.

Figures related to defaulted clients in STA approach are shown in original classes (in which they would be classified assuming there was no default). To complete the picture, exposure class Exposure in default is shown as “out of which” in table below.

### Credit quality by exposure classes

in EUR million	Gross exposure		Specific credit risk adjustments	Write-offs	Credit risk adjustments charges	Net values
	Non-defaulted	Defaulted				
Central Governments and Central Banks	3,339	0	4	0	0	3,334
Institutions	6,700	2	10	0	10	6,691
Corporate	85,217	2,305	1,545	291	-80	85,976
of which Specialised Lending	15,727	687	423	37	33	15,991
of which SME	35,905	1,454	985	74	1	36,374
Retail	77,963	1,901	1,398	218	72	78,466
Retail SME secured by immovable property	7,346	328	130	1	-1	7,545
Retail SME non-secured by immovable property	6,873	228	233	65	8	6,867
Retail secured by immovable property	43,451	724	380	6	7	43,795
Retail revolving	0	0	0	0	-1	0
Other retail	20,294	621	656	101	57	20,258
Equity	150	0	0	0	0	150
Other	108	1	12	0	-2	97
<b>IRB Approach Total</b>	<b>173,476</b>	<b>4,208</b>	<b>2,970</b>	<b>509</b>	<b>1</b>	<b>174,714</b>
Central Governments and Central Banks	36,849	20	7	0	-2	36,862
Regional governments or local authorities	5,034	1	12	0	-9	5,024
Public Sector Entities	3,314	1	17	0	-3	3,298
Multilateral Development Banks	249	0	1	0	0	248
International Organisations	314	0	0	0	0	314
Institutions	557	0	1	0	1	557
Corporates (including secured by immovable properties)	10,434	628	534	63	10	10,527
of which SME	3,403	147	127	11	8	3,422
Retail (including secured by immovable properties)	9,345	406	411	114	55	9,340
of which SME	1,288	66	51	10	0	1,302
Equity exposures	2	0	0	0	0	2
Other items	336	1	3	0	0	334
<b>Standardised Approach Total</b>	<b>66,434</b>	<b>1,058</b>	<b>987</b>	<b>177</b>	<b>52</b>	<b>66,505</b>
of which Exposures in default	5	1,044	697	171	53	352
<b>Total</b>	<b>239,910</b>	<b>5,267</b>	<b>3,957</b>	<b>686</b>	<b>53</b>	<b>241,219</b>
of which: Loans	159,659	4,817	3,592	686	60	160,885
of which: Debt securities	37,288	4	18	0	-4	37,274
of which: Off-balance-sheet exposures	42,963	444	347	0	-3	43,060

Table 23: Credit Risk – Gross and net credit risk exposure, credit risk adjustments, write-offs and credit risk charges by exposure class (Art. 442 (g) CRR and in line with EU CRI-A EBA/GL/2016/11)

## Credit quality by industries

in EUR million	Gross exposure		Specific credit risk adjustments	Write-offs	Credit risk adjustments charges	Net values
	Non-defaulted	Defaulted				
Agriculture, forestry and fishing	2,957	138	91	6	8	3,004
Manufacturing	18,077	579	442	62	-29	18,213
Electricity, gas, steam and air conditioning supply	3,588	76	69	12	12	3,595
Construction	11,410	546	418	81	7	11,539
Wholesale and retail trade	12,539	544	374	118	-16	12,709
Transport and storage	4,755	88	74	10	3	4,769
Accommodation and food service	4,449	316	170	33	1	4,595
Financial and insurance services	24,574	78	86	9	45	24,566
Real estate activities	27,139	576	359	74	-23	27,356
Professional, scientific and technical activities	8,846	216	157	28	5	8,905
Public administration	36,829	1	29	0	-12	36,801
Private households	72,843	1,693	1,388	209	54	73,148
Others	11,904	415	301	45	-2	12,018
<b>Total</b>	<b>239,910</b>	<b>5,267</b>	<b>3,957</b>	<b>686</b>	<b>53</b>	<b>241,219</b>

Table 24: Credit Risk – Gross and net credit risk exposure, credit risk adjustments, write-offs and credit risk charges by industries (Art. 442 (g) CRR and in line with EU CR1-B EBA/GL/2016/11)

## Credit quality by significant areas

in EUR million	Gross exposure		Specific credit risk adjustments	Write-offs	Credit risk adjustments charges	Net values
	Non-defaulted	Defaulted				
Core Market - Austria	107,361	1,923	1,228	172	-37	108,055
Core Market - Croatia	9,625	760	529	150	33	9,856
Core Market - Czech Republic	45,028	719	621	90	-1	45,126
Core Market - Hungary	9,414	195	164	17	-19	9,445
Core Market - Romania	16,458	525	516	91	11	16,467
Core Market - Serbia	2,541	21	33	13	-1	2,529
Core Market - Slovakia	20,294	541	414	78	26	20,421
Emerging Markets	4,010	92	117	14	8	3,985
Other EU Countries	20,831	444	301	59	38	20,974
Other Industrialised Countries	4,350	46	34	3	-5	4,362
<b>Total</b>	<b>239,910</b>	<b>5,267</b>	<b>3,957</b>	<b>686</b>	<b>53</b>	<b>241,219</b>

Table 25: Credit Risk – Gross and net credit risk exposure, credit risk adjustments, write-offs and credit risk charges by significant areas (Art. 442 (h) CRR and in line with EU CR1-C EBA/GL/2016/11)

In the tables below past due credit exposure (defaulted and non-defaulted) is reported by financial instruments, countries and exposure classes.

## Past due exposure by financial instruments

in EUR million	<= 30 days	> 30 days <= 60 days	> 60 days <=90 days	> 90 days <=180 days	> 180 days <= 1year	> 1year	Total overdue
Loans and advances	2,157	519	300	254	302	1,972	5,505
Debt securities	0	0	0	0	0	0	0
<b>Total</b>	<b>2,157</b>	<b>519</b>	<b>300</b>	<b>254</b>	<b>302</b>	<b>1,972</b>	<b>5,505</b>

Table 26: Credit Risk – Past due gross credit risk exposure by financial instrument (EU CR1-D EBA/GL/2016/11)

### Past due exposure by exposure classes

in EUR million	<= 30 days	> 30 days <= 60 days	> 60 days <=90 days	> 90 days <=180 days	> 180 days <= 1year	> 1year	Total overdue
Central Governments and Central Banks	0	0	0	0	0	0	0
Institutions	11	18	0	0	0	0	29
Corporate	574	146	149	76	65	674	1,685
Retail	809	180	99	115	162	844	2,208
Equity	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>IRB Approach Total</b>	<b>1,394</b>	<b>344</b>	<b>248</b>	<b>191</b>	<b>228</b>	<b>1,518</b>	<b>3,923</b>
Central Governments and Central Banks	0	0	0	0	0	0	0
Regional governments or local authorities	14	8	0	0	0	0	22
Public Sector Entities	3	0	0	0	0	0	4
Multilateral Development Banks	0	0	0	0	0	0	0
International Organisations	0	0	0	0	0	0	0
Institutions	1	0	0	0	0	7	8
Corporates (including secured by immovable properties)	184	25	4	0	1	1	214
Retail (including secured by immovable properties)	527	98	32	10	2	1	670
Exposures in default	34	44	16	53	72	444	663
Equity exposures	0	0	0	0	0	0	0
Other items	0	0	0	0	0	1	1
<b>Standardised Approach Total</b>	<b>763</b>	<b>175</b>	<b>52</b>	<b>63</b>	<b>74</b>	<b>454</b>	<b>1,582</b>
<b>Total</b>	<b>2,157</b>	<b>519</b>	<b>300</b>	<b>254</b>	<b>302</b>	<b>1,972</b>	<b>5,505</b>

Table 27: Credit Risk – Past due gross credit risk exposure by exposure class (Art. 442 (g) CRR)

### Past due exposure by significant geographical areas

in EUR million	<= 30 days	> 30 days <= 60 days	> 60 days <=90 days	> 90 days <=180 days	> 180 days <= 1year	> 1year	Total overdue
Core Market - Austria	464	211	71	62	98	666	1,571
Core Market - Croatia	279	74	8	62	33	469	926
Core Market - Czech Republic	270	46	144	29	37	145	672
Core Market - Hungary	209	22	9	9	19	96	364
Core Market - Romania	324	87	31	35	33	179	688
Core Market - Serbia	88	4	1	2	3	8	105
Core Market - Slovakia	383	36	22	40	55	228	764
Emerging Markets - Asia	0	0	0	0	0	0	1
Emerging Markets - Latin America	0	0	0	0	0	0	0
Emerging Markets - Middle East/Africa	1	0	0	0	0	0	1
Emerging Markets - SE Europe/CIS	61	15	3	3	9	58	148
Other EU Countries	71	18	10	11	15	116	241
Other Industrialised Countries	8	7	1	0	0	8	25
<b>Total</b>	<b>2,157</b>	<b>519</b>	<b>300</b>	<b>254</b>	<b>302</b>	<b>1,972</b>	<b>5,505</b>

Table 28: Credit Risk – Past due gross credit risk exposure by significant geographical area (Art. 442 (h) CRR)

In order to show comprehensive picture of the asset quality table below presents split of credit exposure to performing and non-performing parts, including additional information on defaulted and impaired volumes.

### Asset quality by financial instruments

in EUR million	Gross Exposure	Accumulated impairment and provisions and negative fair value adjustments due to credit risk								Collaterals and financial guarantees received					
		performing				non-performing				Performing Exposure		Non-performing exposure		On exposures with non-performing exposure	
		Total	past due (30-90 days)	forborne		Total	defaulted	impaired	forborne	Total	forborne	Total	forborne	On non-performing exposure	measures
Debt securities	37,293	37,284	0	0	9	4	4	3	16	0	2	2	0	0	
Loans and advances	164,477	159,565	542	856	4,912	4,818	4,773	1,629	821	42	2,771	784	1,561	1,143	
Off-balance	43,407	42,961	0	27	446	444	0	68	147	2	200	16	93	45	
<b>Total</b>	<b>245,177</b>	<b>239,810</b>	<b>542</b>	<b>883</b>	<b>5,367</b>	<b>5,267</b>	<b>4,777</b>	<b>1,700</b>	<b>984</b>	<b>44</b>	<b>2,974</b>	<b>801</b>	<b>1,654</b>	<b>1,188</b>	

Table 29: Credit Risk – Defaulted, impaired credit risk exposure supplemented with the information on non-performing and forborne exposure (EU CR1-E BA/GL/2016/11)

In the table above the difference between non-performing exposure and defaulted exposure is related to non-defaulted part of non-performing forbearance portfolio.

### Change of specific credit risk adjustments of defaulted exposures

in EUR million	Dec 18
<b>Opening balance</b>	<b>3,475</b>
Increases due to origination and acquisition	94
Decreases due to derecognition	-432
Changes due to change in credit risk (net)	429
Changes due to modifications without derecognition (net)	-10
Changes due to update in the institution's methodology for estimation (net)	0
Decrease in allowance account due to write-offs	-621
Other adjustments	6
<b>Closing balance</b>	<b>2,941</b>
Total recoveries on credit risk adjustments recorded directly to the statement of profit or loss	-169
Total specific credit risk adjustments recorded directly to the statement of profit or loss	55

Table 30: Credit Risk – Changes in the stock of specific credit risk adjustments held against defaulted exposures (Art. 442 (i) CRR and in line with EU CR2-A EBA/GL/2016/11)

Opening balance of credit loss allowances (CLA) and provisions calculated according to IFRS9 and allocated to defaulted exposures, i.e. with the assigned Stage 3, includes a EUR 21 million impact of IFRS 9 adoption as at 1 January 2018 referring to defaulted customers. In row 'Increases due to origination and acquisition' increases of CLA due to the initial recognition of loans and advances to customers at AC or FVTOCI during the current reporting period are disclosed. Additions in Stage 3 reflect transfers from Stage 1 or Stage 2, having occurred between commitment and drawing dates of related credit facilities. Releases of CLA following the derecognition of the related loans and advances to customers are reported in 'Decreases due to derecognition'.

In row 'Changes due to change in credit risk (net)' CLA net changes due to changes in credit risk are shown that triggered re-assignments of the related loans and advances to customers from Stage 1 or 2 at 1 January 2018 (or initial recognition date, if later) to Stages 3 at 31 December 2018. This position also captures the passage-of-time adverse effect ('unwinding correction') over the lifetime expected cash shortfalls of loans and advances to customers that were assigned to Stage 3 for any period throughout the year, as well as of any POCI loans and advances to customers. 'Changes due to modifications without derecognition (net)' reflects the effect on CLA arising from contractual modifications of loans and advances to customers which do not trigger their full derecognition. The use of CLA triggered by full or partial write-offs of loans and advances to customers is reported in row 'Decrease in allowance account due to write-offs'.

Specific credit risk adjustments (held against defaulted exposures) decreased by EUR 513 million, or 14.9%, throughout the financial year largely in line with the overall decrease of the NPL portfolio. The net releases resulted from improved quality of loan portfolio lower default rates and high recoveries.

### Yearly development of defaulted exposures

in EUR million	Gross carrying value
<b>Opening balance</b>	<b>6,201</b>
Loans and debt securities that have defaulted or impaired since the last reporting period	1,156
Returned to non-defaulted status	-535
Amounts written off	-686
Other changes	-869
<b>Closing balance</b>	<b>5,267</b>

Table 31: Credit Risk – Changes in the stock of defaulted exposures (EU CR2-A EBA/GL/2016/11)

Credit risk exposure towards defaulted clients is continually improving over the period. New defaults have been recorded mainly in Retail segment. However, the main drivers of the decrease of defaulted exposures are recoveries and write-offs performed during the reporting period. The most significant clean-up actions were performed in CEE countries with the majority referring to the Corporate segment.

# Use of ECAIs

## Scope of application and use of external ratings

### DISCLOSURE REQUIREMENTS Art. 444 (a) (b) (c) (d) CRR

Pursuant to Article 4 (98) CRR, external credit assessment institution (ECAI) means a credit rating agency that is registered or certified in accordance with Regulation (EC) No 1060/2009.

Erste Group generally uses the IRB Approach for determining the minimum capital requirements pursuant to Basel 3. The Standardised Approach is applied to exposures in insignificant business areas and business units as well as when the rollout plan specifies a later date for transition to the IRB Approach. Furthermore, specific legal regulations for certain business segments may trigger the application of the Standardised Approach (e.g. zero weighting for Austrian municipalities).

### STANDARD & POOR'S RATINGS

Erste Group generally uses Standard & Poor's (S&P) ratings. The assignment of the rating grades to credit quality steps is undertaken according to Article 136 CRR.

External ratings are used to a limited extent in some exposure classes to calculate the RWA in the Standardised Approach:

- \_ in case of institutions, if an external rating by an ECAI of the counterparty is available, the risk weight (RW) has to be determined pursuant to Article 120 CRR;
- \_ in case an external rating by an ECAI of the counterparty is not available, the RW has to be determined pursuant to Article 121 CRR;
- \_ in case of central governments and central banks, the RW has to be determined pursuant to Article 114 CRR

In addition, the external ratings published by S&P are used by Erste Group Bank AG as well as by the Austrian subsidiaries for the sub-portfolio of insurance companies of the corporates exposure class. Furthermore, the S&P ratings of securities issuers are used for determining the eligibility of financial collateral according to Article 197 CRR and the calculation of the volatility adjustment pursuant to Article 224 (1) CRR.

### Transfer and allocation of external ratings to credit quality steps and risk weights

The transfer of the issuer credit ratings onto comparable assets in the banking book is pursuant to Article 138 CRR (Art. 444 (c)). The allocation of the ratings to credit quality steps is as follows:

Standard & Poor's	Credit quality step
AAA to AA-	1
A+ to A-	2
BBB+ to BBB-	3
BB+ to BB-	4
B+ to B-	5
CCC+ and below	6

Table 32: Allocation of external ratings to credit quality steps (Art. 444 (d) CRR (1/2))

The risk weight allocation depending on the credit quality step and the exposure class is as follows:

Credit quality step	Central governments and central banks (Article 114 CRR)	Institutions (Article 121 CRR)	Institutions (Article 120 -1 CRR) long-term	Institutions (Article 120 -2 CRR) short-term	Corporates (Article 122 CRR)
1	0%	20%	20%	20%	20%
2	20%	50%	50%	20%	50%
3	50%	100%	50%	20%	100%
4	100%	100%	100%	50%	100%
5	100%	100%	100%	50%	150%
6	150%	150%	150%	150%	150%

Table 33: Allocation of external ratings to credit quality steps and risk weights (Art. 444 (d) CRR (2/2))

## Quantitative disclosure on credit risk – Standardised Approach

DISCLOSURE REQUIREMENTS Art. 444 (e) CRR

### Regulatory exposure by exposure classes and CRM effects

in EUR million	Exposure before CCF and CRM		Exposure post CCF and CRM		RWA	RWA density
	On-balance	Off-balance	On-balance	Off-balance		
Central Governments and Central Banks	51,927	78	55,408	117	1,375	2.5%
Regional governments or local authorities	4,292	789	5,790	269	344	5.7%
Public Sector Entities	2,895	478	1,284	103	274	19.7%
Multilateral Development Banks	260	0	423	10	0	0.0%
International Organisations	318	0	318	0	0	0.0%
Institutions	640	193	648	70	182	25.3%
Corporates	6,740	3,720	6,466	871	6,933	94.5%
Retail	5,199	812	4,270	244	3,245	71.9%
Exposures secured by mortgages on immovable property	4,055	58	4,054	26	1,506	36.9%
Exposures in default	277	56	274	13	325	113.4%
Exposures associated with particular high risk	111	38	111	19	195	150.0%
Covered bonds	24	0	24	0	5	19.2%
Collective investment undertakings (CIUs)	122	0	122	0	72	59.6%
Equity exposures	228	0	228	0	443	194.3%
Other items	3,081	3	3,109	1	1,648	53.0%
<b>Total</b>	<b>80,167</b>	<b>6,225</b>	<b>82,528</b>	<b>1,743</b>	<b>16,547</b>	<b>19.6%</b>

Table 34: Standardised approach – Credit risk exposure and CRM effect (Art. 453 (f) (g) CRR and in line with the EU CR4 EBA/GL/2016/11)

Exposure before CCF and CRM is regulatory exposure net of credit risk adjustments, before application of credit conversion factor to off-balance and before application of the credit risk mitigation techniques.

### Regulatory exposure before CCF and CRM

in EUR million	Risk weights													Total
	0%	2%	10%	20%	35%	50%	70%	75%	100%	150%	250%	Other	Deducted	
Central governments or central banks	49,591	0	1,434	36	0	0	0	0	779	0	159	6	0	52,005
Regional governments or local authorities	3,622	0	0	1,258	0	0	0	0	200	0	0	0	0	5,080
Public Sector Entities	538	0	0	2,395	0	21	0	0	419	0	0	0	0	3,373
Multilateral Development Banks	260	0	0	0	0	0	0	0	0	0	0	0	0	260
International Organisations	318	0	0	0	0	0	0	0	0	0	0	0	0	318
Institutions	42	197	0	408	0	69	0	0	116	0	0	0	0	833
Corporates	702	0	0	37	0	158	0	1	9,561	1	0	0	0	10,460
Retail	54	0	0	0	0	0	0	5,956	1	0	0	0	0	6,011
Exposures secured by mortgages on immovable property	0	0	0	0	3,466	572	0	0	74	0	0	0	0	4,113
Exposures in default	7	0	0	0	0	0	0	0	235	92	0	0	0	333
Exposures associated with particular high risk	0	0	0	0	0	0	0	0	0	149	0	0	0	149
Covered bonds	0	0	2	22	0	0	0	0	0	0	0	0	0	24
Collective investment undertakings (CIUs)	0	0	0	0	0	0	0	0	21	0	0	100	0	122
Equity exposures	0	0	0	0	0	0	0	0	85	0	143	0	0	228
Other items	1,435	0	0	0	0	0	0	0	1,650	0	0	0	0	3,085
<b>Total</b>	<b>56,569</b>	<b>197</b>	<b>1,436</b>	<b>4,155</b>	<b>3,466</b>	<b>821</b>	<b>0</b>	<b>5,957</b>	<b>13,141</b>	<b>241</b>	<b>302</b>	<b>106</b>	<b>0</b>	<b>86,393</b>

Table 35.1: Standardised approach – Credit risk exposure value by risk weights (Art. 444 (c) CRR)

## Regulatory exposure after CCF and CRM

in EUR million	Risk weights													Total	Unrated
	0%	2%	10%	20%	35%	50%	70%	75%	100%	150%	250%	Other	Deducted		
Central governments or central banks	52,664	0	1,873	36	0	9	0	0	779	0	159	6	0	55,525	801
Regional governments or local authorities	4,926	0	0	987	0	0	0	0	146	0	0	0	0	6,059	13
Public Sector Entities	448	0	0	819	0	21	0	0	99	0	0	0	0	1,387	34
Multilateral Development Banks	433	0	0	0	0	0	0	0	0	0	0	0	0	433	53
International Organisations	318	0	0	0	0	0	0	0	0	0	0	0	0	318	0
Institutions	39	197	0	356	0	39	0	0	87	0	0	0	0	718	314
Corporates	0	0	0	76	0	284	0	1	6,974	1	0	0	0	7,336	6,766
Retail	0	0	0	0	0	0	1	4,512	1	0	0	0	0	4,514	4,350
Exposures secured by mortgages on immovable property	0	0	0	0	3,445	561	0	0	73	0	0	0	0	4,080	3,958
Exposures in default	0	0	0	0	0	0	0	0	210	77	0	0	0	287	257
Exposures associated with particular high risk	0	0	0	0	0	0	0	0	0	130	0	0	0	130	74
Covered bonds	0	0	2	22	0	0	0	0	0	0	0	0	0	24	22
Collective investment undertakings (CIUs)	0	0	0	0	0	0	0	0	21	0	0	100	0	122	94
Equity exposures	0	0	0	0	0	0	0	0	85	0	143	0	0	228	121
Other items	1,457	0	0	5	0	0	0	0	1,647	0	0	0	0	3,110	2,255
<b>Total</b>	<b>60,285</b>	<b>197</b>	<b>1,875</b>	<b>2,301</b>	<b>3,445</b>	<b>913</b>	<b>2</b>	<b>4,513</b>	<b>10,124</b>	<b>207</b>	<b>302</b>	<b>106</b>	<b>0</b>	<b>84,271</b>	<b>19,112</b>

Table 36.2: Standardised approach – Exposure post CCF and CRM by risk weights (Art. 444 (e) CRR and in line with EU CR5 EBA/GL/2016/11)

Table above presents exposure post CCF and CRM with the breakdown to credit quality steps. It includes only exposure under credit risk framework, while the split of counterparty credit risk relevant exposure is presented in corresponding chapter. Under column Unrated, exposures for which credit risk assessment by a nominated ECAI is not used and for which specific risk weights are applied depending on their exposure class.



# Leverage

## Leverage ratio

### DISCLOSURE REQUIREMENTS Art. 451 (1) (a) CRR

The leverage ratio represents the relationship between Tier 1 capital and the leverage exposure pursuant to Article 429 CRR, more specifically the Delegated Regulation (EU) 2015/62 with regard to leverage ratio (Delegated Act) of 10 October 2014, which was published in the Official Journal of the European Union on 17 January 2015. Essentially, the leverage exposure represents the sum of unweighted on-balance sheet and off-balance sheet positions considering valuation and risk adjustments as defined in the Delegated Act.

The leverage ratio for Erste Group Bank AG at consolidated level amounted to 6.6%, comfortably above the 3.0% minimum recommendation. The ratio is calculated on period-end values for both leverage exposure and Tier 1 capital, with the Tier 1 capital based on fully-fledged CRR definitions, i.e. not including any transitional provisions.

## Leverage exposure breakdown and reconciliation

### DISCLOSURE REQUIREMENTS Art. 451 (1) (a) (b) (c) CRR

Erste Group discloses its CRR leverage ratio in accordance with the Commission Implementing Regulation (EU) 2016/200 which specifies implementing technical standards for the disclosure of the leverage ratio. Items included in the prescribed disclosure tables which are not relevant for Erste Group are omitted from the tables disclosed in this section in order to improve the readability of the information. As a consequence, the numbering of rows in the tables may not be consecutive.

#### Reconciliation of the Group's published financial statements to the total leverage ratio exposure

in EUR million	Category	Applicable amount
1	Total assets as per published financial statements	236,792
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	531
4	Adjustments for derivative financial instruments	159
5	Adjustments for securities financing transactions (SFTs)	538
6	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	15,227
7	Other adjustments	-3,053
8	<b>Leverage ratio total exposure measure</b>	<b>250,193</b>

Table 36: Reconciliation of accounting assets and leverage ratio exposure (Art. 451 (1) (b) CRR / Table LRSum)

Under IFRS accounting standards, Erste Group does not recognise fiduciary items on its balance sheet. As such, there are no derecognised fiduciary items in accordance with Article 429 (13) CRR. Equally, there are no adjustments for intragroup exposures as disclosure is at consolidated Group level. Article 429 (14) CRR is not applicable to Austrian banks; therefore, no exclusions to the leverage ratio exposure in accordance with this article apply. As a result, rows relating to these items have been excluded from all disclosure tables.

The following table provides a breakdown of the total leverage exposure measure into its main constituent parts as well as the calculation of the period-end leverage ratio.

in EUR million		CRR leverage ratio exposures
<b>On-balance sheet exposures (excluding derivatives and SFTs)</b>		
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	216,275
2	(Asset amounts deducted in determining Tier 1 capital)	-1,783
3	<b>Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)</b>	<b>214,492</b>
<b>Derivative exposures</b>		
4	Replacement cost associated with all derivatives transactions (i.e. net of eligible cash variation margin)	1,431
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	1,343
EU-5a	Exposure determined under Original Exposure Method	39
9	Adjusted effective notional amount of written credit derivatives	517
11	<b>Total derivative exposures</b>	<b>3,330</b>
<b>SFT exposures</b>		
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	16,606
14	Counterparty credit risk exposure for SFT assets	538
16	<b>Total securities financing transaction exposures</b>	<b>17,144</b>
<b>Other off-balance sheet exposures</b>		
17	Off-balance sheet exposures at gross notional amount	44,119
18	(Adjustments for conversion to credit equivalent amounts)	-28,892
19	<b>Other off-balance sheet exposures</b>	<b>15,227</b>
<b>Capital and total exposure measure</b>		
20	Tier 1 capital	16,515
21	<b>Leverage ratio total exposure measure</b>	<b>250,193</b>
<b>Leverage ratio</b>		
22	Leverage ratio	6.6%

Table 37: Leverage ratio common disclosure (Art. 451 (1) (b) CRR / Table LRCom)

The following table provides a breakdown of on-balance sheet exposures (excluding derivatives, SFTs and exempted exposures) by exposure class.

in EUR million	Category	CRR leverage ratio exposures
EU-1	Total on-balance sheet exposures (excluding derivatives, SFTs and exempted exposures), of which:	216,275
EU-2	Trading book exposures	4,681
EU-3	Banking book exposures, of which:	211,595
EU-4	Covered bonds	1,201
EU-5	Exposures treated as sovereigns	45,118
EU-6	Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	4,149
EU-7	Institutions	4,422
EU-8	Secured by mortgages / immovable property	49,079
EU-9	Retail exposures	40,954
EU-10	Corporate	52,525
EU-11	Exposures in default	2,075
EU-12	Other exposures (e.g. equity, securitisations and other non-credit obligation assets)	12,072

Table 38: Split-up of on-balance sheet exposures (Art. 451 (1) (b) CRR / Table LRSpl)

## Management of the risk of excessive leverage

### DISCLOSURE REQUIREMENTS Art. 451 (1) (d) CRR / Table LRQua

The focus of Erste Group's business model, in line with its stated strategic objectives, is on retail and corporate lending businesses. Therefore, the Group's leverage exposure is mainly driven by on-balance sheet and off-balance sheet credit-related exposures with limited impact from derivatives and securities financing transactions. As a result, the risk of excessive leverage is mitigated by Erste Group's solid and diversified business model. Since the lending-focused business model results in a relatively high RWA density (defined as RWA/leverage exposure), the risk-based capital requirements (capital requirements expressed as a percentage of total RWA) rather than the leverage ratio currently represent the primary capital constraint for the business activities of Erste Group.

This notwithstanding, the leverage ratio is planned as part of the annual forecasting and budgeting process and also represents a core risk metric included in the Group RAS with defined RAS thresholds, which, when breached, trigger management discussions and actions to manage and control excessive leverage. As a RAS metric, the development of the Group leverage ratio is regularly monitored by the management board (reported in the Group Risk Report) and the supervisory board (reported in the Group Risk Report and RAS Monitor). Local leverage ratio limits and triggers are also defined in the Local RAS by relevant local entities and monitoring is undertaken at local entity level.

## Factors influencing the development of leverage exposure

DISCLOSURE REQUIREMENTS Art. 451 (1) (e) CRR / Table LRQua

The Leverage ratio remained stable at 6.6% compared to year-end 2017, driven by Tier 1 capital increase which was offset by growth in leverage exposure. Tier 1 capital increased by 7.0% or by EUR 1.1 billion mainly due to the inclusion of the profit for the year. The overall leverage exposure increased by 6.6% to EUR 250 billion. This change was mainly driven by an increase in on-balance sheet primarily as a result of business and loan growth in the retail and corporate segments as well as increased reverse repo transactions.

# Use of the IRB Approach to credit risk

## Approved approaches and transitional rules by the regulator

### DISCLOSURE REQUIREMENTS Art. 452 (a) CRR

Erste Group was authorised by the Austrian Financial Market Authority (FMA) and Oesterreichische Nationalbank (Austrian central bank) to calculate risk-weighted exposure amounts for credit risk using the IRB Approach as of 1 January 2007.

The following segments fall under the Foundation IRB Approach:

- \_ Institutions
- \_ Sovereigns (exposures to central governments and central banks of the Member States and their regional governments, local authorities and public sector entities assigned with a 0% risk weight remain under the Permanent Partial Use)
- \_ Corporates
- \_ Specialised Lending - Slotting Criteria approach

The following segment falls under the Advanced IRB Approach:

- \_ Retail

For equity exposures, the PD/LGD approach is applied. If the IRB-approach of equity exposures is set to PD/LGD approach and the PD-value is missing due to a STA-rating method, then equity exposures are treated under the simple risk weight approach. For certain intra-group equity exposures, the Standardised Approach under PPU is applied.

The authorisation to calculate risk-weighted exposure amounts for credit risk using the IRB approaches by the supervisory authorities was issued for an indefinite period of time.

## IRB OFFICIAL NOTICES AND IRB ROLL-OUT PLAN

### IRB official notice for single banking entities and at consolidated level in Austria

The following savings banks in the cross-guarantee system and domestic operating subsidiaries of Erste Group were audited locally by the FMA/OeNB and received approval to apply the IRB Approach indefinitely as of 1 January 2007 or later:

#### IRB approval with application starting from 1 January 2007

- \_ Erste Group Bank AG
- \_ Allgemeine Sparkasse Oberösterreich Bank AG
- \_ Dornbirner Sparkasse Bank AG
- \_ Kärntner Sparkasse AG
- \_ Sparkasse Imst AG
- \_ Sparkasse Niederösterreich Mitte West AG
- \_ Steiermärkische Bank und Sparkassen AG
- \_ Tiroler Sparkasse Bank AG Innsbruck
- \_ Bausparkasse der oesterreichischen Sparkassen AG
- \_ Sparkasse Baden
- \_ Sparkasse Bregenz Bank AG
- \_ Sparkasse Herzogenburg-Neulengbach Bank AG
- \_ Lienzer Sparkasse AG
- \_ Salzburger Sparkasse Bank AG
- \_ Sparkasse Bludenz Bank AG
- \_ Sparkasse der Stadt Feldkirch
- \_ Sparkasse Korneuburg AG
- \_ Sparkasse Frankenmarkt AG
- \_ Sparkasse Hainburg-Bruck-Neusiedl AG
- \_ Sparkasse Horn-Ravelsbach-Kirchberg AG
- \_ Waldviertler Sparkasse Bank AG
- \_ Sparkasse der Gemeinde Egg
- \_ Sparkasse der Stadt Amstetten AG
- \_ Sparkasse Eferding-Peuerbach-Waizenkirchen
- \_ Sparkasse Feldkirchen/ Kärnten
- \_ Sparkasse Lambach Bank AG

- \_ Sparkasse Langenlois
- \_ Sparkasse Mühlviertel-West Bank AG
- \_ Sparkasse Mürzzuschlag AG
- \_ Sparkasse Neuhofen Bank AG
- \_ Sparkasse Neunkirchen
- \_ Sparkasse Pöllau AG
- \_ Sparkasse Pottenstein N.Ö.
- \_ Sparkasse Poysdorf AG
- \_ Sparkasse Pregarten – Unterweißenbach AG
- \_ Sparkasse Rattenberg Bank AG
- \_ Sparkasse Scheibbs AG
- \_ Sparkasse Voitsberg-Köflach Bank AG
- \_ Wiener Neustädter Sparkasse
- \_ Bankhaus Krentschker & Co. AG
- \_ Kremser Bank und Sparkassen AG

#### **IRB approval with application from a later date**

- \_ Sparkasse Salzkammergut AG (IRB Official Notice 30 June 2008)
- \_ Erste Bank der Oesterreichischen Sparkassen AG (IRB Official Notice 9 August 2008 after the split-off from Erste Group)
- \_ Sparkasse Ried im Innkreis-Haag am Hausruck (IRB Official Notice 20 July 2009)

The following savings banks were granted an individual IRB Official Notice prior to joining the cross-guarantee system that was supplemented when they joined the cross-guarantee system:

- \_ Sparkasse Schwaz AG (IRB Official Notice 28 June 2007 / 29 September 2008)
- \_ Sparkasse Reutte AG (IRB Official Notice 18 April 2007 / 22 September 2008)
- \_ Sparkasse der Stadt Kitzbühel (IRB Official Notice 18 April 2007 / 22 September 2008)
- \_ Sparkasse Mittersill Bank AG (IRB Official Notice 18 April 2007 / 22 September 2008)
- \_ Sparkasse Kufstein, Tiroler Sparkasse von 1877 (IRB Official Notice 18 April 2007 / 1 October 2009)

#### **IRB official notice for single banking entities and at consolidated level for institutions abroad**

The following foreign banks have been audited by the local supervisory authorities on behalf of the FMA and have been granted an indefinite approval to apply the IRB Approach as of 1 January 2007 or later:

- \_ Česká spořitelna, a.s. (IRB Official Notice 1 January 2007)
- \_ Stavebni sporitelna Ceske sporitelny a.s. (IRB Official Notice 1 January 2007)
- \_ Erste Bank Hungary Zrt (IRB Official Notice 1 April 2008)
- \_ Slovenská sporiteľňa, a.s. (IRB Official Notice 1 July 2008)
- \_ Erste & Steiermärkische bank d.d., Rijeka (IRB Official Notice for the consolidated level 1 July 2009 and single-entity level 7 October 2011)

#### **IRB official notice at consolidated level only**

The following financial institutions have been audited by the OeNB or by local supervisory authorities on behalf of the FMA and were granted approval to apply the IRB Approach at the consolidated level indefinitely:

- \_ Erste Bank und Sparkassen Leasing GmbH
- \_ Erste Group Immorent AG
- \_ Sparkassen Leasing Süd GmbH
- \_ Sparkassen Leasing Süd GmbH & Co KG
- \_ s Wohnbaubank AG

#### **IRB application planned – Temporary partial use (TPU)**

The following members of the Group of credit institutions will be gradually included in the application of the IRB Approach, for which a specific rollout plan is in place:

- \_ Banca Comercială Română SA
- \_ Waldviertler Sparkasse Bank AG (only business area Czech Market)
- \_ Erste Bank Hungary Zrt (Specialised Lending Project Finance)

At present, the application of the IRB Approach is not planned for any of the other fully consolidated credit institutions.

## PERMANENT PARTIAL USE

Based on the approval of the FMA, Permanent Partial Use (PPU) is applicable to the following exposure classes and in the following cases:

- \_ Exposures with respect to the mandatory liquidity reserve with the central institution;
- \_ Exposures with insignificant risk profiles in minor business areas and exposure classes of insignificant volume;
- \_ Exposures in the exposure classes of the federal government, the federal states, municipalities and public sector entities;
- \_ Exposures regarding claims of a credit institution vis-à-vis its parent company, its subsidiaries or a subsidiary of its parent company;
- \_ Investments within the scope of government programmes of the member states to promote specific economic sectors;
- \_ Exposures in the form of mandatory minimum reserves;
- \_ Liabilities and back-to-back guarantees of central governments;
- \_ Investments in companies if the exposures to these companies are assigned a weighting of 0% under the credit risk Standardised Approach.

### Overview of EAD based on exposure classes (FIRB, AIRB, TPU, PPU)

in EUR million	EAD	% of total	Total TPU EAD	Total TPU EAD (% of total)	Banca Comercială Română SA	Erste Bank Hungary Zrt	Waldviertler Sparkasse Bank AG
Retail-SME secured by immovables	7,361	2.8%					
Retail-secured by immovable property	43,419	16.8%					
Retail revolving	-	0.0%					
Retail SME non-secured by immovables	6,187	2.4%					
Other retail	19,244	7.4%					
<b>Advanced IRB Approach Total</b>	<b>76,211</b>	<b>29.4%</b>					
Central governments and central banks	4,084	1.6%					
Institutions	13,399	5.2%					
Corporates-SME without supporting factor	22,046	8.5%					
Specialised lending	15,851	6.1%					
Other corporates	33,985	13.1%					
Equity exposures	1,051	0.4%					
Securitisation positions	1,282	0.5%					
Other non-credit obligation assets	6,967	2.7%					
<b>Foundation IRB Approach Total</b>	<b>98,666</b>	<b>38.1%</b>					
Central governments or central banks	55,525	21.4%	5,345	2.1%	5,334	0	11
Regional governments or local authorities	6,059	2.3%	573	0.2%	572	-	1
Public Sector Entities	1,387	0.5%	11	0.0%	11	0	-
Multilateral Development Banks	433	0.2%	-	0.0%	-	-	-
International Organisations	318	0.1%	-	0.0%	-	-	-
Institutions	718	0.3%	88	0.0%	88	0	1
Corporates	7,336	2.8%	2,558	1.0%	2,405	69	84
Retail	4,514	1.7%	1,669	0.6%	1,565	38	66
Exposures secured by mortgages on immovable property	4,080	1.6%	2,474	1.0%	2,191	0	283
Exposures in default	287	0.1%	138	0.1%	109	1	27
Exposures associated with particular high risk	130	0.1%	118	0.0%	56	-	62
Covered bonds	24	0.0%	-	0.0%	-	-	-
Collective investment undertakings (CIUs)	122	0.0%	-	0.0%	-	-	-
Other items	3,110	1.2%	1,505	0.6%	1,496	-	8
Equity exposures	228	0.1%	2	0.0%	2	-	-
<b>Standardised Approach Total</b>	<b>84,271</b>	<b>32.5%</b>	<b>14,480</b>	<b>5.6%</b>	<b>13,829</b>	<b>109</b>	<b>542</b>
<b>Total</b>	<b>259,147</b>	<b>100.0%</b>					

Table 39: EAD overview based on exposure classes according to the approaches in the rollout plan

In the table above EAD figure represents exposure value used as a base for RWA calculation (post CCF and CRM) and includes exposure under credit risk, counterparty credit risk and securitisation frameworks.

## Rating systems

### DISCLOSURE REQUIREMENTS Art. 452 (b) (i) CRR

A rating system comprises all models, methods, processes, controls, data collection and data processing that serve the assessment of credit risks, the allocation of exposures to rating grades and the quantification of default probabilities and loss estimates for certain types of exposures. The rating systems used by Erste Group meet the requirements for the application of the IRB Approach.

## RATING MODELS

The internal rating models and the estimates of related risk parameters play a key role in credit risk management, in the decision-making processes and in lending operations. Furthermore, they deliver the main determinants for the procedures to assess capital requirements. Erste Group uses empirical-statistical and expert-based model types. A periodic validation ensures the quality of the rating models and risk parameters.

### Empirical-statistical models

Empirical-statistical models of risk assessment require a large data base and are especially suitable for mass market businesses.

Based on sufficiently large empirical data bases (data of a large population from the customer base of the bank), scorecards are developed using logistic regression techniques. The key criterion used for selecting the best scorecard is the accuracy ratio. The accuracy ratio indicates the ability of the scorecard to differentiate between customers with low and high default risk. The result of the scorecard is presented as a rating grade, which is associated with a probability of default estimate.

The key element in rating models applied to retail portfolios is the assessment of account behaviour, which is updated on a monthly basis. This enables continuous risk monitoring of customer portfolios in the retail banking business. Furthermore, the rating models also include customer information that is updated at least once a year but in any case when a credit application is made (in the event of a credit decision).

The rating results (rating grades) are verifiable and objective, i.e. if the input information is the same they supply the same rating grade regardless of the individual assessment by the account manager.

Empirical-statistical models are used not only in the retail business, but also in the corporate segment. In the case of corporates, the emphasis is on statistically developed financial ratings (evaluation of financial statement ratios). Apart from the financial rating (hard facts), qualitative customer information (soft facts) also enters into the risk evaluation of corporate customers, which is updated at least once a year.

### Expert-based models

For expert-based models, the empirical-statistical component is not as important – due to the lack of a sufficiently large population of customers in the respective customer segments or a sufficient number of defaulted customers – and is replaced by expert know-how, which takes into account quantitative criteria (e.g. financial statements), qualitative criteria (e.g. market and industry developments), but also macro-economic factors (e.g. country rating).

By helping to assess the specific debtor- and business-specific features, this expert knowledge makes an important contribution to the rating models for the following customer segments: specialised lending, banks (for which the rating model is currently being amended with an empirical-statistical financial rating) and sovereigns.

These rating models ensure a sound assessment of the debtor- and business-specific features, risk differentiation as well as precise and consistent quantitative risk estimates.

## RATING METHODS

### DISCLOSURE REQUIREMENTS Art. 452 (c) CRR

#### Exposure classes of the IRB Approach and applied rating methods

Exposure class/rating method	Empirical-statistical models			Expert-based models			External ratings (ECAIs)
	Rating Private Individuals	Rating SME	Rating Corporates	Rating Specialised Lending	Bank Rating	Country Rating	
Retail	•	•					
Corporate incl. SME, SL		•	•	•	•		
Institutions					•		
Central government and central banks						•	
Equity			•	•	•		
Securitisations							•
Other assets							

Table 40: Map of rating methods (Art. 452 (c) (i) CRR)

The rating methods Bank Rating and Country Rating are used as centralised methods throughout Erste Group without any regional modifications. The rating grades are determined by Erste Group centrally and made available to the Group companies.

The other rating methods (Rating Private Individuals, Rating SME, Rating Corporates and Rating Specialised Lending (Rating SL)) follow uniform modelling guidelines and – where possible – model structures, and feature regional adaptations appropriate to the respective portfolios in the individual Group companies.

For Rating SME, two different type of models, one for single entry bookkeeping and one for double entry bookkeeping are used. For Rating Corporates, two types of models are used with respect to size of the company based on company's annual turnover. For rating models in Specialised Lending, two types of models based on financing object, real estate or project financing are used. For remaining segments there is one model covering the segment.

## **Rating Private Individuals**

### **Classification**

Customers are classified as private individuals according to their occupational status. They are assigned to the rating method Rating Private Individuals in the customer database.

### **Development**

The rating method Rating Private Individuals was developed by experts at Erste Group as an empirical-statistical model. The variants used at the various subsidiaries were developed on the basis of the local customer database, making it possible to take local specifics into account. The rating method is applied in case of applications for a financing decision (e.g. new loan applications) and automatically with in the monthly update of customer ratings.

### **Rating determinants**

The rating model assigns scores based on demographic information, account data (e.g. debit balances and days in overdraft), product attributes as well as external data (e.g. information supplied by Kreditschutzverband, an Austrian creditor protection association, or other credit reference agencies). The assessment of account behaviour is performed monthly and provides an essential input for timely risk assessment. Analyses done in the case of applications take into account not only the input factors for the rating, but also the current customer information on their income and expenditure.

### **Outputs of the rating process**

Based on a scorecard, every private individual is assigned a rating grade on a rating scale of 8 grades. The customers with rating grade A1 have the lowest and customers with rating grade D2 have the highest PD. The customer rating serves as the basis for the calculation of capital requirements and is an indicator for the credit decision and the lending terms. Private individual ratings derived from the analysis of the loan application, which includes all loans granted and applied for, are an integral part of the decision recommendation. Rating grades of customers are updated at the monthly reappraisal of account behaviour. The monthly processing of customer and account data is also the basis for the early warning system. The early warning list supplies account managers with valuable information on current risk assessments and also contains private individuals of substandard creditworthiness because of specific customer or account features. Such customers may include, for example, those with regular overdrafts or customers that have been sent reminders.

## **Rating SME**

### **Classification**

The rating method Rating SME (incl. small commercial customers and independent professionals) is applied to SMEs with sales revenues of up to EUR 5 million as well as to independent professionals.

### **Development**

Statistically-derived rating models are used in all subsidiaries. In principle, the PD for SME customers and independent professionals must be determined taking into account the financial situation before and after the financing being applied for. This Basel requirement is complied with by means of an online rating initiated manually for determining the current rating grade and the rating in the case of a loan application (rating by type of financing). In addition to the online rating, there is also a monthly batch rating in which the current rating grade is determined based on behaviour. This automatically updates the rating grade (based on an evaluation of account behaviour and any available external information).

### **Rating determinants**

According to differences in income patterns, the method is broken down into three sub-groups: customers using double-entry bookkeeping, customers using single-entry book-keeping and customers using simplified accounting. Depending on these accounting types, the following six rating determinants apply:

- \_ Double-entry book-keeping: From the analysis of financial statements, condensed information is extracted (financial rating) that can be adjusted by entering any corrections relevant to financial strength (such as hidden reserves or liabilities).



- \_ Single-entry book-keeping: A financial rating is also calculated based on the statement of income and expenses.
- \_ Asset and liability status: The asset and liability position may be considered in the financial rating for customers that use single-entry book-keeping. For customers using simplified accounting, it is used to calculate a debt ratio, which in turn is considered in the overall rating.
- \_ Qualitative factors: Qualitative factors make it possible to take into account input factors that cannot be derived directly from financial statements. Examples are management, accounting practices, market and its trends, and external information (credit bureau notifications).
- \_ Account behaviour: Particular attention is paid to account behaviour, which is automatically assessed and updated on a monthly basis. The evaluation considers and scores, for example, the incidence of payment difficulties, account balances and the extent to which available credit and overdraft facilities are used.
- \_ Creditworthiness based on cash flow considerations: Finally, the ability to service debts is evaluated. To this end, disposable income derived from the business documentation and from revenue and expenditure accounting is compared to current liabilities.

### Outputs of the rating process

A specific rating grade from a scale of 13 grades is assigned to every SME or professional customer. This customer rating serves as the basis for determining the required regulatory capital, as an indicator for the credit decision and as a factor in credit terms.

## Rating Corporates

### Classification

Corporates, i.e. commercial customers with sales revenues above specified thresholds, are rated by the “Rating Corporates” method. Within the corporate segment a further size differentiation exists. In addition, some locally specific corporate rating methods exist adapted to the nature of certain portfolio segments.

### Development

Statistically-derived rating models are used in all subsidiaries.

### Rating determinants

The assignment of ratings for corporates is done systematically both with respect to information on past developments as well as future prospects, with special attention being paid to the relevant customer segment (e.g. whether the customers’ business is capital goods intensive) and the characteristics of the relevant markets (e.g. divergent accounting rules in Eastern European countries).

Rating Corporates is a two-stage process including the assignment of individual customer ratings and group ratings.

- \_ Individual customer rating: The cornerstone is the evaluation of the company’s financials. Based on ratios from the financial statements, a so-called “financial rating” (hard facts) is calculated. This financial rating also takes into account local factors based on the country where the company has its registered office. Another component for rating corporates are qualitative factors (soft facts). Unlike the hard facts that enter into the financial rating, these soft facts also include projections into the future. A company’s potential, opportunities and risks are determined, evaluated and documented according to a standardised procedure.
- \_ Group rating: In a second step, the company is considered within the context of a Group of companies that form an economic unit. A separate customer rating is produced for the Group as a whole. The capacity and the willingness to provide support are analysed, which may have a positive influence on the individual customer rating. Additionally, the Group’s rating is the cap for the rating of the individual customer. Rating caps also result from country ratings.

### Outputs of the rating process

Based on the score, every corporate is assigned a rating grade on a scale of 13 grades. The customer rating serves as the basis for determining the regulatory capital requirement, as an indicator for the credit decision and as a factor in the credit terms and conditions.

## Rating Specialised Lending

### Classification

The Corporates customer category includes the specialised lending customer segment. These are mainly real estate projects (e.g. rental, tourism and for-sale properties) and other project financing (e.g. power plants, infrastructure).

### Rating determinants

Both the hard facts (financial ratios) and the soft facts differ substantially from the rating for general corporates. The indicators include the loan-to-value and the debt service coverage ratio, features of the object financed (e.g. location quality) and project risks.

### Outputs of the rating process

The model output is mapped to the regulatory risk categories in the Supervisory Slotting Approach within the IRB Approach. These categories are the basis for the calculation of the capital requirement.

### Bank Rating Classification

The rating method “Banks” is used to evaluate foreign and domestic banks, investment banks as well as financial institutions belonging to banking groups.

### Development

The expert-based Bank Rating model was developed and is supported centrally by Erste Group.

A credit institution or financial institution is to be assigned a rating grade if

- \_ a bank overdraft limit is granted;
- \_ there is an exposure vis-à-vis the Group;
- \_ Erste Group has a nostro account with the institution or
- \_ the institution has a loro account with Erste Group with overdraft privileges.

### Rating determinants

The central component of the bank rating is a peer group comparison on the basis of quantitative, qualitative and country-related criteria. The institution to be analysed is compared with a group of banks of similar size, business activities, geographic location, ownership structure, etc.

The following quantitative data for the institution to be rated are automatically compared by the rating model to the data for the peer group and evaluated:

- \_ profitability (e.g. return on equity)
- \_ liquidity (e.g. deposit base)
- \_ asset quality (e.g. ratio of non-performing loans to gross loans)
- \_ capitalisation (e.g. capital ratio).

The following qualitative criteria are evaluated by the expert analyst:

- \_ likelihood of support (e.g. by the owner or the state)
- \_ importance of the institution for the country’s financial system
- \_ quality of banking supervision
- \_ experience to date
- \_ future potential.

To recognise transfer risk, the country rating of the home country of the bank is also considered in the rating. The model automatically assigns scores depending on the country’s rating.

### Outputs of the rating process

Based on the score achieved in the rating model, every customer from the Bank rating segment is assigned a rating grade on a scale of 13 grades. The rating serves as the basis for the calculation of the limit for the maximum exposure that the bank is prepared to enter into with a given customer. The rating grade must be stated in every limit and credit application. After approval of the rating, the rating grade is made available to all member institutions of Erste Group.

### Country Rating Classification

The rating method Country Rating is a rating for the sovereign and, at the same time, covers central governments, central banks and institutions guaranteed by the central government.

### Development

The expert-based country rating model was developed in 1992/1993, adapted after the Asian crisis (1997/1998) and implemented in 2001 and subsequently adjusted as a consequence of the financial crisis 2008/2009. External ratings do not enter into the model as input factors. The rating reflects the risk of a default in foreign currency and thus primarily represents the transfer risk (risk arising from cross-border transactions). The country ratings are determined centrally by Erste Group with binding effect for the entire Group (generally quarterly, at least once a year) and are made available to the Group entities.

### Rating determinants

Two groups of countries are distinguished: industrialised nations and emerging markets. The reason for the distinction is that foreign debt and debt service play an important role in emerging markets, but are of minor importance as indicators in established industrialised countries. For industrialised countries, the Maastricht criteria are used as indicators to help determine creditworthiness.

The emerging markets model contains 18 indicators. Of these, 12 are quantitative and 6 qualitative indicators. Eight further quantitative indicators are indirectly incorporated via the qualitative variables. The data are obtained from the research organisation Economist Intelligence Unit. The qualitative indicators have a weighting of about 40%.

### Outputs of the rating process

Based on the score achieved in the rating model, every customer from the Country Rating segment is assigned a rating grade on a scale of 13 grades. The country rating assigned is a key factor for determining the limits for countries and their sovereign institutions. Usually, the country rating serves as a cap for the assessment of the companies located in a given country (“sovereign ceiling”); exceptions exist, for example, when sovereign powers are transferred to higher-ranking supranational organisations (e.g. in the euro zone).

### External ratings (ECAIs)

External ratings are used for securitisations only.

## RELATION BETWEEN INTERNAL AND EXTERNAL RATINGS

### DISCLOSURE REQUIREMENTS Art. 452 (b) (i) CRR

All IRB rating models currently in use at Erste Group are internally-developed models. External ratings are not used directly for internal ratings and are used as input factors only in the Corporates model. For the segment “Large Corporates”, the valuation of the soft fact “capacity for raising external capital” takes external ratings into consideration, if available. Therefore, external ratings play almost no role in the internally-developed rating models and do not influence the rating grades that result from the model.

## RATING PROCESS

Mandatory elements of any rating process are defined group-wide. These include:

- \_ A definition of persons who are authorised to assign ratings
- \_ A definition of rating and re-rating triggers
- \_ The rating approval process
- \_ A regulation of manual override of a rating
- \_ Mandatory downgrading rules in case of outdated financial information
- \_ A synchronization process for ratings of the same client in different entities

### Rating by the selected method

#### Decentralised methods

Under the decentralised methods – Rating Private Individuals, Rating SME, Rating Corporates, and Rating SL – the input data needed for the rating is entered into the IT system by the account manager or the risk manager or is inferred from historical data on payment and account behaviour. The result is a computer-assisted rating grade.

#### Centralised methods

The centralised approaches are the rating methods Bank Rating and Sovereign Rating. The input data is captured by central specialised departments; the process results in an internal rating grade.

### Rating confirmation by risk management

As a main principle, the rating determined based on any of these methods must be confirmed by the risk management function. The only exceptions are certain assets in the retail portfolio, where the risk management decision may be derived from an automation-assisted rating result (unless this is manually overridden).

## CONTROL MECHANISMS FOR RATING SYSTEMS

DISCLOSURE REQUIREMENTS Art. 452 (b) (iv) CRR

### Independent validation

Every new IRB model developed must be validated prior to use by the independent validation function. Compliance with development standards and the quality of the results are assessed based on documented validation standards.

The final decision on a models related aspects are taken by the Holding Model Committee (HMC) for central models and Local Model Committee for local models.

The rating systems are regularly validated and reviewed by Model Validation by means of a standardised validation process carried out annually. The validation comprises the following methods (as applicable):

- \_ review of the documentation of the rating method
- \_ review of the basic assumptions underlying the models (representativeness)
- \_ testing of the data quality
- \_ testing of the correlations and the multi-collinearity structure
- \_ benchmarking based on external ratings
- \_ testing of the discriminatory power of the rating method
- \_ testing of the discriminatory power of the rating method in sub-portfolios
- \_ testing of the coefficients of the risk variables
- \_ review of the distribution of rating grades
- \_ testing of migration matrices
- \_ testing of calibration
- \_ analysis of manual overrides of model results.

The validation methods comprise qualitative methods (data quality, model design, overrides) and quantitative methods (discriminatory power, stability, calibration) with the results being presented on the basis of objective assessment criteria. If the validation of a rating model reveals a weakness, appropriate actions are agreed to remediate the relevant deficiencies; for example further analysis, re-calibration, partial or full re-development as necessary.

Apart from the rating model, the rating process is also reviewed. This review comprises an evaluation of the model's coverage of the portfolio (lacking/overdue ratings) and of cross-portfolio migration (rating method switching). In this case as well, measures are developed and implemented to address any shortcomings.

### Review of the rating systems in use by exposure segment

The usage of rating method is determined depending on the customer classification:

- \_ retail
- \_ corporates
- \_ banks
- \_ sovereigns

Every customer is assigned to a specific rating method. This allocation process is highly automated to keep the percentage of manual decisions as low as possible. It includes a number of checks executed by the IT system, e.g. the permanent monitoring of the criteria occupational status, operating income, legal form and industry code, which are needed for the automated allocation of rating methods to customers.

The checks conducted by the system for plausibility and correct completion of the data entry fields inform the user of any errors by sending a warning or error message. Ensuring data quality is done by special periodic evaluations. The responsibility for the correct application of the rating methods and correct data entry ultimately lies with the local level, from the account managers to the persons responsible in operative risk management departments.

## KEY ROLES AND RESPONSIBILITIES IN RATING SYSTEM LIFE-CYCLE

### Model Development

Main principle of Model Development is a "Subsidiarity model" approach. It means that as a rule, responsibilities are assigned to the lowest level that can effectively execute, i.e.:

- \_ Model development is executed by large local banks for their local models locally;

- \_ Models of smaller local banks are developed by the Holding.
- \_ All group-wide models are developed by the Holding.

The Holding is responsible to set standards for the development of all models and provides methodological support to ensure consistency within the Group. A subsidiarity model for model development is therefore balancing development efforts between the Holding and local banks and is simplifying tailoring of approaches to local requirements and data situation. This design fosters local acceptance and ownership and facilitates involvement of local experts and business stakeholders.

#### Model Validation

Model validation is organized in a “Hub-and-Spoke” model, which means that all validation responsibilities are bundled within the Holding validation unit, but local banks remain responsible for the sign-off of the results and for taking appropriate remediation action when necessary. Such design ensures independence and control of model validation, as well as enforce adherence to uniform standards. The local responsibility for sign-off implicitly requires local understanding of the validation results and of the actions required for the remediation.

#### Model Approval

Model approval is carried out via a dual approval model approach - corresponding Holding and Local Model committee structures to reflect responsibilities depending on model perimeter. The ultimate responsibility for models used within the Group (at consolidated level) lies with the Group CRO. Notwithstanding this, locally developed and used models are within the responsibility of the respective local CROs. A formal process of Local & Holding model approvals is implemented via a tailored committee structures. This setup for model approval reflects ownership requirements across Group entities.

#### Model Monitoring

Model monitoring is following a “subsidiarity model” analogue to model development:

- \_ Local banks are monitoring local models in both large and smaller local banks.
- \_ Holding is monitoring group-wide models.

A subsidiarity model for model monitoring fosters harmonization with model development and ensures close local oversight and understanding of models through proximity to local business and local use of models. Holding remains responsible for setting the standards and approach for model monitoring to ensure a consistent application throughout the Group. This enables group-wide oversight and benchmarking of similar models across the Group, as well as appropriate reporting at both levels.

#### Internal Audit

Internal audit or another comparable independent auditing unit shall review at least annually the institution's rating systems and its operations, including the operations of the credit function and the estimation of PDs, LGDs, ELs and conversion factors (according to Article 191 CRR).

In order to allow an objective assessment, the internal audit function is granted an adequate level of independence from the reviewed processes and units in order to ensure that (according to Guide for the Targeted Review of Internal Models (TRIM), Chapter 2.6):

- \_ there is an effective separation between the staff performing the internal audit function and the staff involved in the operation of the internal models: model development, model validation and the relevant business area;
- \_ the internal audit reports directly to the management body; and
- \_ no undue influence is exerted on the staff responsible for the audit conclusions.

Independence between internal audit and risk management functions is ensured by the separation up to the board level (audit - CEO, risk management - CRO). Ensuring that internal audit provides independent and objective assurance on risk management is vital for risks to be managed effectively.

Audit's assessment includes a confirmation of the fulfilment of tasks of quantitative nature performed by the units responsible for development and initial validation of the rating model(s) according to CRR (Article 191), RTS (Article 17) and internal requirements.

## DEFINITIONS, METHODS, AND DATA FOR THE ESTIMATION AND VALIDATION OF THE RISK PARAMETERS

DISCLOSURE REQUIREMENTS Art. 452 (c) (i) CRR

### Probability of default

The PD represents the probability that a given customer will default within the subsequent twelve months (one-year PD). The PD is estimated internally for the portfolios Retail, Corporates, Banks and Sovereigns.

The one-year PD is estimated per rating grade by a method developed by Lando and Skødeberg (Lando Method) and in case of private individual portfolio of Slovenská sporiteľňa, a.s. so called Durability Method. The Lando Method permits the determination of default and migration probability matrices for any desired period. An advantage of this method is that it also covers indirect defaults. This means that even a very good rating grade in which no customers defaulted historically can have a PD greater than zero when applying this method. Durability method calculates PDs directly from per-grade default rates while methodologically treating also defaults shorter than one year. Additionally, when estimating PD, a safety margin or margin of conservatism is added for each portfolio in order to ensure a conservative estimate as per IRB Approach standards.

PDs for low default portfolios are calculated based on long term average default experience in the default rates. The estimations include conservative margins defined by the regulations. The regulatory floors on the minimal level of PD are applied. The difference between PDs and actual default rates arise due to long term average nature of PDs and conservative margins defined in the regulation that are applied in the PD estimation.

The validation of the PDs employs both qualitative and quantitative methods:

- \_ review of the documentation
- \_ review of the underlying model assumptions
- \_ testing of data quality
- \_ analysis of time series
- \_ back-testing

In the quantitative validation, the estimated PDs are validated using the binomial test (back-testing). This involves comparing actual default rates with estimated probabilities of default. Qualitative methods comprise population distribution tests, time-series analysis of default rates and analysis of raw data. Both the qualitative and quantitative validation is performed annually in conjunction with the validation of the rating models by the independent validation function. Where appropriate, improvement measures are initiated depending on the results. The same also applies to the risk parameters LGD and CCF described below.

The table below shows the estimated PDs per rating method compared to actual default rates (back-testing). The figures are derived from the number-weighted average across all Group member banks which apply the IRB Approach, for each time period given. For the rating method Country Rating, all countries rated by Erste Group are used for the PD estimate and the default rate calculation because of the small number of countries involved, while otherwise only customers with exposure were considered as relevant. From a Group-wide perspective, the PD estimates are generally higher than the actual default rates, confirming the conservativeness of the estimates.

Customer class	Arithmetic average PD by obligors	Average historical annual default rate
Country rating	3.36%	0.51%
Bank rating	0.96%	0.25%
Rating Corporates	1.81%	1.86%
Rating SME	3.56%	3.13%
Rating of private individuals	1.80%	1.81%

Table 41: Back-testing PD (Art. 452 (i) CRR (1/3))

PD is calculated at client level; hence Erste Group omitted the segmentation by exposure class within the retail portfolio (private individuals and SMEs) due to comparison reasons.

### Loss given default

LGD is currently estimated at Erste Group only for the retail portfolio for Pillar 1 purposes. LGD is defined as the expected economic loss after recoveries (from collateral and other repayments) as a percentage of EAD. Depending on data availability and local factors (e.g. processes, business needs), modelling is based either on a total recovery rate or on a combination of a redemption recovery rate (customer repayments) and a collateral recovery rate (proceeds of realisation of collateral). Depending on credit exposure, LGD is calculated taking

into account proportionately allocated costs and a margin of conservatism. The risk drivers are identified, homogenous segments (pools) formed and a recovery rate calculated for every segment. This rate is directly incorporated into the modelling and estimation of LGD.

LGDs for low default portfolios are estimated both on closed exposures and the exposures that are currently in the workout phase. The remaining expected LGDs on workout cases are calculated based on the models that use both experience from closed exposures as well as workout strategies projections. The time lapse between default event and closure of exposure may differ based on exposure type and may be from few months up to more years of workout process. LGD include regulatory conservative margins as well as down turn regulatory add on.

Regular validation of the LGD risk parameter is performed by the independent validation function once a year, using both qualitative and quantitative methods:

- \_ review of the documentation
- \_ review of the underlying model assumptions
- \_ testing of data quality
- \_ analysis of time series
- \_ back-testing

The quantitative validation (back-testing) consists primarily of the comparison of actual and expected LGDs. Qualitative methods address the assessment of compliance with all relevant rules in the models (e.g., investigation of documentation and data quality).

The table below shows the LGD back-testing results for defaulted customers at Group level on the long-term EAD-weighted average. All defaults over a period of at least five years (years from 2006 to 2017 from internal validation reports) were considered, with the model valid as of the beginning of 2013 being used for the calculation of estimated LGD. The estimated LGDs were higher than the observed value for all sub-classes of the retail exposure class, indicating the conservativeness of the estimates.

Asset class	Average LGD estimates	Average annual observed LGD
Retail	27.51%	19.68%
thereof SME	27.73%	19.01%
thereof Private Individuals	29.71%	20.88%

Table 42: Back-testing LGD (Art. 452 (i) CRR (2/3))

As LGD is estimated on own LGD pools at client level in some geographical areas; hence Erste Group omitted the segmentation by exposure class within the retail portfolio (private individuals and SMEs) due to comparison reasons.

### Credit conversion factor

The CCF is estimated internally only in the Retail portfolio for Pillar 1 purposes. It is defined as the expected drawdown of off-balance sheet, non-derivative positions within twelve months on the condition that the customer defaults within this period. EAD represents current drawings plus the off-balance sheet non-derivative positions (that is, the available undrawn credit), multiplied by the CCF.

The CCF is estimated in a two-stage process: In the first step, empirical conversion rates are determined based on the data collected on defaulted customers. The conversion rate represents the relationship between the net credit increase from the reference date to the default date, on the one hand, and the available undrawn credit at the reference date on the other hand. The reference date is the date one year before default. The second step consists of the identification of risk drivers and, based on this, the segmentation and the estimation of the CCF for each homogeneous segment.

The estimates of CCFs are calculated by segment as the respective mean of all conversion rates per given segment over the entire period, plus a margin of conservatism allowance for estimation error. The relevant amount of error is determined based on a bootstrapping method.

Regular validation of the CCF risk parameter is performed by independent validation function once a year, using both qualitative and quantitative methods:

- \_ review of the documentation
- \_ review of the underlying model assumptions
- \_ segmentation
- \_ outlier rules
- \_ use test
- \_ approval of limits

- \_ testing of data quality
- \_ analysis of time series
- \_ benchmarking

Quantitative methods consist primarily of the comparison of actual and expected CCFs. Qualitative methods are large population distribution tests, such as analysis of raw data and time series analysis of defaults, of conversion rates and of exposure at the reference date.

The following table presents the results of back-testing at Group level over the time period from year 2006 to 2017 based on the internal validation reports.

Asset class	Average CCF estimates	Average observed CCF
Retail	55.21%	43.38%
thereof SME	69.81%	44.48%
thereof Private Individuals	48.31%	41.47%

Table 43: Back-testing CCF (Art. 452 (i) CRR (3/3))

As CCF is estimated on own CCF pools at retail asset class level in some geographical areas; hence Erste Group omitted the segmentation by exposure class within the retail portfolio (private individuals and SMEs) due to comparison reasons.

## Use of internal estimates for purposes other than for calculating risk-weighted exposure amounts

### DISCLOSURE REQUIREMENTS Art. 452 (b) (ii) CRR

Having qualified for the IRB Approach under Basel, Erste Group has internal risk parameters which, aside from the calculation of regulatory capital requirements, are also employed for the purposes of loan loss provision calculation and standard risk costs (SRC).

## LOAN LOSS PROVISION CALCULATION

In general, internally-assessed risk parameters are applied to the recognition of expected credit losses, either one year or life-time, according to IFRS 9 (in case of on-balance sheet exposures) or the expected loss concept according to IAS 37 (in case of off-balance sheet exposures) is applied. Generally, risk parameters used in the calculation of expected credit losses may be different to the Basel 3 Pillar 1 or Pillar 2 risk parameters if the properties of the respective portfolio in combination with accounting rules necessitate this.

## STANDARD RISK COSTS

SRC are used in Erste Group as a component of risk-adjusted pricing. SRC at the time of origination (internally called “expected risk margin”) represent, in absolute terms, the sum of revenues that the bank should obtain over the lifetime (or until the next re-pricing date) of a given product to cover losses generated by this product. Based on SRC, the bank is able to estimate losses until the final maturity date or until the next re-pricing date.

IRB parameters are not used directly in the calculation of SRC. This is particularly the case for PD, as:

- \_ a different granularity of segmentation is required for SRC
- \_ PD until maturity (or until the next re-pricing date) is required as opposed to the one-year IRB PDs used in the RWA calculation.

## STRESS TESTING

Stress testing is a vital component of the risk management framework at Erste Group and is incorporated into the planning process, capital and liquidity assessments. The assessment of the ability of the bank to sustain losses in severe but plausible macroeconomic scenarios provides information on the adequacy of the overall business model and supports the planning of emergency and mitigation measures.

Stress testing for credit risk is undertaken at Erste Group for all portfolios including the portfolios under the Standardised Approach. Especially with respect to the IRB portfolio, the internal risk parameters are used for stress tests by simulating the values of these parameters under stressed conditions. Erste Group models sensitivities for the individual parameters (e.g. PD or LGD) as well as employing complex crisis testing scenarios based on simulations.



Simulations are calculated for the individual exposures by performing downgrades of rating grades and by applying shifts to the current values of the PD, LGD and CCF parameters and collaterals in the IRB portfolio in order to compute the effects on RWA, expected loss, non-performing loans and risk costs. The results are used to define the impact on the income statement and overall capital position.

Stress testing results are integrated into financial projections, budgeting processes, the assessment of risk concentrations as well as into calculation of the stressed capital metrics (stressed Pillar 1 capital ratios and Economic Capital Adequacy). These capital metrics are part of the Risk Appetite Statement (RAS), and are monitored regularly.

## Quantitative disclosure on credit risk – IRB Approach

### DISCLOSURE REQUIREMENTS Art. 452 (d) (e) (f) (g) (j) CRR IN CONJUNCTION WITH Art. 447 (c) CRR

The table below presents distribution of EAD (post CCF and CRM) in IRB portfolio broken down by exposure classes. IRB exposures included in counterparty credit risk and securitisation frameworks are not covered by table below, but within respective chapters.

#### IRB Approach - exposure classes

in EUR million	EAD	EAD (% of total)
Central governments and central banks	4,080	2.5%
Institutions	5,801	3.5%
Corporate	69,855	42.6%
Specialised Lending	15,755	9.6%
Retail	76,210	46.5%
Retail SME secured by immovable property	7,361	4.5%
Retail SME non-secured by immovable property	6,186	3.8%
Retail secured by immovable property	43,419	26.5%
Other retail	19,243	11.7%
Equity	1,051	0.6%
Other	6,967	4.2%
<b>Total</b>	<b>163,964</b>	<b>100.0%</b>

Table 44: IRB Approach (incl. supervisory slotting) – EAD by exposure classes (Art. 452 (d) CRR)

Table below presents the flow statement explaining yearly development of the RWA calculated in accordance with the Part Three, Title II, Chapter 3 of the CRR. The counterparty credit risk relevant exposures are not subject of the table below.

#### IRB Approach - RWA flow

in EUR million	RWAs	Capital requirements
<b>RWAs as of Dec 17</b>	<b>69,251</b>	<b>5,540</b>
Asset size	5,463	437
Asset quality	-2,092	-167
Model updates	175	14
Methodology and policy	1,904	152
Acquisitions and disposals	0	0
Foreign exchange movements	-48	-4
Other:	-53	-4
Restructured Securitisation	-158	-13
Adjustments and Financial Reconciliation	105	8
<b>RWAs as of Dec 18</b>	<b>74,599</b>	<b>5,968</b>

Table 45: RWA flow statement of credit risk exposure under IRB approach (EU CR8 EBA/GL/2016/11)

Credit RWA for IRB portfolio increased by EUR 5 billion during the reporting period. Main drivers consist of net business growth mainly in Austria and Czech Republic and the regulatory changes, incl. phase-out of Sovereign portfolio and expiration of Grandfathering for Equities, partially offset by change in asset quality mainly driven by net rating upgrades in Corporate, Retail and SME portfolio. Methodology and policy includes impact of the regulatory changes including Phase-out of Sovereign in PPU and expiration of Equity Grandfathering.

With respect to exposures under IRB Approach, a breakdown is given below of the exposure classes of central governments and central banks, institutions, corporates and retail by PD scales. Equity exposures, specialised lending and other non-credit obligation assets are not subject to following tables.

Probability of default bends (PDs used in calculation of RWA)

PD scale	Lower bend	Upper bend
1	0.00%	0.15%
2	0.15%	0.25%
3	0.25%	0.50%
4	0.50%	0.75%
5	0.75%	2.50%
6	2.50%	10.00%
7	10.00%	99.99%
8 (Default)		100.00%

Table 46: Probability of default lower and upper bends

#### IRB Approach – Central governments and central banks

in EUR million	On-balance	Off-balance	Average CCF	EAD	Average PD	Number of Obligors	Average LGD	Average maturity	RWA	RWA density	EL adjustments	Value
PD scale	Central governments and central banks											
1	3,253	36	99.2%	3,888	0.1%	367	41.8%	2.5	1,558	40.1%	1	
2	0	0	0.0%	0	0.0%	0	0.0%	0.0	0	0.0%	0	
3	26	0	75.0%	26	0.3%	69	45.0%	2.5	15	56.2%	0	
4	77	0	0.0%	73	0.6%	62	44.6%	2.5	58	80.1%	0	
5	133	18	75.0%	65	1.1%	75	45.0%	2.5	66	102.3%	0	
6	38	22	75.0%	28	3.7%	101	45.0%	2.5	41	145.0%	0	
7	1	0	0.0%	0	39.1%	40	45.0%	2.5	1	255.7%	0	
8	0	0	0.0%	0	0.0%	0	0.0%	0.0	0	0.0%	0	
<b>Total</b>	<b>3,528</b>	<b>76</b>	<b>86.5%</b>	<b>4,080</b>	<b>0.1%</b>	<b>714</b>	<b>41.9%</b>	<b>2.5</b>	<b>1,739</b>	<b>42.6%</b>	<b>2</b>	<b>4</b>

Table 47: IRB Approach – Exposure class: Central Governments and Central Banks by PD classes (Art. 452 (e) CRR and EU CR6 EBA/GL/2016/11 )

#### IRB Approach – Institutions

in EUR million	On-balance	Off-balance	Average CCF	EAD	Average PD	Number of Obligors	Average LGD	Average maturity	RWA	RWA density	EL adjustments	Value
PD scale	Institutions											
1	1,799	473	53.7%	2,333	0.1%	1,703	41.8%	2.5	892	38.2%	1	
2	2,130	328	48.8%	2,110	0.2%	1,309	37.0%	2.5	911	43.2%	1	
3	1,393	120	20.3%	988	0.4%	524	31.9%	2.5	501	50.7%	1	
4	166	32	66.2%	179	0.6%	154	33.0%	2.5	123	68.8%	0	
5	42	2	42.5%	30	1.1%	114	47.7%	2.5	37	123.8%	0	
6	231	40	73.0%	112	4.7%	208	45.0%	2.5	192	171.4%	2	
7	47	1	23.3%	47	10.8%	104	45.1%	2.5	98	208.8%	2	
8	2	0	0.0%	2	100.0%	1	45.0%	2.5	0	0.0%	1	
<b>Total</b>	<b>5,810</b>	<b>995</b>	<b>49.2%</b>	<b>5,801</b>	<b>0.4%</b>	<b>4,117</b>	<b>38.2%</b>	<b>2.5</b>	<b>2,755</b>	<b>47.5%</b>	<b>10</b>	<b>10</b>

Table 48: IRB Approach – Exposure class: Institutions by PD classes (Art. 452 (e) CRR and EU CR6 EBA/GL/2016/11)

### IRB Approach – Corporates (excluding SL)

in EUR million	On-balance	Off-balance	Average CCF	EAD	Average PD	Number of Obligors	Average LGD	Average Maturity	RWA	RWA density	EL	Value adjustments
<b>PD scale</b>												
<b>SME</b>												
1	419	117	51.4%	466	0.1%	613	40.4%	2.5	90	19.3%	0	
2	973	667	33.9%	1,207	0.2%	1,483	41.8%	2.5	417	34.6%	1	
3	3,586	2,195	51.9%	4,627	0.4%	4,876	41.8%	2.5	2,237	48.3%	8	
4	1,420	531	46.7%	1,640	0.6%	1,894	41.5%	2.5	879	53.6%	4	
5	6,588	2,629	44.8%	7,575	1.3%	8,557	41.5%	2.5	5,666	74.8%	42	
6	3,763	1,013	49.4%	4,105	4.5%	6,262	39.0%	2.5	4,141	100.9%	77	
7	463	101	50.8%	497	19.6%	1,936	39.6%	2.5	776	156.2%	39	
8	946	100	48.2%	962	100.0%	1,877	41.1%	2.5	0	0.0%	395	
<b>Total</b>	<b>18,158</b>	<b>7,353</b>	<b>46.9%</b>	<b>21,079</b>	<b>6.5%</b>	<b>27,498</b>	<b>41.0%</b>	<b>2.5</b>	<b>14,207</b>	<b>67.4%</b>	<b>566</b>	<b>698</b>
<b>PD scale</b>												
<b>Other corporates</b>												
1	8,440	3,274	44.8%	9,230	0.1%	1,274	41.0%	2.5	1,887	20.4%	2	
2	4,201	2,714	51.1%	5,414	0.2%	1,965	43.3%	2.5	2,569	47.5%	5	
3	8,743	4,936	43.3%	9,989	0.4%	5,553	43.6%	2.5	6,111	61.2%	16	
4	933	725	38.8%	1,210	0.5%	291	43.8%	2.5	892	73.7%	3	
5	4,481	2,674	43.3%	5,289	1.3%	2,439	42.8%	2.5	5,203	98.4%	29	
6	1,080	423	37.6%	1,205	4.5%	1,608	41.4%	2.5	1,639	136.0%	22	
7	207	205	17.4%	235	25.2%	2,664	42.6%	2.5	546	232.0%	26	
8	513	113	38.8%	449	100.0%	332	42.3%	2.5	0	0.0%	190	
<b>Total</b>	<b>28,598</b>	<b>15,065</b>	<b>44.3%</b>	<b>33,021</b>	<b>2.1%</b>	<b>16,126</b>	<b>42.6%</b>	<b>2.5</b>	<b>18,847</b>	<b>57.1%</b>	<b>293</b>	<b>403</b>
<b>Total</b>	<b>46,756</b>	<b>22,418</b>	<b>45.1%</b>	<b>54,100</b>	<b>3.8%</b>	<b>43,624</b>	<b>42.0%</b>	<b>2.5</b>	<b>33,054</b>	<b>61.1%</b>	<b>859</b>	<b>1,102</b>

Table 49: IRB Approach – Exposure class: Corporates (excluding SL) by PD classes (Art. 452 (e) CRR and EU CR6 EBA/GL/2016/11)

## IRB Approach – Retail

in EUR million	On-balance	Off-balance	Average CCF	EAD	Average PD	Number of Obligors	Average LGD	RWA	RWA density	EL	Value adjustments
<b>PD scale</b>											
<b>SME secured by immovable property</b>											
1	450	76	47.5%	486	0.1%	3,314	12.4%	12	2.4%	0	
2	689	108	46.0%	739	0.2%	4,209	13.9%	31	4.2%	0	
3	1,176	102	50.7%	1,228	0.3%	7,377	14.8%	85	6.9%	1	
4	704	80	51.2%	745	0.5%	3,823	15.0%	73	9.7%	1	
5	1,537	125	55.7%	1,607	1.2%	9,083	19.2%	367	22.9%	4	
6	1,586	116	47.4%	1,641	4.7%	9,064	17.8%	737	44.9%	14	
7	569	27	70.5%	588	21.3%	3,273	26.0%	670	113.9%	33	
8	324	5	47.1%	326	100.0%	2,156	16.3%	74	22.7%	95	
<b>Total</b>	<b>7,036</b>	<b>640</b>	<b>50.8%</b>	<b>7,361</b>	<b>7.6%</b>	<b>42,299</b>	<b>17.2%</b>	<b>2,049</b>	<b>27.8%</b>	<b>147</b>	<b>147</b>
<b>PD scale</b>											
<b>Retail-secured by immovable property</b>											
1	16,412	658	33.5%	16,632	0.1%	227,568	15.2%	522	3.1%	2	
2	3,415	136	100.0%	3,550	0.2%	62,693	23.4%	354	10.0%	2	
3	10,710	322	26.3%	10,794	0.4%	128,249	11.6%	835	7.7%	5	
4	2,772	103	100.0%	2,875	0.6%	53,922	23.1%	600	20.9%	4	
5	5,749	165	51.0%	5,833	1.4%	120,417	20.5%	1,974	33.8%	17	
6	2,360	98	21.7%	2,381	5.5%	40,445	17.9%	1,509	63.4%	24	
7	627	12	20.1%	630	26.2%	10,120	17.5%	653	103.6%	28	
8	721	4	39.7%	723	100.0%	14,968	20.0%	247	34.1%	280	
<b>Total</b>	<b>42,766</b>	<b>1,498</b>	<b>43.6%</b>	<b>43,419</b>	<b>2.7%</b>	<b>658,382</b>	<b>16.5%</b>	<b>6,694</b>	<b>15.4%</b>	<b>360</b>	<b>383</b>
<b>PD scale</b>											
<b>Retail SME non-secured by immovable property</b>											
1	177	240	55.1%	309	0.1%	9,930	33.1%	21	6.8%	0	
2	287	303	53.2%	448	0.2%	15,779	33.2%	46	10.3%	0	
3	1,028	327	59.5%	1,223	0.3%	34,284	34.5%	190	15.5%	1	
4	301	218	57.0%	425	0.5%	19,007	34.9%	89	21.0%	1	
5	1,009	413	64.5%	1,276	1.4%	43,336	36.2%	419	32.9%	6	
6	1,513	474	60.6%	1,801	4.5%	53,445	34.8%	739	41.0%	28	
7	423	78	77.2%	483	19.7%	41,343	37.0%	310	64.2%	35	
8	215	12	46.1%	221	100.0%	10,333	37.5%	64	29.0%	156	
<b>Total</b>	<b>4,954</b>	<b>2,065</b>	<b>59.7%</b>	<b>6,187</b>	<b>6.8%</b>	<b>227,457</b>	<b>35.1%</b>	<b>1,878</b>	<b>30.4%</b>	<b>228</b>	<b>228</b>
<b>PD scale</b>											
<b>Other retail</b>											
1	3,104	4,699	58.1%	5,835	0.1%	1,323,369	41.3%	413	7.1%	1	
2	879	413	74.4%	1,186	0.2%	337,604	48.9%	239	20.1%	1	
3	3,367	856	49.4%	3,789	0.4%	471,003	38.3%	948	25.0%	6	
4	1,012	435	87.0%	1,390	0.6%	288,787	56.7%	644	46.3%	4	
5	3,618	887	71.1%	4,248	1.5%	698,658	48.9%	2,569	60.5%	32	
6	1,415	254	65.7%	1,582	5.4%	352,297	50.4%	1,255	79.3%	43	
7	555	55	74.8%	596	23.4%	273,075	47.5%	671	112.6%	67	
8	610	11	51.9%	616	100.0%	105,729	45.4%	270	43.8%	437	
<b>Total</b>	<b>14,559</b>	<b>7,609</b>	<b>61.6%</b>	<b>19,244</b>	<b>4.8%</b>	<b>3,850,522</b>	<b>45.0%</b>	<b>7,008</b>	<b>36.4%</b>	<b>590</b>	<b>625</b>
<b>Total</b>	<b>69,315</b>	<b>11,813</b>	<b>58.4%</b>	<b>76,211</b>	<b>4.1%</b>	<b>4,778,660</b>	<b>25.3%</b>	<b>17,629</b>	<b>23.1%</b>	<b>1,326</b>	<b>1,367</b>

Table 50: IRB Approach – Exposure class: Retail by exposure classes and PD classes (Art. 452 (f) CRR and EU CR6 EBA/GL/2016/11)

## IRB Approach – Group of countries

in % - EAD weighted	Retail LGD	Retail PD	Non-Retail PD
Core Market - Austria	19.4%	3.5%	3.2%
Core Market - Croatia	35.0%	9.9%	9.1%
Core Market - Czech Republic	33.9%	3.3%	4.6%
Core Market - Hungary	45.1%	8.6%	2.1%
Core Market - Romania	32.7%	29.8%	0.9%
Core Market - Serbia	28.3%	5.2%	0.9%
Core Market - Slovakia	27.3%	4.7%	2.2%
Other EU Countries	16.6%	8.8%	1.5%
Other Industrialised Countries	19.9%	6.8%	1.1%
Emerging Markets	25.0%	3.8%	1.4%
<b>Total</b>	<b>25.3%</b>	<b>4.1%</b>	<b>3.1%</b>

Table 51: IRB Approach – Retail and non-retail average parameters by country groups (based on country of residence) (Art. 452 (j) CRR)

In the table above, EAD weighted average parameters by country of the residence in IRB portfolios are reported.

The following table shows the development of total specific credit risk adjustments for both IRB and Standardised Approach portfolios by exposure class during the reporting period:

in EUR million	Specific credit risk adjustments			Specific credit risk adjustments (% of total)
	1 Jan	31 Dec	Change (%)	
Sovereigns	2	2	-12.1%	0.1%
Institutions	2	2	0.6%	0.1%
Corporates	1,974	1,588	-19.5%	54.0%
Retail	1,477	1,350	-8.6%	45.9%
IFRS9 Implementation effect	21			
<b>Total</b>	<b>3,475</b>	<b>2,941</b>	<b>-15.4%</b>	<b>100.0%</b>

Table 52: Specific credit risk adjustments and changes by main exposure class (Art. 452 (g) CRR)

The specific credit risk adjustments decrease was driven mainly by an overall decrease of the NPL portfolio, impacted by significant recoveries for defaulted customers. The continued clean-up actions across the Group as well as the positive macroeconomic developments supported this trend.

# Credit risk mitigation techniques

## Management and recognition of credit risk mitigation

DISCLOSURE REQUIREMENTS Art. 452 (b) (iii)

Group Collateral Management is a staff unit within the Group Credit Risk Management that is responsible for the standardised and consistent management of credit collateral across Erste Group. Jointly with Trading Book Risk Management within Group Liquidity and Market Risk Management it also coordinates the roll-out of risk management standards to ensure consistent management of treasury collateral across Erste Group. For this purpose, Group Collateral Management issues the Group Collateral Management Policy as a framework for compliance with the CRR.

The Group Collateral Management Policy provides guidelines for a robust end-to-end process and responsibilities for managing collateral including valuation, revaluation and monitoring standards, requirements for consideration of collateral for internal risk calculation and criteria for eligibility of collateral according to CRR. All collateral assets accepted by Erste Group are described in the Group Collateral Catalogue – as a part of the Group Collateral Policy - including their definitions and eligibility criteria, as well as the minimum requirements of valuation, revaluation and monitoring. Each local entity defines an exhaustive list of acceptable and eligible collateral depending on the locally used approach.

In each subsidiary of Erste Group, the local Collateral Management unit is responsible for the implementation of the framework by issuing a local policy and working instructions taking into consideration any additional local legal and regulatory requirements and the organisation of the subsidiary. The local implementation is supervised by Group Collateral Management and Trading Book Risk Management.

## Collateral valuation and netting

### COLLATERAL VALUATION AND MANAGEMENT

DISCLOSURE REQUIREMENTS Art. 453 (b) (c) CRR

Collateral is accepted at Erste Group only to back up loans and capital market transactions and does not serve as a substitute for the borrower's ability to meet his obligations. Therefore, collateral can only be evaluated in the credit application along with the assessment of the borrower's creditworthiness and capacity for repayment.

The valuation of credit collateral is performed pursuant to the following process:

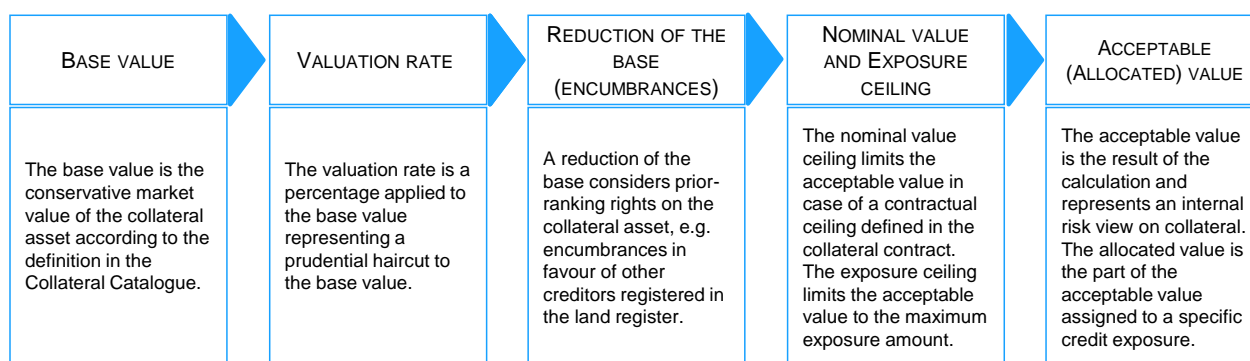


Figure 4: Credit collateral valuation

Collateral valuation is based on current market prices, considering an amount that can be recovered within a reasonable time period. The calculation methodology for the base value is specified by Group Collateral Management taking into consideration the collateral asset type. In the collateral valuation process, a pre-defined prudential haircut, i.e. valuation rate, is applied to the base value. The valuation rates are set by Local Collateral Management based on empirical data representing the past experience of workout departments and on the results of the data collected regarding the proceeds from the realisation of collateral. The valuation rates depend on the collateral types.

The valuation processes are defined and technically implemented by authorised staff using the appropriate software applications. The valuation rates and methods are back-tested regularly – at least once a year – to current recovery proceeds. When facing significant changes in market developments, the valuation rates are adjusted ad hoc.

Collateral revaluation is done periodically and is automated as far as possible. The relevant interfaces are used for external data sources. The maximum periods for the revaluation of individual collateral are predefined and compliance is monitored with a support of software applications. Irrespective of the periodically conducted revaluations, revaluations must also be carried out when information becomes available indicating that the value of the collateral has decreased for special reasons.

Only standard contracts of the local legal departments or contracts with sufficient legal review are used to ensure the enforceability of the collateral in the relevant jurisdiction, including the event of insolvency and bankruptcy of the borrower or the collateral provider. Local Collateral Management Policies and working instructions determine responsibilities for the end-to-end collateral management process from activation of collateral to release (liquidation) of collateral to ensure the best results in case of a realisation of collateral.

The following types of credit collateral are accepted:

- \_ real estate: both residential and commercial real estate
- \_ financial collateral: securities, cash deposits and life insurance policies
- \_ guarantees: guarantees of sovereigns and public sector entities, financial institutions, other corporate entities and individuals
- \_ movables: equipment, investment goods, machinery, motor vehicles, inventories and commodities
- \_ claims and rights: accounts receivable, leasehold rights and shares in a company's capital.

Real estate, financial collateral and guarantees are the most frequently used types of collateral and are discussed in more detail in the following sections. Movables as well as claims and rights are accepted collateral by Erste Group but have less relevance.

### **Real estate**

Real estate is the most important collateral within Erste Group. Residential real estate (i.e. real estate which is or will be occupied or let by the owner for residential purposes) and commercial real estate are used for credit risk mitigation. Real estate properties are evaluated at a conservative market value. The applicable appraisal methods are predefined and depend on the type of real estate. In general, the comparative method is used for residential real estate whereas the income method is used for commercial real estate. Only independent external or internal appraisers, who are not involved in the lending decision process, are permitted to perform real estate valuations. Local Collateral Management defines the accepted appraisers. For quality assurance purposes, real estate valuations are validated on an ongoing basis and real estate appraisers who do not fulfil the quality requirements are eliminated from future valuations as a consequence.

The monitoring of real estate values is performed at least yearly. Statistical monitoring based on official transaction data is used for residential real estate. If statistical method is not applicable or the market value exceeds defined thresholds individual monitoring is done by real estate experts. Revaluations follow the same process as initial valuations. It is performed at least every three years when the loan amount secured by residential real estate exceeds EUR 3 million or when the loan amount secured by commercial real estate situated in Austria, Czech Republic or Slovakia exceeds EUR 1 million or when the loan amount secured by commercial real estate situated in all other countries exceeds EUR 500.000.

### **Financial collateral**

Financial collateral assets are mainly security accounts, cash deposits (accounts, savings books) and life insurance policies. Gold (bullion and coins) is accepted and used for risk mitigation. The pledge or assignment of financial collateral has to be unconditional and irrevocable. If the financial collateral is held by third party institutions, they are to be notified of the pledge or assignment. The base value of the financial collateral depends on the type of collateral asset. The base value of the cash deposit is the pledged amount. The base value of security accounts (securities) is their market value on the stock exchange, whereas the base value of life insurance policies is the cash surrender value. The revaluation is carried out automatically at least semi-annually.

### **Guarantees**

Guarantees are mostly provided by corporates, financial institutions, sovereigns, and public sector-related entities in combination with special credit products. The guarantee must represent a direct claim on the guarantor. The contract must not contain any condition, the fulfilment of which is outside the direct control of the bank and could prevent the guarantor from being obliged to pay.

All guarantors must be checked with regards to their economic capacity. They must have a minimum credit rating which is reviewed at least annually. The PD of the guarantor is used for risk weighted asset calculation when the defined preconditions are met.

### **Receivables**

Trade accounts receivables are used for credit risk mitigation if they fulfil the requirements of CRR. The base value is the average level of gross monthly receivables. Overdue receivables, receivables against affiliates of the borrower and claims with high commercial dependency between the collateral borrower and the garnishee as well as receivables against garnishee with doubtful eco-

nomic quality or domiciled in countries where the enforcement may be problematic are excluded. The revaluation is performed at least annually.

#### **Treasury Collateral**

For more details see chapter “Counterparty Credit Risk”

### **POLICIES AND PROCESSES FOR NETTING**

DISCLOSURE REQUIREMENTS Art. 453 (a) CRR

Netting is currently not used for risk mitigation in the on-balance sheet customer lending business. The consideration of netting agreements for the over-the-counter (OTC) derivative business is described in the chapter “Counterparty Credit Risk”.

## **Main types of guarantors and credit derivative counterparties**

DISCLOSURE REQUIREMENTS Art. 453 (d) CRR

Most guarantees are provided by corporates, financial institutions, sovereigns and public sector-related entities.

The credit derivatives business is conducted only with credit institutions of sufficient credit quality based in Austria or abroad, and only within a limit that is based on the counterparty’s credit rating. Furthermore, the transactions are executed with credit institutions with a rating in the investment grade range assigned by recognised rating agencies.

## **Risk concentrations within credit risk mitigation**

DISCLOSURE REQUIREMENTS Art. 453 (e) CRR

Risk concentrations resulting from CRM techniques are understood to be the risk of a detrimental correlation of risks that may arise from the use of these techniques. This may affect a single customer, but also a portfolio defined by region, industry or type of collateral.

Due to Erste Group’s retail banking model, its customer structure and the different markets in which it does business, it is not facing any concentrations with respect to collateral.

The following processes are applied for monitoring and preventing possible concentrations:

- \_ in the case of corporate guarantees, all loans and guarantee liabilities of the provider across Erste Group are taken into consideration in the credit application process
- \_ in the case of guarantees provided by a sovereign, a public sector entity or a financial institution, the guarantee amount has to be covered within the approved limit of the guarantor.



## Quantitative disclosure on credit risk mitigation

### DISCLOSURE REQUIREMENTS Art. 453 (f) (g) CRR

The following table gives an overview on the extent of the use of CRM techniques applied to the exposures under credit risk framework.

#### Overview on CRM techniques

in EUR million	Exposure unsecured	Exposure to be secured	Exposure secured by collateral	Exposure secured by financial guarantees	Exposure secured by credit derivatives
<b>Total exposure STA</b>	<b>60,706</b>	<b>11,578</b>	<b>10,566</b>	<b>5,901</b>	<b>30</b>
of which loans and debt securities	50,942	10,585	9,689	5,393	29
of which defaulted	178	166	155	60	3
<b>Total exposure IRB</b>	<b>125,195</b>	<b>73,478</b>	<b>60,078</b>	<b>1,789</b>	<b>0</b>
of which loans and debt securities	80,793	69,081	56,962	1,433	0
of which defaulted	2,886	1,772	1,325	119	0
<b>Total exposure</b>	<b>185,901</b>	<b>85,056</b>	<b>70,645</b>	<b>7,690</b>	<b>30</b>
of which loans and debt securities	131,735	79,666	66,651	6,825	29
of which defaulted	3,065	1,938	1,480	178	3

Table 53: CRM overview ( Art. 453 (f) (g) CRR and EU CR3 EBA/GL/2016/11)

In the table above, for the standardised approach exposure net of specific credit risk adjustments (before application of CCF to off-balance items) is reported, while for IRB approach gross exposure (before application of CCF to off-balance items) is disclosed. Exposure amounts that have at least one CRM mechanism associated, irrespective of its value, are included in the column exposure to be secured. Exposure secured by collateral equals the value secured by the eligible collateral.

#### Collateral types by exposure classes

in EUR million	Guarantees	Mortgage collateral	Financial and other collateral
Central Governments and Central Banks	701	0	1
Institutions	603	48	25
Corporates	109	12,953	1,656
Specialised Lending	0	0	0
Retail	376	40,879	2,722
SME	269	4,668	859
Secured by immovable property collateral	61	36,210	985
Other retail	46	0	878
Equity	0	0	0
Securitisation Positions	0	0	0
Other non-credit obligation assets	0	6	0
<b>IRB Approach Total</b>	<b>1,789</b>	<b>53,886</b>	<b>4,404</b>
Central Governments and Central Banks	3,703	0	0
Regional Governments or Local Authorities	1,664	0	1
Public Sector Entities	24	2	4
Multilateral Development Banks	184	0	0
International Organisations	0	0	0
Institutions	5	0	0
Corporates	318	58	333
Retail	2	12	43
Exposures secured by mortgages on immovable property	0	4,122	0
Exposures in default	1	90	1
Exposures associated with particular high risk	0	0	0
Covered Bonds	0	0	0
Securitisation Positions	0	0	0
Exposures to institutions and corporates with a short-term credit assessment	0	0	0
Collective Investment Undertakings	0	0	0
Equity	0	0	0
Other items	0	0	0
<b>Standardised Approach Total</b>	<b>5,901</b>	<b>4,283</b>	<b>382</b>
<b>Total</b>	<b>7,690</b>	<b>58,169</b>	<b>4,786</b>

Table 54: Eligible collateral values by exposure class and type of collateral (Art. 453 (f) (g) CRR)

As the bank does not have credit derivatives, template EU CR7 – Effect on the RWAs of credit derivatives used as CRM techniques is not applicable.

# Counterparty credit risk

## Goals and principles of risk management

DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) CRR

Counterparty credit risk (CCR) for OTC derivatives and securities financing transactions (securities repurchasing transactions and securities lending) is measured as the sum of current replacement costs in the case of default of the counterparty (i.e. the positive market value taking into account netting agreements) and of potential replacement costs that may result from future changes in market values due to a change in the underlying market risk factors (e.g. interest rates, currencies, equity or commodity prices).

Counterparty credit risks are monitored and controlled at transaction level as well as at portfolio level. Erste Group has a real-time limit monitoring system for the entire Group to which the entities of the Group, especially the units with trading activities, are connected online. The availability of unused limits must be checked before a transaction is executed.

## ORGANISATION

Credit risks from derivatives, repurchase agreements and securities lending transactions are fully integrated into the general credit risk management system. A requirement for entering into derivative transactions is the compliance with the credit process, where the same standards with respect to classification, limits and monitoring apply as in the case of conventional credit transactions. Counterparty credit risks are measured and monitored on a daily basis by an independent risk management unit in Group Credit Risk Management. Counterparty default risk is taken into consideration in credit risk reporting.

## RISK MEASUREMENT AND CONTROL

For the internal measurement of credit risk arising from derivatives, repurchase transactions and securities lending transactions, the current market values (replacement values) and potential fluctuations of the replacement values (Potential Future Exposure) due to changes in the underlying market risk factors until maturity are taken into account.

The calculation of the potential future exposure uses standard methods as well as Monte Carlo simulation methods. The simulation method is used especially for interest rate and currency derivatives. These derivatives account for the larger part of the portfolio.

For repurchase agreements and derivatives that are not included in the simulation method, a standard method is used. This method takes into account the current market value and an add-on for potential changes to the EAD in the future. The add-on values are based on internal estimates (derived from historic volatilities) depending on the product, maturity and underlying risk factors.

For the calculation of current and potential credit risks, netting procedures are taken into account only if they can be legally enforced (depending on business partner and jurisdiction). The legal enforcement of netting agreements is examined based on legal expert opinions.

The amounts receivable are limited by own limits as well as within the scope of the limits of the overall credit risk exposure of the respective counterparty, groups of counterparties and countries. Additionally, settlement risk is controlled by adequate limits.

## NETTING AND COLLATERAL

An important basis for the reduction of counterparty credit risk is entering into framework agreements (international framework agreements for derivatives of the International Swaps and Derivatives Association (ISDA), Austrian or German framework agreements, framework agreements for securities lending transactions and repurchase deals) with the respective business partners. Based on these agreements, it is possible to net all amounts due or payable for each individual transaction under a framework agreement in the case of a credit default, with the result that only the net receivables vis-à-vis the business partner are of relevance for credit risk. Erste Group does not make use of cross product netting (i.e. exposures, including both derivatives and SFTs netted at counterparty level).

Furthermore, collateral agreements (e.g. ISDA Credit Support Annex) are used for reducing the credit risk from derivatives. Within the scope of these collateral agreements, the portfolio with the respective counterparty is revalued periodically, usually daily, and in case of insufficient coverage additional collateral is requested.

## Internal capital allocation and definition of credit limits for counterparty credit exposures

### DISCLOSURE REQUIREMENTS Art. 439 (a) CRR

Counterparty credit risk is assessed as part of the centralised calculation of RWAs and treated as a component of credit risk in the RCC. In part, portfolios subject to the Standardised Approach are recalculated using IRB parameters in order to gain an economic perspective. RWAs are scaled to the confidence level of 99.95% in the RCC. Counterparty credit risk is incorporated into the Group RCC, which is reported quarterly to the management board. It forms one of the vital components of the Economic Capital Adequacy Limit, which is approved by the management board.

A credit limit for counterparties at individual customer level is requested and approved by the appropriate credit processing channels. Individual customer limits are regularly monitored and tracked in the reporting system.

Further relevant credit limits include the maximum lending limit for the group of connected clients and industry limits which are defined in line with the Group RAS and the Group Risk Strategy and also periodically reviewed and reported to the management board and supervisory board.

## Securing of collateral and establishing of reserves

### DISCLOSURE REQUIREMENTS Art. 439 (b) CRR

On the basis of bilateral contracts (securities repurchase transactions, securities lending, ISDA netting agreements, credit support annexes, etc.), Erste Group has the ability to apply risk mitigating measures (netting, taking of security). Erste Group incurs credit risk only when the net market value is positive (replacement risk). As this risk depends mainly on fluctuations in the market risk parameters (exchange rates, interest rate movements, share prices, credit spreads), open transactions must regularly be revalued and the collateral adjusted.

Acceptable collateral usually consists of cash denominated in certain defined major currencies (generally EUR, USD) and securities of top-rated issuers (government bonds of several European countries and the US or issues of Austrian banks backed by the Austrian government). In the case of securities used as collateral, an additional valuation discount (haircut) depending on the residual maturity is applied. The adjustment of the collateral to the current risk situation (mark-to-market valuation of the transactions with the respective counterparty) and the review of the current collateral value (taking into account exchange rate fluctuations for collateral in foreign currency, market value of securities) are performed at contractually agreed intervals. Valuation frequencies customary in the market are daily or weekly; Erste Group strives to ensure daily valuation.

The ability to realise collateral in the event of counterparty insolvency and to reuse collateral (notably to re-pledge it to third parties, or to reuse it for lending or repo transactions) is ensured based on legal opinions issued on behalf of ISDA for the relevant jurisdictions of the individual counterparties. As Erste Group accepts either cash deposits or securities with the best credit ratings issued by sovereign issuers as collateral, no further reserves are being created for exposures secured in this manner. Credit value adjustments are made for unsecured exposures from derivative transactions contingent on the credit rating or PD of the counterparty and the maturity of the contract.

For repurchase and securities lending agreements, collateral limits are set for single issuers and rating groups contingent on credit quality. As the mutual obligation to meet margin calls ensures full collateralisation on an ongoing basis, no additional reserves are formed for these transactions.

## Limitation on wrong-way risk

### DISCLOSURE REQUIREMENTS Art. 439 (c) CRR

Erste Group is using various scenarios and standard reports to identify wrong-way risk. Based on the results, specific limits are set in order to avoid general and specific wrong-way risk (e.g. limitations for acceptable collateral for OTC and repurchase agreements, limitations on trades where specific wrong-way risk could occur).

## Impact on collateralisation of a rating downgrade

### DISCLOSURE REQUIREMENTS Art. 439 (d) CRR

Contractual provisions concerning dependencies between collateralisation and the credit rating of Erste Group exist in the context of collateral agreements. The variables affected by this in some of the collateral agreements are the exposure-independent amount of collateral (referred to as the independent amount), the amount of exposure the counterparty is willing to accept before Erste Group is required to post collateral (the threshold amount), and the minimum amount of additional collateral that may be requested (the minimum transfer amount). A process for additional liquidity outflows due to contracts with downgrade triggers shown in the Liquidity Coverage Ratio and yearly reporting of all relevant contracts has been established in Erste Group.

## Quantitative disclosure on counterparty risk

### DISCLOSURE REQUIREMENTS Art. 439 (e) (f) (g) (h) CRR

The table below provides an overview of the methods used to calculate CCR regulatory requirements, the main parameters used within each method, as well as the resulting net exposures and RWAs. Erste Group does not use the Standardised approach or an internal model for the calculation of exposures for CCR purposes. The reduction in replacement costs related to OTC derivative transactions (2017: EUR 1,898 million) is mainly driven by signing new netting agreements with some of the larger counterparties and is also reflected in overall lower EADs (2017: EUR 4,370 million). The increase in EADs under the financial collateral method for SFTs (2017: EUR 9,971 million) results from intensifying business in repo style transactions in some of the key home markets.

#### Methods calculating CCR

in EUR million	Notional	Replacement cost/ current market value	Potential future credit exposure	EEPE	Multiplier	EAD post CRM	RWAs
Mark to market		1,898	1,997			2,820	1,033
Original exposure	881					39	26
Standardised approach		0			0	0	0
IMM (for derivatives and SFTs)				0	0	0	0
of which securities financing transactions				0	0	0	0
of which derivatives and long settlement transactions				0	0	0	0
of which from contractual cross-product netting				0	0	0	0
Financial collateral simple method (for SFTs)						0	0
Financial collateral comprehensive method (for SFTs)						21,611	435
VaR for SFTs						0	0
<b>Total</b>							<b>1,494</b>

Table 55: Analysis of CCR exposure by approach (Art. 436 (e) (f) (i) CRR and EU CCR1 EBA/GL/2016/11)

As IMM (internal model method) for derivatives and SFTs is not used, template EU CCR7 – RWA flow statement of CCR exposures under the IMM according to EBA/GL/2016/11 is not disclosed.

The table below provides an overview of the exposures subject to CVA capital charges in accordance with Part three, Title VI, Article 382 CRR. Erste Group applies the standardised method to compute CVA capital charges exclusively. Compared to 2017 there was an increase in exposure values subject to CVA (2017: EUR 2,531 million) which was partially reflected in increased CVA RWAs (2017: EUR 622 million) driven by shifts in the portfolio composition and overall improvements in counterparty ratings.

#### CVA capital charges

in EUR million	Exposure Value	RWAs
Total portfolios subject to the advanced method	0	0
(i) VaR component (including the 3x multiplier)		0
(ii) SVaR component (including the 3x multiplier)		0
All portfolios subject to the standardised method	3,103	661
Based on the original exposure method	0	0
<b>Total subject to the CVA capital charge</b>	<b>3,103</b>	<b>661</b>

Table 56: Analysis of CCR CVA Capital Charge (Art. 439 (e) (f) CRR and EU CCR2 EBA/GL/2016/11)

The table below provides an overview of the exposures towards central counterparties (CCPs) in the scope of Part Three, Title II, Chapter 6, Section 9 of the CRR and related capital requirements. Compared to 2017 there was a significant reduction in overall exposures to CCPs mainly driven by extending netting agreements with counterparty clearing brokers (2017: EUR 1,267 million). The increase in default fund contributions (2017: EUR 5million) is related to enlarging the scope of direct clearing membership. Erste Group does not have exposures to non-qualifying CCPs.

### Exposures to central counterparties

in EUR million	EAD post CRM	RWAs
Exposures to QCCPs (total)		9
Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	187	4
(i) OTC derivatives	187	4
(ii) Exchange-traded derivatives	-	-
(iii) SFTs	-	-
(iv) Netting sets where cross-product netting has been approved	-	-
Segregated initial margin	84	
Non-segregated initial margin	195	4
Prefunded default fund contributions	16	1
Alternative calculation of own funds requirements for exposures		-
Exposures to non-QCCPs (total)		-
Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which	-	-
(i) OTC derivatives	-	-
(ii) Exchange-traded derivatives	-	-
(iii) SFTs	-	-
(iv) Netting sets where cross-product netting has been approved	-	-
Segregated initial margin	-	
Non-segregated initial margin	-	-
Prefunded default fund contributions	-	-
Unfunded default fund contributions	-	-

Table 57: Exposures to CCPs (Art. 439 (e) (f) CRR and in line with EU CCR8 EBA/GL/2016/11)

The table below provides a breakdown of CCR exposure calculated in accordance with Part Three, Title II, Chapter 6 of the CRR and risk-weighted according to Chapter 3 of the same title: by portfolio (type of counterparties) and by risk weight (riskiness attributed according to the standardised approach).

### CCR portfolio in STA

inEURmillion	Risk weights											Total	Unrated
	0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Others		
Central governments or central banks	14,467	0	0	0	0	0	0	0	0	0	0	14,467	-
Regional governments or local authorities	35	0	0	0	0	0	0	0	0	0	0	35	-
Public Sector Entities	47	0	0	0	0	0	0	0	0	0	0	48	-
Multilateral Development Banks	5	0	0	0	0	0	0	0	0	0	0	5	-
International Organisations	0	0	0	0	0	0	0	0	0	0	0	0	-
Institutions	0	185	0	2	0	8	0	0	0	0	0	195	-
Corporates	0	0	0	3	0	1	0	0	77	0	0	81	77
Retail	0	0	0	0	0	0	0	7	0	0	0	7	7
Exposures secured by mortgages on immovable property	0	0	0	0	0	0	0	0	0	0	0	0	-
Exposures in default	0	0	0	0	0	0	0	0	0	1	0	1	1
Exposures associated with particular high risk	0	0	0	0	0	0	0	0	0	0	0	0	-
Covered bonds	0	0	0	0	0	0	0	0	0	0	0	0	-
Securitisation positions	0	0	0	0	0	0	0	0	0	0	0	0	-
Exposures to institutions and corporates with a short-term credit assessment	0	0	0	0	0	0	0	0	0	0	0	0	-
Collective investment undertakings (CIUs)	0	0	0	0	0	0	0	0	0	0	0	0	-
Equity exposures	0	0	0	0	0	0	0	0	0	0	0	0	-
Other items	0	0	0	0	0	0	0	0	0	0	0	0	-
<b>Total</b>	<b>14,555</b>	<b>185</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>7</b>	<b>77</b>	<b>1</b>	<b>0</b>	<b>14,839</b>	<b>84</b>

Table 58: Standardised approach – CCR exposures by regulatory portfolio and risk (Art. 444 (e) CRR and in line with EU CCR3 EBA/GL/2016/11)

In the table above, under column Unrated, exposures are presented for which credit risk assessment by a nominated ECAI is not used and for which specific risk weights are applied depending on their exposure class.

The table below provides an overview of RWAs and parameters used in RWA calculations for exposures subject to the CCR framework (excluding CVA charges or exposures cleared through a CCP) and where the credit risk approach is used (in accordance with Article 107 CRR) to compute RWAs in IRB approach. The same PD scale applies as for credit risk exposures.

#### CCR portfolio in IRB approach

in EUR million	EAD post CRM	Average PD	Number of obligors	Average LGD	Average maturity	RWA	RWA density
<b>PD scale</b>		<b>Institutions</b>					
1	3,149	0.1%	111	13.2%	1.0	364	11.6%
2	1,731	0.2%	78	10.0%	1.3	182	10.5%
3	1,694	0.4%	43	11.3%	0.9	268	15.8%
4	87	0.6%	12	24.0%	1.4	42	48.3%
5	890	1.0%	14	8.0%	0.6	143	16.0%
6	17	4.0%	4	4.8%	1.0	2	14.8%
7	29	24.5%	2	16.5%	2.0	31	107.5%
8	0		0			0	
<b>Total</b>	<b>7,598</b>	<b>0.4%</b>	<b>264</b>	<b>11.5%</b>	<b>1.0</b>	<b>1,033</b>	<b>13.6%</b>
<b>PD scale</b>		<b>Corporate</b>					
1	58	0.1%	46	38.9%	2.2	11	19.5%
2	807	0.2%	124	4.4%	0.7	38	4.7%
3	173	0.4%	300	35.8%	2.1	83	48.3%
4	57	0.6%	142	19.6%	1.4	18	32.3%
5	162	1.4%	442	22.4%	1.5	77	47.5%
6	115	3.8%	323	13.2%	1.0	44	38.3%
7	559	32.7%	29	0.4%	0.5	12	2.2%
8	1	100.0%	21	45.0%	2.5	0	0.0%
<b>Total</b>	<b>1,932</b>	<b>10.0%</b>	<b>1,427</b>	<b>9.6%</b>	<b>0.9</b>	<b>284</b>	<b>14.7%</b>
Other	101		406			85	84.6%
<b>Total</b>	<b>9,631</b>		<b>2,097</b>			<b>1,403</b>	<b>14.6%</b>

Table 59: IRB approach – CCR portfolio by exposure class, PD scale (Art. 452 (e) CRR and EU CCR4 EBA/GL/2016/11)

The table below provides an overview of the impact of netting and collateral held on exposures for which the exposure value is measured as per Part Three, Title II, Chapter 6 of the CRR, including exposures arising from transactions cleared through a CCP. Erste Group does not make use of counterparty netting for SFT transactions for the purposes of RWA calculations and there are no cross product netting agreements in place. Compared to 2017 there is a reduction in the net credit exposures to OTC derivatives (2017: EUR 731 million) which reflects the extension of netting agreements and corresponds to the overall lower derivatives positions. The netted current credit exposure is lower (2017: EUR 2,492 million) and the level of collateral held is correspondingly lower (2017: EUR 1,761 million). There is a significant increase in the net carrying amount for SFTs (2017: EUR 9,971 million) which is largely due to increased business volumes in some of the home markets and is also reflected in the SFT net credit exposures (2017: EUR 1,069 million).

in EUR million	Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
Derivatives	4,522	2,612	1,909	1,283	626
SFTs	21,450	0	21,450	20,108	1,342
Cross-product netting	0	0	0	0	0
<b>Total</b>	<b>25,972</b>	<b>2,612</b>	<b>23,359</b>	<b>21,391</b>	<b>1,968</b>

Table 60: Impact of netting and collateral held on exposure values (Art. 439 (e) CRR and EU CCR5-A EBA/GL/2016/11)

The table below provides an overview of all types of collateral posted or received by Erste Group to support or reduce CCR exposures related to derivative transactions or to SFTs, including transactions cleared through a CCP. Compared to 2017 for OTCD transactions there is a reduction in the volume of collateral received (2017: EUR 1,761 million) and an increase in collateral posted (2017: EUR 400 million) which reflects shifts in the composition of the derivatives portfolio. The proportion of exposures collateralized by cash remains high at 93.0% (2017: 97.0%) for received collateral but is slightly lower at 57.2% (2017: 89.0%) for posted collateral mainly due to the higher proportion of bonds used as collateral. For SFTs the overall level of collateral received grew significantly for both collateral received (2017: EUR 9,633 million) with an emphasis on government bonds and collateral posted (2017: EUR 9,971 million) mainly in cash due to higher volumes placed with central banks.

in EUR million	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
	Segregated	Unsegregated	Segregated	Unsegregated		
Cash	0	1,194	-58	-339	1,898	16,352
Government bonds	0	1	-25	-168	17,077	3,603
Corporate bonds	0	88	-16	-87	1,133	1,496
<b>Total</b>	<b>0</b>	<b>1,283</b>	<b>-100</b>	<b>-594</b>	<b>20,108</b>	<b>21,450</b>

Table 61: Composition of collateral for exposures to CCR (Art. 439 (e) CRR and EU CCR5-B EBA/GL/2016/11)

The table below provides an overview of Erste Group's exposures to credit derivative transactions broken down between derivatives bought or sold. Compared to 2017 there is a decrease in credit protection bought (2017: EUR 539 million) and a slight decrease in protection sold (2017: EUR 431 million). Erste Group does not have exposures to exotic credit derivatives and currently has no credit derivative positions purchased for hedging in the banking book.

in EUR million	Credit derivative hedges		Other credit derivatives
	Protection bought	Protection sold	
<b>Notionals</b>	-	-	-
Single-name credit default swaps	444	417	-
Index credit default swaps	130	150	-
Total return swaps	-	-	-
Credit options	-	-	-
Other credit derivatives	-	-	-
<b>Total notionals</b>	<b>574</b>	<b>567</b>	<b>-</b>
<b>Fair values</b>	-	-	-
Positive fair value (asset)	4	9	-
Negative fair value (liability)	11	4	-

Table 62: Credit derivatives exposures (Art. 439 (g) (h) CRR and EU CCR6 EBA/GL/2016/11)

# Exposure to securitisation positions

## Investments in securitisation positions

DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d), 449 (a) (c) (f) (h) (n) (v) CRR

In the past, securitisation deals were concluded by Erste Group to diversify risks and returns when acting as an investor in securitisation positions. There have not been any new investments in securitisation positions since 2011. It is planned to phase out this portfolio through amortisations.

Credit decisions are reached on the basis of a fundamental analysis of the underlying pools, while on a regular basis a waterfall simulation of the pool is done, for which structural risks of securitisation are taken into account. The continuous monitoring of the remaining securitisation portfolio is undertaken via a standardised process using various impairment tests. Changes in market risk are analysed on a monthly basis using current market prices for each of the securitisation positions. Furthermore, developments in credit spreads are analysed in the asset classes of the securitisation portfolio and used in the regular monitoring of market liquidity. Valuations by external rating agencies as well as a series of performance-linked indicators are used for the monthly assessment of credit risk. Additionally, annual reviews are prepared at the individual transaction level to check for impairment and measure the development of the securitisation positions. Transactions that fall below certain defined thresholds would be furthermore tracked in a watch list that is regularly updated, however, there are none at the moment.

To value securitisation positions, Erste Group receives third-party pricing for each of its US investments on a monthly basis. Third party pricing for the last US Student Loan ABS is based on observable inputs including (i) discount margins, (ii) conditional prepayment rate (CPR) and (iii) yield curves. For the European ABS Portfolio, Erste Group receives prices from external market data providers on a daily basis. Erste Group's pricing validation practice has been in place since 2013. There have been no changes in the valuation methods.

Erste Group is using the Ratings Based Method pursuant to Article 261 CRR for investor positions to calculate risk-weighted exposure amounts.

From 31 December 2016 onwards, Erste applies to all 1250% risk-weighted securitisation positions on its balance sheet the deduction of the exposure amount from the amount of Common Equity Tier 1 items pursuant to the Article 266 (3) CRR and Article 36 (1)(k) CRR as an alternative to applying a risk weight of 1250%.

The 1250% securitisation positions deducted from own funds as of 31 December 2018 include the two first loss positions of the two originated transactions Edelweiss 2013-1 (EUR 3 million) and Bee SME 2018-1 (EUR 25 million) as well as the synthetic excess spread of Bee SME 2018-1 (EUR 3 million).

## Securitisation activities at Erste Group

DISCLOSURE REQUIREMENTS Art. 449 (a) (b) (d) (e) (g) (h) (j) (k) (n) CRR

As an originator, securitisation transactions can improve the risk/return profile and enable growth through the following effects:

- \_ transfer of credit risk to the capital market
- \_ freeing of credit limits for customers of Erste Group
- \_ release of economic and regulatory capital
- \_ raising liquidity at attractive terms.

In December 2013, Erste Group securitised a portion of the car leasing portfolio of Erste Bank und Sparkassen Leasing GmbH (former EBV-Leasing Gesellschaft m.b.H.), through the Edelweiss 2013-1 transaction with a volume of EUR 267 million. There was no gain recognised for the sale of leasing receivables by Erste Bank und Sparkassen Leasing GmbH as they were sold at notional values.

Compartment Edelweiss 2013-1 bond of the Luxembourg Securitisation Special Purpose Entity (SSPE) Bee First Finance S.A. was structured in four tranches with AAA to BB+ ratings by Moody's and Fitch. The four tranches were fully placed with institutional investors, thereby achieving funding and a capital relief effect by transferring a significant portion of credit risk of the securitised assets to third parties.

Erste Group uses the Rating Based Method pursuant to Article 261 CRR for originator positions to calculate risk-weighted exposure amounts for Edelweiss 2013-1.



### Structure and ratings of Edelweiss 2013-1 traditional securitisation transaction

in EUR million	Notional value outstanding as of 11 Oct. 18 (last payment date)	Share (in %)	Current rating (Moody's/Fitch)	Spread (in bps)
Tranche A	0	0.0%	Aaa/AAA	47
Tranche B	5	23.9%	Aaa/AAA	92
Tranche C	9	44.2%	Aaa/AAA	200
Tranche D	7	31.9%	-/A-	300
<b>Total</b>	<b>21</b>	<b>100.0%</b>		
Reserve fund	3	15.9%		

Table 63: Overview of Edelweiss 2013-1 securitisation tranche structure as well as external ratings (Art. 449 (k) CRR)

As of the last payment date, which was on 11 October 2018, tranche A has been paid down completely. Both rating agencies, Fitch Ratings Limited and Moody's, have taken various rating actions on the Edelweiss 2013-1 notes reflecting the transaction's deleverage as well as its better than expected performance to date. Fitch upgraded the rating of tranche B from A (rating at issue date) to AAA, the rating of tranche C from BBB (rating at issue date) to AAA and the rating of tranche D from BB+ (rating at issue date) to A-. Moody's upgraded the rating of tranche B to Aaa from Aa3 (rating at issue date) and the rating of tranche C to Aaa from Baa2 (rating at issue date).

The reserve fund (first-loss piece) of EUR 3.3 million is provided by Erste Bank und Sparkassen Leasing GmbH in the form of a subordinated loan to the issuer, Bee First Finance S.A. acting for and on behalf of its compartment Edelweiss 2013-1. This loan represents the first loss piece of the transaction, i.e. it covers the losses of the securitised leasing exposures after usage of excess spread up to its total amount of EUR 3.3 million. The loan is unrated, has a risk-weight of 1250% under Article 261 CRR and is retained on the balance sheet. From 31 December 2016 onwards, Erste Group deducts the 1250% risk-weighted reserve fund amount from the amount of Common Equity Tier 1 items pursuant to Article 266 (3) CRR and Article 36 (1)(k) CRR as an alternative to applying a risk weight of 1250%. No hedging or unfunded credit protection is used to mitigate the risk of the retained first loss piece.

The average spread of the four tranches at issuance was 62 bps over the 3-month Euribor. Edelweiss 2013-1 was structured in four tranches and a liquidity facility. The replenishment period ended in October 2014. The portfolio consists of 100% Austrian car leasing receivables that are redeemed monthly, while the notes have quarterly payments.

The 5% originator retention required under Article 405 CRR was met by retaining exposures with a volume of EUR 14.1 million or 5% prior to securitisation at Erste Bank und Sparkassen Leasing GmbH level by random selection and on each quarterly replenishment date.

Erste Group acted as co-arranger, joint lead manager and joint bookrunner for the structuring and placement of the transaction, and is responsible for the following activities during the transaction's life: deemed collections guarantee provider, back-up servicer and swap counterparty. EBOe is the collection account bank and Erste Bank und Sparkassen Leasing GmbH fulfils the functions of the seller, servicer and subordinated loan provider in the transaction.

On 19 December 2018, Erste Group's second synthetic securitisation transaction ("Bee SME 2018-1") became effective. The first synthetic transaction ("Bee SME 2016-1") was terminated on 30 April 2018. The main objective of the new EUR 1,325 million transaction was credit protection of a predominantly Austrian SME credit portfolio via an unfunded financial guarantee on the mezzanine tranches. The significant risk transfer pursuant to Article 244 (2) (a) CRR contributed to regulatory capital relief. The transaction has a final legal maturity on 31 May 2043 and includes loans to SME, corporate and self-employed customers. The reference portfolio was not sold but remains on the balance sheet of Erste Bank der Oesterreichischen Sparkassen AG. No SSPE was involved in the transaction.

Erste Group uses the Supervisory Formula Method pursuant to Article 262 CRR for this transaction to calculate risk-weighted exposure amounts. No rating agency was involved in the transaction. The transaction was structured in three tranches whereby the mezzanine tranche is guaranteed by the European Investment Fund (EIF). In contrast to Bee SME 2016-1, the European Investment Bank (EIB) with funds from European Fund for Strategic Investments (EFSI) supports the new transaction with a back-to-back guarantee with EIF and retrocession of part of the guarantee premium to Erste Group in case a certain new loan origination requirement is reached, as part of its mission to support SME lending and economic growth in the European Union. The structure of the transaction is set out in the table below.

## Bee SME 2018-1 synthetic securitisation transaction

in EUR million	Notional value outstanding	Seniority of tranche	Tranche characteristic
Senior Tranche	1,221	Senior	Retained
Mezzanine Tranche	44	Mezzanine	Guaranteed
Junior Tranche	25	Junior	Retained
<b>Total</b>	<b>1,289</b>		
Excess Spread	3		

Table 64: Overview of Bee SME 2018-1 securitisation tranche structure and characteristics

The transaction has no replenishment period. As of the end of reporting period the tranches of the transaction have been paid down by 2.7% of their initial balance. The redemption of the senior and mezzanine tranches is on a pro-rata basis and losses are allocated to the tranches in the reverse order of seniority. The transaction includes a synthetic excess spread in the amount of the expected loss of the portfolio. Losses are first allocated to the excess spread and then to the tranches starting with the junior tranche. The excess spread as well as the junior tranche are deducted from the amount of Common Equity Tier 1 items pursuant to Article 266 (3) CRR and Article 36 (1)(k) CRR. No hedging or unfunded credit protection is used to mitigate the risk of the retained tranches.

The specific provisions booked for a credit event loan are used as an estimate for the final loss (“initial loss”) in respect of the credit event loan in the transaction. Revised estimates of the loss lead to positive or negative loss adjustments during the workout process. After completion of the workout process the total loss accounted for in respect of the credit event loan is the final loss. In case of losses above the excess spread and the junior tranche and up to the mezzanine tranche Erste Bank der Oesterreichischen Sparkassen AG receives credit protection payments from the investor.

The 5% originator retention required under Article 405 CRR was met by retaining exposures with a volume of EUR 70 million or 5% prior to securitisation at Erste Bank der Oesterreichischen Sparkassen AG level by random selection.

The administration and monitoring is executed according to the policy “process documentation for execution and administration of synthetic securitisation transactions” in the internal IT securitisation platform. The policy covers the roles, responsibilities, governance and organisation of the synthetic securitisation process within Erste Group and Erste Bank der Oesterreichischen Sparkassen AG.

Besides the termination of Bee SME 2016-1 and the issuance of Bee SME 2018-1 no further securitisation transaction was executed at Erste Group in 2018. Erste Group is planning to execute its first synthetic securitisation for Ceska Sporitelna in 2019 again with EIF and EIB as investors.

In cases in which Erste Group invested in synthetic securitisations, assets were allocated to the financial category available-for-sale and measured at fair value. On the balance sheet, available-for-sale assets are disclosed under the line item “Financial assets – available for sale”.

Assets awaiting securitisation are loans which are valued at amortised cost and are not recorded in the credit institution’s trading book or trading. On the balance sheet, loans are disclosed under the line items “Loans and receivables to credit institutions” and “Loans and receivables to customers”.

## Quantitative disclosure on securitisation positions

### SECURITISATION ACTIVITIES

DISCLOSURE REQUIREMENTS Art. 449 (m) (n) (p) CRR

#### Type of securitisation

in EUR million	Type of exposure	Exposure	Exposure (% of total)
Traditional	Car finance	17	1.3%
Synthetic	Corporate and SME loans	1,289	98.7%
<b>Total</b>		<b>1,306</b>	<b>100.0%</b>

Table 65: Overview on outstanding exposures securitised (Art. 449 (n) (i) CRR)

The total amount of outstanding exposures securitised increased due to the issuance of the EUR 1,325 million Bee SME 2018-1. This outweighed the continued decrease of Edelweiss 2013-1 and the termination of Bee SME 2016-1. The securitized exposures are all on-balance. The aggregate amount of off-balance sheet securitisation exposures is 0.

## Risk category

in EUR million	Type of exposure	Exposure	Exposure (% of outstanding exposures)
Impaired / past due assets	Car finance	0.4	2.7%
Losses	Car finance	0.0	-0.3%
Impaired / past due assets	Corporate and SME loans	0.0	0.0%
Losses	Corporate and SME loans	0.0	0.0%

Table 66: Impaired/past due assets (Art. 449 (p) CRR)

The amount of impaired/past due car finance assets securitised refers to leases in arrears as of 31 December 2018 and to defaulted car finance assets in 2018. Losses recognised during the reporting period for Edelweiss 2013-1 are calculated as defaulted loans fully written-off in 2018 minus recoveries of defaulted loans in 2018. Losses recognized during the reporting period for Edelweiss 2013-1 are negative as recoveries of defaulted loans that are initially fully written-off were higher than defaulted loans in 2018.

The amount of impaired/past due corporate and SME loans under Bee SME 2018-1 refers to the notional amount of credit event loans since effective date 19 December 2018. The amount of losses for Bee SME 2018-1 are the initial specific provisions as well as positive and negative loss adjustments of the loans with a credit event since effective date 19 December 2018. No credit events occurred from effective date to 31 December 2018.

## EXPOSURE AMOUNTS FOR INVESTMENTS IN SECURITISATION

### DISCLOSURE REQUIREMENTS Art. 449 (o) CRR

Securitisation that is deducted from own funds is also included in total EAD figure presented in tables below. None of the positions are in trading book. Investments in securitisation positions differ by type of securitisation and are broken down by risk weight bands and rating approach.

### By type of securitisation

in EUR million		EAD	EAD (% of total)	Capital requirements
Asset Backed Securities	ABS	29	6.6%	0
out of which retained		3	0.3%	0
Collateralised Bond Obligation	CBO	0	0.0%	0
Collateralised Loan Obligation	CLO	1,249	92.9%	7
out of which retained		1,249	92.9%	7
Commercial Mortgage Backed Securities	CMBS	0	0.0%	0
Collateralised Mortgage Obligation	CMO	0	0.0%	0
Other Collateralised Debt Obligation	Other CDO	0	0.0%	0
Residential Mortgage Backed Securities	RMBS	4	0.6%	0
Resecuritisations	Resecuritisations	0	0.0%	0
<b>Total</b>		<b>1,282</b>	<b>100.0%</b>	<b>7</b>

Table 67: Securitisation positions – EAD and capital requirements by type of securitisation (Art. 449 (n)(ii) (o)(i) CRR (1/3))

### By risk weight band

in EUR million	EAD	EAD (% of total)	Capital requirements
<=10% RW	1,221	97.6%	7
>10% to 20% RW	27	0.1%	0
>20% to 50% RW	3	0.3%	0
>50% to 100% RW	0	0.0%	0
>100% to 350% RW	0	0.1%	0
>350% to 650% RW	0	0.0%	0
>650% to <1250% RW	0	0.0%	0
1250% RW	0	0.0%	0
<b>Total</b>	<b>1,251</b>	<b>97.8%</b>	<b>7</b>
deducted from capital	32	2.2%	0
<b>Total</b>	<b>1,282</b>	<b>100.0%</b>	<b>7</b>

Table 68: Securitisation positions – EAD and capital requirements by risk weight band (Art. 449 (o)(i) CRR (2/3))

### By rating approach and by securitisation and re-securitisation exposures

in EUR million		EAD	EAD (% of total)
IRB Approach	Resecuritisation Exposure	0	0.0%
	Securitisation Exposure	1,282	100.0%
Standardised Approach	Resecuritisation Exposure	0	0.0%
	Securitisation Exposure	0	0.0%
<b>Total</b>		<b>1,282</b>	<b>100.0%</b>

Table 69: Securitisation positions – EAD by rating approach and by securitisation and re-securitisation exposures (Art. 449 (o)(i) CRR (3/3))

# Market Risk

## Goals and principles of risk management

DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) AND 445 CRR

Market risks arise due to fluctuations of interest rates, exchange rates, equity prices and commodity prices. Market risks derive from short-term trading in instruments whose prices are determined daily (trading book) as well as from the traditional banking business (banking book). The measurement method for risk in the trading book is Value at Risk (VaR).

### ORGANISATION

The responsibility for market risk at Group level rests in the division Group Liquidity and Market Risk Management (GLMRM). This division is responsible for steering, measurement, and controlling of liquidity and market risk of Erste Group. It covers both banking book and trading book and comprises the departments Banking Book Risk Management, Trading Book Risk Management, Market and Liquidity Risk Methods and Models, and Market and Liquidity Risk Model Validation.

Banking Book Risk Management is responsible for the group wide governance of market and liquidity risk of the banking book. This includes the identification, measurement and controlling of market and liquidity risk as well as the integration into the group's enterprise wide risk management and risk appetite framework. Furthermore, this department is responsible for setting, controlling, and monitoring of group wide liquidity and market risk limits in the banking book and respective limit escalation procedures.

Trading Book Risk Management is responsible for the group wide governance of market risk of the trading book. It acts independently of the trading units and takes responsibility for identifying, measuring, and monitoring of all market risks arising from capital market business. The scope of this department also comprises setting, controlling, and monitoring of group wide market risk limits in the trading book and respective limit escalation procedures.

Market and Liquidity Risk Methods and Models covers the development of risk models related to Pillar 1 (i.e. the calculation of the regulatory capital requirements for market risk in the trading book) and Pillar 2 capital requirements as well as valuation and various internal steering purposes.

Market and Liquidity Risk Model Validation is responsible for the independent review and validation of market and liquidity risk related methods and models.

### RISK MEASUREMENT AND CONTROL

VaR is calculated based on the method of historic simulation. A confidence interval of 99% and a holding period of one day apply. The software package MRS (Market Risk Solution) is used for this purpose. The validity of the statistical methods used is constantly checked through back-testing.

The management board sets the strategic framework for market risk management in the Group, approves the risk appetite, which is appropriate to the business strategy, and approves the Group strategy. The breakdown and allocation of strategic market risk limits to segments follows a proposal of the risk management department Trading Book Risk Management, which is subject to approval by the MRC. The MRC is the ultimate decision-making body for market risk and other trading book-related issues of all entities of Erste Group. Its key function is to discuss and decide on important risk management issues related to Group Markets activities, in particular, to approve and implement common risk management standards, limit structures, trading strategies and to establish the overall governance framework. The chairman of the MRC is the CRO. The MRC further comprises of the Chief Financial Officer, the board member responsible for the Group capital markets business, key staff from risk management and the relevant business units. Limit compliance is verified at several levels by the appropriate local decentralised risk management units as well as by the department Trading Book Risk Management.

### METHODS AND INSTRUMENTS OF RISK MITIGATION

The general standards of market risk controlling and management (standards, limits and analyses) are defined by Erste Group and are described in the Group Principles for Managing Market Risk which are constantly reviewed and improved.

Risk measurement is guaranteed by the daily calculation of VaR for the entire Group and for each of the trading units. Additionally, sensitivity limits are in place for all asset classes. This system permits control that extends to the level of the individual trading desks and the

individual traders. The limits are monitored daily. Furthermore, a consistency check between the VaR limits and the sensitivity limits is carried out on a regular basis.

Risk measurement by purely statistical methods such as VaR does not adequately take into account the consequences of crisis situations. For this reason, Erste Group supplements its VaR-based risk measurement with stress testing based on several methods (stressed Value at risk (sVaR), daily and ad-hoc scenario analysis). These assessments help to analyse the effects of market movements of low probability; the results are made available to the MRC.

## MARKET RISK REPORTING

Risk reporting is divided into internal and external reporting.

Internal reporting comprises:

- \_ daily measurement and limit control of the market risk for all trading books at Group level (includes VaR, sensitivity and stop-loss limit reporting to management)
- \_ VaR overview for the Group, movements over time by risk type, banking book, hedge funds, detailed analyses of the trading book, limit utilisation
- \_ stress testing: sVaR, standard scenarios, combination scenarios

External reporting comprises:

- \_ capital requirements based on the internal model
- \_ quarterly reports to the Joint Supervisory Team
- \_ reports on exceptions in back-testing of the internal model as required

## OWN FUNDS REQUIREMENT FOR EXPOSURE TO MARKET RISK UNDER THE STANDARDISED APPROACH

The table below provides an overview of the capital requirements of Erste Group for market risk covered by the Standardised approach, broken down by risk type. Own funds in the Standardised approach is calculated for entities and risk types not part of the internal model on the consolidated level. In particular:

Entities scope of the Standardised Approach: Trading books in

- \_ Banca Comercială Română (BCR),
- \_ Erste Bank Croatia (EBC),
- \_ Erste Bank Serbia (EBS),
- \_ Allgemeine Sparkasse OÖ (ASK).

Risk Types not covered in the internal model:

- \_ specific interest rate risk
- \_ CIUs.

In addition Standardised approach is applied to residual positions in entities generally covered in the internal model but with market data not sufficient in length and quality to be modelled (e.g. new shares whose price history is too short or certain types of collective investment undertakings).

### Own funds requirement for market risk in STA

in EUR million	RWAs	Capital requirements
<b>Outright products</b>		
Interest rate risk (general and specific)	638	51
Equity risk (general and specific)	63	5
Foreign exchange risk	c	22
Commodity risk	0	0
<b>Options</b>		
Simplified approach	0	0
Delta-plus method	7	1
Scenario approach	0	0
Securitisation (specific risk)	0	0
<b>Total</b>	<b>981</b>	<b>79</b>

Table 70: Market risk under the Standardised approach (Art. 445 CRR and in line with EU MR1 EBA/GL/2016/11)

## Internal Market risk model

### SCOPE OF APPLICATION AS APPROVED BY THE SUPERVISORY AUTHORITY

DISCLOSURE REQUIREMENTS Art. 455 (b) CRR

Erste Group Bank AG calculates own funds requirements for market risk based on an internal model in accordance with Part 3, Title IV Chapter 5 CRR. The VaR model was originally approved on 3 September 2001 for the trading book of Erste Group Bank AG. The model was expanded on multiple occasions to meet market developments and new regulatory requirements with the most recent changes having been approved by the regulator in December 2016. Besides the earlier approved extensions like the integration of event risk of equity instruments and the implemented sVaR calculation the current model was expanded to use OIS discounting for derivatives, FX-derived curves for VaR and sVaR calculation and applies benchmark curves as new risk factors.

The following entities within Erste Group (consolidated level) are within the application scope of the internal model:

- \_ Erste Group Bank (including the branches in London, New York and Hong Kong),
- \_ Česká spořitelna (CS),
- \_ Slovenská sporiteľňa (SLSP),
- \_ Erste Bank Hungary (EBH),
- \_ Erste Bank Investment Hungary (EBIH).

The model considers the following risk positions:

- \_ general position risk in interest-related instruments
- \_ specific and general position risk in equity instruments
- \_ commodity position risk
- \_ risk from positions in foreign currency and gold
- \_ gamma risk
- \_ vega risk.

### CHARACTERISTICS OF THE INTERNAL MODEL

DISCLOSURE REQUIREMENTS Art. 455 (a) (i) CRR

The internal model uses the method of historical simulation for the VaR and sVaR calculation. VaR is the maximum loss that will not be exceeded within a defined period with a certain probability. To calculate VaR by this method, a historical time series is needed for every market parameter that enters into the valuation of the portfolio. Subsequently, the assumption is made that past price changes are an approximation of future market behaviour.

The calculation of VaR involves three stages:

- \_ in the first step, the NPV of the positions being assessed is calculated based on current market data (e.g. interest rates, volatilities);
- \_ in the second step, the changes in market data are determined for every day – within a selected historical time period. The current market data are adapted to take account of these changes and then the value of the portfolio is re-assessed. The difference between the current NPV and the new NPV based on historical changes is calculated for every day of the simulation period. This produces a time series of gains and losses;
- \_ in the third step, the NPV gains and losses are analysed statistically. To this end, confidence intervals and ranks are calculated.

The computation is based on a confidence level of 99% and a holding period of one day. VaR and sVaR are calculated on a daily basis. For VaR, the simulation period is the past two years. For sVaR, the simulation period is only one year and the calibration of the relevant period for sVaR is performed weekly.

For the purpose of event-specific risk for equity exposures Erste Group applies a combination of historical simulation and Monte-Carlo simulation based. Equity risk factors are augmented with idiosyncratic and market wide events and VaR is calculated by using the augmented time series. The maximum of the original historical VaR and the VaR including events is the final Event VaR number used for the calculation of own funds requirements.

For the purposes of determining capital requirements, the calculated values are scaled to a holding period of ten days using the square-root-of-time rule.

The methodology described is consistently applied to all portfolios and positions included in the internal market risk model.

As Erste Group does not have an approval for specific risk in interest-linked instruments, no model for incremental default and migration risk is used. Additionally, Erste Group does not have a correlation trading portfolio therefore no related model is used.

All components of the internal market risk model are subject to at least annual validation by the department Market & Liquidity Risk Model Validation.

#### Own funds requirement for market risk under the Internal Model

in EUR million	RWAs	Capital requirements
VaR (higher of values a and b)	726	58
(a) Previous day's VaR (Article 365-1 of the CRR (VaRt-1))		18
(b) Average of the daily VaR (Article 365-1) of the CRR on each of the preceding 60 business days (VaRavg) x multiplication factor (mc) in accordance with Article 366 of the CRR		58
SVaR (higher of values a and b)	1,726	138
(a) Latest SVaR (Article 365-2 of the CRR (SVaRt-1))		39
(b) Average of the SVaR (Article 365-2 of the CRR) during the preceding 60 business days (SVaRavg) x multiplication factor (ms) (Article 366 of the CRR)		138
IRC (higher of values a and b)	0	0
(a) Most recent IRC value (incremental default and migration risks calculated in accordance with Article 370 and Article 371 of the CRR)		0
(b) Average of the IRC number over the preceding 12 weeks		0
Comprehensive risk measure (higher of values a, b and c)	0	0
(a) Most recent risk number for the correlation trading portfolio (Article 377 of the CRR)		0
(b) Average of the risk number for the correlation trading portfolio over the preceding 12 weeks		0
(c) 8% of the own funds requirement in the standardised approach on the most recent risk number for the correlation trading portfolio (Article 338-4 of the CRR)		0
Other	0	0
<b>Total</b>	<b>2,453</b>	<b>196</b>

Table 71: Market risk under the IMA (Art. 455 (e) CRR and EU MR2-A EBA/GL/2016/11)

In accordance with Article 364 CRR, the own funds contributions from both VaR and sVaR are derived from the average VaR and sVaR of the past 60 business days scaled to 10 days and using a multiplier determined by the regulator. The regulatory multiplier was 3.0. Based on the results of the back-testing no add-on to the regulatory multiplier was applied at year end 2018. Erste Group does not use an internal model for the specific risk of debt instruments and, therefore, does not calculate capital requirements for incremental default and migration risk. In addition, Erste Group does not have a correlation trading portfolio.

The own funds requirement for market risk under the IMA has increased in 2018 (from EUR 151 million in Q4 2017 to EUR 196 million in Q4 2018). The increase is a combined effect of higher VaR and SVaR contribution due to higher market volatility. The decrease of the multiplier is due to a lower number of outliers in the backtesting programme in 2018.

#### RWA flows for market risk in the IMA

in EUR million	VaR	SVaR	Total RWAs	Total capital requirements
<b>RWAs at end of previous period</b>	<b>495</b>	<b>1,396</b>	<b>1,891</b>	<b>151</b>
Regulatory adjustment <sup>1</sup>	-298	-1,022	-1,320	-106
RWAs at end of previous period-end (end of the day)	197	374	571	46
Movement in risk levels <sup>2</sup>	24	115	139	11
Model updates/changes <sup>3</sup>	0	0	0	0
Methodology and policy	0	0	0	0
Acquisitions and disposals	0	0	0	0
Foreign exchange movements	0	0	0	0
Other	0	0	0	0
RWAs at the end of the reporting period (end of the day)	221	489	710	57
Regulatory adjustment <sup>4</sup>	687	1,669	2,356	188
Change in backtesting multiplier (QoQ)	-182	-432	-613	-49
<b>RWAs at the end of the reporting period</b>	<b>726</b>	<b>1,726</b>	<b>2,453</b>	<b>196</b>

1) Difference between: single day RWAs without multiplier and RWAs at end of period (higher of either 60-day average with multiplier, or single end of day without multiplier)

2) changes due to position changes

3) updates to the model, as well as significant changes in model scope

4) difference between: RWAs at end of period (higher of either 60-day average with multiplier, or single end of day without multiplier) and single day RWAs without multiplier

Table 72: RWA flow statement of market risk exposures under the IMA (Art. 455 (e) CRR and EU MR2-B EBA/GL/2016/11)



The market risk RWA under the IMA are determined by the 60-day average of VaR and SVaR. The main drivers for RWA changes in 2018 can be attributed to market volatility.

## DESCRIPTION OF THE STRESS TESTS APPLIED

DISCLOSURE REQUIREMENTS Art. 455 (a) (iii) CRR

### Stressed value at risk (sVaR)

In contrast to the normal VaR calculation, the simulation does not cover the past two years, but rather a 12-month period during which there were particularly adverse market price fluctuations for the position of the bank. At present, this is the period from 1 July 2008 to 30 June 2009.

### Standard scenarios

The following standard scenarios are calculated:

- \_ four interest rate scenarios with a respective shift of 1, 25, 50, 100, 200 and 500 basis points upward and downward in the currencies EUR, CZK, HUF, RON, HRK, USD and CHF
- \_ increases and declines of 10%, 25% and 50% in the equity index
- \_ appreciation and depreciation of USD, CZK, HUF, RON and HRK vs. EUR by 6%, 25% and 50%
- \_ increases and declines in volatilities of interest rates, exchange rates and equities of 50%

### Comprehensive stress tests

On the one hand, historical scenarios are used as a basis for calculations, i.e. actual historical market crises are replicated and applied to the current position. The historical scenarios contain, but are not restricted to, e.g. Lehman Default Crisis 2008, Recession hits Europe 2009, the 9/11 attacks etc. The advantage of this approach is that no assumptions need to be made about the correlations between market risk factors and that the scenarios are always realistic since they actually happened in the past. Calculations are made for holding periods of 1, 10 and 20 working days, which also generates information on the development of the portfolio under illiquid market conditions.

In addition, the method also relies on probabilistic scenarios in which the strongest historical fluctuations in the most relevant market risk factors are applied to the portfolio. Such scenarios can be computed with different holding periods and difference percentiles.

## BACK-TESTING AND VALIDATION OF THE INTERNAL MODEL

DISCLOSURE REQUIREMENTS Art. 455 (a) (iv) CRR

Back-testing is performed mark-to-model, i.e. based on hypothetical changes in the portfolio value at unchanged daily closing positions as well as on the economic result.

Back-testing is executed in three steps based on the mark-to-model method:

- \_ first, the net present value of the daily closing position is measured at current prices;
- \_ in a second step, the position is then revalued at the next business day's prices;
- \_ the difference represents the hypothetical profit or loss on the trading position given a one-day holding period.

Back-testing is done both for the overall risk and the individual risk types (interest rate, currency, equities, commodity, and volatility) as well as at unit and trading desk level.

As for the determination of VaR, the back-testing calculations also employ MRS. For the economic back-testing, actual profit and loss results are used and, if necessary, corrected for profit and loss resulting from positions not covered by the internal model. The validation methods used that exceed regulatory back-testing include:

- \_ as statistical methods, Kupiec's dual proportion-of-failure test and testing of the independence of outliers to each other
- \_ validation of the scaling of the holding period of ten days using the square-root-of-time rule
- \_ validation of the validity of risk factors in product valuation as well as the influence of proxies on market risk factors.

## DESCRIPTION OF THE EXTENT AND METHODOLOGIES FOR COMPLIANCE WITH THE REQUIREMENTS PURSUANT TO ART. 104 AND 105 CRR

DISCLOSURE REQUIREMENTS Art. 455 (c) CRR

Market risks are actively taken as part of trading activities including market making, specific types of client servicing and proprietary trading. The definition of the trading book is included in the Group Principles for Managing Market Risks.

### Valuation at market prices

Generally, all positions in the trading book are valued daily in the front-office system independent of trading operations. The valuation of all positions is done, if possible, based on market data obtained from independent external providers such as Reuters, Bloomberg, etc. Bond positions are valued on bid-ask prices, and exchange-traded securities and trades are valued using the closing prices or the last traded price.

### Valuation at model prices

If it is not possible to conduct the valuation at market prices, model prices are used. For this purpose, models commonly used in the market are used (e.g. Black Scholes, Hagan, Hull White, Libor Market). If available, the input data is obtained from the same data providers that are used for determining market prices. The valuation of the positions is done at mean rates. The figures of relevance for the internal model are determined daily in a system independent of trading operations.

The periodic review of market conformity of the models, model parameters and model prices determined is the responsibility of Trading Book Risk Management which operates separately from the trading business. The sections of the trading book for which model prices are used are reported periodically to the management board.

### Independent price review

The valuations are coordinated periodically between Mid-Office and Risk Management. Additionally, at least once a month, a reconciliation of the valuations is conducted with Accounting.

### Valuation adjustments or reserves

For financial instruments for which a mid-model price is determined, product-specific valuation adjustments are determined that take into account the usual market bid-ask spreads, remaining times to maturity and nominal values which reflect the model and liquidity risk as well as ask-bid spreads. The adjustments are reported separately in the risk systems.

### Systems and controls

All models used are documented and aligned with Risk Management, Trading and the auditors. An independent validation of valuation models is done by department Market & Liquidity Risk Model Validation. All model parameters and data that cannot be obtained from market providers are documented and are reviewed periodically for market conformity independently of the Front Office.

The valuation method applied for a specific product is defined and documented in the Product Approval Process. The final approval is given by the MRC, which serves as Product Approval Board.

Generally, three categories are distinguished for positions in the trading book:

**Level 1.** Financial instruments for which there is a price in an active market belong to this category. An active market is a market in which there are transactions in sufficient frequency and volume. In some cases, it may occur that a price on an active market does not reflect the fair value. For example, if a major event occurs after the market closes but before the value date. If the price quoted needs to be adjusted (to account for this), it results in a classification at a lower level.

**Level 2.** Level 2 instruments use inputs to the valuation that are not included in Level 1; these inputs may be directly observable (prices) or indirectly observable inputs (derived from prices). When a financial instrument has a fixed maturity, Level 2 inputs must be observable for the entire life (for example the discount curve for a bond or swap). The following inputs belong to Level 2:

- \_ prices quoted for similar instruments in active markets;
- \_ prices quoted for identical or similar financial instruments in inactive markets;
- \_ inputs that do not represent prices such as interest rates (if available for the entire life), volatilities, prepayment rates and default rates
- \_ and inputs that may be derived from observable market data.

**Level 3.** These are instruments where the valuation uses inputs that are not based on observable market data. Unobservable inputs may be used if there are no observable inputs to determine the fair value of a financial instrument for which there is no active market. Unobservable inputs must reflect the assumptions that market participants would make in their assessment. When measuring unobservable inputs as much information as possible must be used, including internal data.

### Prudent valuation

The CRR sets out requirements relating to prudent valuation adjustments (Article 105) of all asset and liability positions measured at fair value, including those positions not in the trading book, to determine prudent values that achieve an appropriate degree of certainty.

In Article 34 (“Additional value adjustments”) of the CRR, the demand for additional value adjustments, as specified in Article 105 CRR (“Requirements for prudent valuation”) is laid down as mandatory from 1 January 2014.

In accordance with the CRR and the relevant Regulatory Technical Standards, the absolute sum of fair valued assets and liabilities lies above the threshold of EUR 15 billion and hence Erste Group implemented additional value adjustments under the ‘core approach’. Additional value adjustments are applied to the fair values of the positions to calculate an asset’s ‘prudent’ value in the sense that the prudent value is unfavorable or equal to a realised value with a certainty of 90%. The implemented valuation adjustment framework encompasses the following valuation adjustment types: market price uncertainty, model risk, unearned credit spreads, investing and funding costs, concentrated positions, and future administrative costs. Valuation adjustments for operational risk, early termination and close out costs are not evaluated explicitly in the prudent valuation process in order to avoid double counting, as they are covered elsewhere in the risk and valuation measurement framework. The valuation adjustment calibration relies primarily on quantitative methods for measuring the individual valuation adjustments with only limited use of expert based approaches where a straightforward quantification cannot be applied to the bank’s methodological valuation approach. The additional value adjustments reduce the regulatory Common Equity Tier 1 capital.

## Quantitative disclosure on market risk

### DISCLOSURE REQUIREMENTS Art. 455 (d) (i) (ii) (g) CRR

The table below shows the maximum, the mean and the minimum VaR and sVaR values of the reporting period as well as the value at the end of the reporting period

<b>VaR (10 day 99%)</b>	
Maximum value	27
Average value	17
Minimum value	10
Period end	18
<b>sVaR (10 day 99%)</b>	
Maximum value	65
Average value	44
Minimum value	30
Period end	39
<b>IRC (99.9%)</b>	
Maximum value	0
Average value	0
Minimum value	0
Period end	0
<b>Comprehensive risk capital charge (99.9%)</b>	
Maximum value	0
Average value	0
Minimum value	0
Period end	0

Table 73: IMA values for trading portfolios (Art. 455 (d) CRR and EU MR3 EBA/GL/2016/11)

The figure below shows the back-testing results referring to the market risk in the trading book of the reporting year. It provides a comparison of the daily VaR estimates with both the mark-to-model back-testing and actual gains/losses of the bank. Valuation adjustment related to bid-ask spread of securities are included in the actual back-testing. All other reserves and valuation adjustments are not included in back-testing.

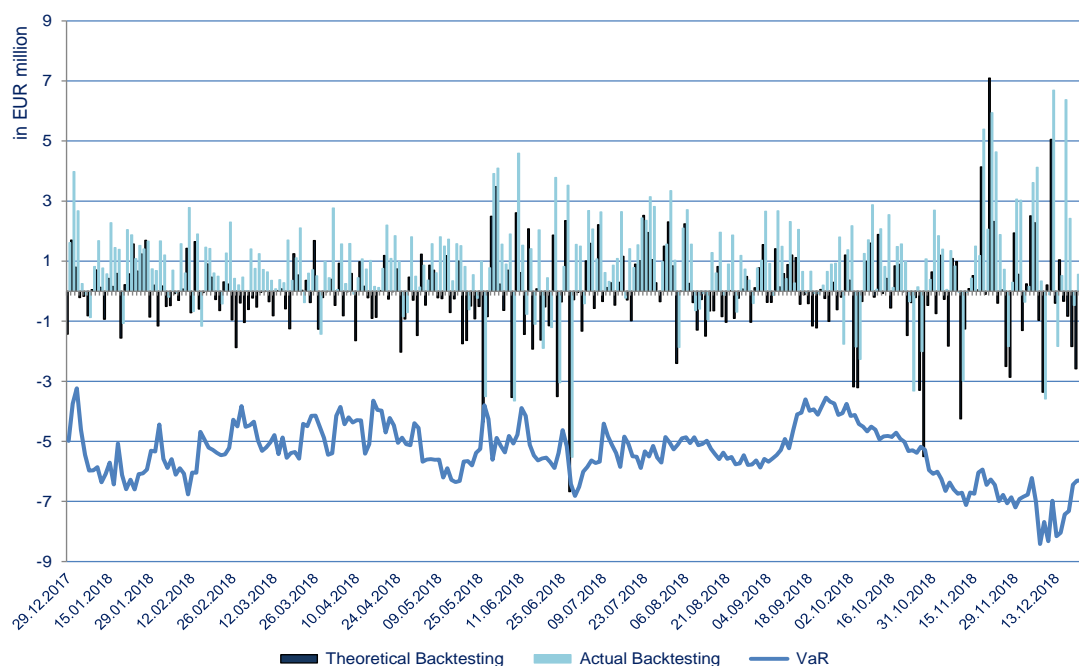


Figure 5: Results for actual back-testing (EU MR4 EBA/GL/2016/11)

In the reporting year 2018 the internal market risk model showed three outliers in the hypothetical back-testing and zero outliers in the actual back-testing. The first overshooting in May 2018 was triggered by government bond positions. In June 2018 the CZK FX rate change led to the second outlier. The last overshooting in October 2018 was caused by strong movement in swap rates particularly on the Czech market.

# Interest rate risk

## Goals and principles of risk management

DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) AND 448 (a) CRR

Interest rate risk is the risk that the bank's earnings and/or economic value might be negatively affected by changes in interest rates. Changes in the yield curve can have a negative effect on net interest income. These changes also affect the market value of assets, liabilities and off-balance sheet items, as the future payments (and thus also their NPV) vary directly with changes in interest rates. As a consequence, an effective risk management process that keeps the impacts of interest rate changes on the bank's balance sheet within appropriate limits is of fundamental importance for the security and creditworthiness of the bank.

The types of interest rate risk to which the Group is exposed are:

- \_ re-pricing risk – results from the mismatch in the maturity and repricing of assets and liabilities and off-balance sheet short and long term positions.
- \_ yield curve risk – is caused by changes in the slope and shape of the interest rate curve
- \_ basis risk – results from the imperfect correlation in the adjustment of the credit and debit interest rates of different products that otherwise would have the same interest rate terms
- \_ optionality risk – is derived mainly from options (gamma and vega effect) that are contained in positions of the banking book (e.g., prepayments, embedded optionalities such as caps / floors, call rights on bonds, etc.).

The first three types represent traditional interest rate risk. The fourth type is becoming increasingly important with the growing number of options embedded in products reported both on and off the balance sheet.

The interest rate risk management process is governed by clear responsibilities of all stakeholders in the interest rate risk framework (Organisation) and can be divided into four high level components:

- \_ Risk identification
- \_ Risk measurement
- \_ Risk management and Risk control
- \_ Risk reporting.

## ORGANISATION

The Asset Liability Committee is the highest decision making committee concerning all aspects of interest rate risk management in the banking book and consists of all members of the Board of Directors. The purpose of the Asset Liability Committee (ALCO) is to manage the consolidated balance sheet (BS) of Erste Group, focusing on a trade-off between all consolidated balance sheet risks (interest rate (IR), foreign exchange (FX), liquidity, credit) and Erste Group's P&L by performing management actions on the Holding BS and by setting the group standards and limits for EBG members. It meets monthly within the scope of the regular management board meetings.

The tasks of Asset and Liability Management (ALM) comprise the management of interest risk on the banking book of Erste Group and also the further development and maintenance of the Funds Transfer Pricing (FTP) System while Banking Book Risk Management is responsible for risk controlling. For Erste Group's Austrian subsidiaries and the savings banks a special service model is applied where local ALCO coverage is provided by ALM of EBOe and Group Banking Book Risk Management respectively. The foreign subsidiaries have their own ALM and Risk departments, which are responsible for the analyses and the preparation of the documents. With respect to these subsidiaries, the responsibility of Erste Group's ALM and Risk department is to safeguard uniform standards of analysis and ensure that the ALM tasks in the subsidiaries are performed in accordance with the Group guidelines.

## RISK IDENTIFICATION

The ALM software QRM Balance Sheet Management is used throughout the entire Group. This software makes both Group-level planning and consolidation as well as the modelling of interest rate risk on the balance sheet of Erste Group possible. This system is capable of capturing all sources of interest rate risk and calculates their effect on the balance sheet of Erste Group. The data for the current portfolio, market data for the cut-off date in question and the assumptions on future portfolio developments (volume, margins, etc.) are all entered into this system. It measures both the effect on profit/loss and the market value of the banking book positions. The data is organised by account and product. The account structure corresponds to that of the IFRS balance sheet, while the product structure represents the currency and the interest rate-related behaviour of the products in the Group.

## KEY ASSUMPTIONS USED IN RISK MODELLING

The behavioural model for demand deposits (split into entity dependent clusters like retail, SME, corporates, sovereign, ...) used for risk measurement are based on a life cycle framework. For each cluster the number of accounts (attrition model), the average balance per account (average balance model) and the average deposit rate (deposit rate model) are modelled separately. The run-off profile is determined by the combination of the attrition rate model and the average balance model. The estimated future interest rate cash flows are determined by the deposit rate model. The weighted average life resulting from the run-off profiles for demand deposits is capped with 5 years if necessary

## RISK MEASUREMENT

In general there are four methods which are used to measure interest rate risk in the banking book:

- \_ Sensitivity measures (BP01, CR01) to assess the market value sensitivity of certain portfolios
- \_ Economic value measures (MVoE, EVE) to assess the market value change under certain scenarios
- \_ Earnings at risk measure (NII sensitivity, OCI sensitivity) to assess the impact on operating income of certain scenarios on Group level.
- \_ Value at Risk based measures to assess all aggregated risk types on Group level and used for economic capital allocation under Pillar 2

Based on these tools a big variety of scenarios are assessed on a regular basis to capture all aspects of interest rate risk.

## RISK MANAGEMENT AND RISK CONTROL

For the practical management of interest rate risk three main tools are used and monitored on a regular basis:

- \_ Sensitivity measures (BP01, CR01)
- \_ Economic value measure (MVoE, EVE)
- \_ Earnings at risk measure (NII sensitivity)

The sensitivity measures on the (BP01, CR01) analyses the general positioning of the banking book portfolio and serves as a initial starting point for deeper analysis. The economic value measure (MVoE, EVE) analyses the banking book by means of NPV simulations of the market value, for example the effect of a 200 bps interest rate shock and the EBA standard scenarios on market value. It provides insights on the balance of fixed rate assets versus fixed rate liabilities and indicates an economic over- or underperformance of the bank in the long run given certain interest rate scenarios. The earnings at risk measure assesses the accounting impact of interest rate changes under various scenarios over a horizon up to 5 years and provides insights on P&L changes stemming from changes in interest rates.

The interest rate risk strategy of the Group sets out interest rate targets and is based on the optimisation of market risk and income possibilities, i.e. all measures developed in the interest rate strategy are analysed with respect to their effect on the income defined in the financial projections and on the market value. The interest rate risk strategy is approved by the ALCO on an annual basis and periodically reviewed to ensure that it is up to date. A modification may become necessary due to changes in the business plan or the market situation and is therefore a requirement for active risk control.

Based on the targets set out in the interest rate strategy, the results of the regular analysis and the economic forecast, investment and hedging recommendations are presented to the ALCO. These recommendations may increase or decrease risk. They may be implemented by means of on-balance sheet or off-balance sheet transactions. For cash flow hedges and fair value hedges, the relationship between the underlying transaction and the hedge (effectiveness) is continually monitored and documented.

## INTEREST RATE RISK REPORTING

The interest rate risk of Erste Group is calculated separately for each relevant currency and reported on the monthly basis to Group ALCO. Furthermore, materials on the following topics are prepared for the Group ALCO:

- \_ Market overview;
- \_ Periodic and economic risk ratios and measures related to market risk (Market Risk Banking Book Pillar 2 RWA, EVE, BP01, CR01, VaR, MVoE, etc);
- \_ Positions (held-to-maturity portfolios in the Group, strategies);
- \_ Balance sheet movements (equity, liquidity, primary deposits, non-bank business) and
- \_ Liquidity management.

## Quantitative disclosure on interest rate risk

### DISCLOSURE REQUIREMENTS Art. 448 (b) CRR

The potential effects of interest rate changes on equity of the Group are analysed at Erste Group using the simulation method already described under “Risk Measurement and Control”. Simulation models make it possible to apply maximum precision and flexibility to risk measurement, also for complex portfolio structures. The NPV simulation accounts for all future cash flows based on current knowledge.

The following table exhibits the risk of a change in the market value of equity in the case of a 1 bp upward shock of the interest rate curve.

#### Interest rate risk

in EUR thousand	EGB	EBOe	CS	SLSP	BCR	EBH	EBC	EBNS	Others	SPK	Total
EUR	-3,723	301	-71	163	111	185	125	104	25	520	-2,261
USD	-481	9	-31	-23	72	-6	-13	-1	0	-1	-477
CZK	30	0	-64	0	0	0	0	0	94	-17	44
HUF	2	0	-0	0	0	47	0	0	22	0	70
RON	-11	0	-0	0	-247	0	0	0	-0	0	-258
HRK	-2	0	0	0	0	0	104	0	-0	-0	102
RSD	-0	0	0	0	0	0	0	-25	0	0	-25
CHF	-67	1	0	0	0	-2	3	-4	21	7	-40
Others	-3	0	1	0	0	0	0	-0	-0	-0	-2
<b>Total</b>	<b>-4,255</b>	<b>311</b>	<b>-165</b>	<b>140</b>	<b>-64</b>	<b>224</b>	<b>219</b>	<b>74</b>	<b>161</b>	<b>510</b>	<b>-2,847</b>

EGB: Erste Group Bank; EBOe: Erste Bank Österreich; CS: Česká spořitelna, Stavební spořitelna Ceske sporitelny, a.s. SLSP: Slovenská sporiteľňa; BCR: Banca Comercială Română; EBH: Erste Bank Hungary, Erste Lakas-Takarekpenztar Zrt, ERSTE Jelzálogbank Zrt; EBC: Erste Bank Croatia; EBNS: Erste Bank Serbia; SPK: Savings Banks, Bausparkasse der österreichischen Sparkassen, s Autoleasing, s Wohnbaubank

Table 74: Changes in the market value by interest rate shock (Art. 448 (b) CRR)

The table below shows the sensitivity of Erste Groups Net Interest Income (NII) result to a +100 bps shock of the interest rate curve.

#### Net interest income

in EUR thousand	EGB	EBOE	CS	SLSP	BCR	EBH	EBC	EBNS	Others	SPK	Total
EUR	-44,078	-17,519	-168	12,975	4,759	4,480	11,343	1,977	1,733	178,771	154,274
USD	-14,143	1,212	-2,908	-461	4,502	-1,049	231	-315	0	-269	-13,200
CZK	13,683	-2	165,470	147	0	0	0	0	0	305	179,603
HUF	1,953	-19	0	0	0	17,288	0	0	0	0	19,222
RON	-212	0	0	0	-4,179	0	0	0	0	0	-4,392
HRK	-404	0	0	0	0	0	4,539	0	0	13	4,148
RSD	-9	0	0	0	0	0	0	2,303	0	0	2,294
CHF	-1,480	1,952	0	0	0	144	613	-207	0	2,533	3,555
Others	1,295	253	0	0	0	0	0	0	0	0	1,549
<b>Total</b>	<b>-43,394</b>	<b>-14,123</b>	<b>162,393</b>	<b>12,661</b>	<b>5,082</b>	<b>20,863</b>	<b>16,725</b>	<b>3,759</b>	<b>1,733</b>	<b>181,354</b>	<b>347,054</b>

EGB: Erste Group Bank; EBOe: Erste Bank Österreich; CS: Česká spořitelna, Stavební spořitelna Ceske sporitelny, a.s. SLSP: Slovenská sporiteľňa; BCR: Banca Comercială Română; EBH: Erste Bank Hungary, Erste Lakas-Takarekpenztar Zrt, ERSTE Jelzálogbank Zrt; EBC: Erste Bank Croatia; EBNS: Erste Bank Serbia; SPK: Savings Banks, Bausparkasse der österreichischen Sparkassen, s Autoleasing, s Wohnbaubank

Table 75: Earnings at risk by interest rate risk shock (Art. 448 (b) CRR)

# Exposures in equities not included in the trading book

## Goals and principles of risk management

DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) CRR

Investment risk refers to the potential loss in value resulting from a lack of dividend payouts, the (partial) write-off of assets, losses from divestments and the reduction of hidden reserves from invested own funds, from profit transfer contracts (loss transfers) or from liability risks (e.g. letters of comfort). Investment risk covers both strategic investments as well as operating equity investments and includes all equity investments of the Group (irrespective of type of consolidation).

The continuing implementation of the concept of a comprehensive financial services provider is Erste Group's strategy for equity exposures aimed primarily at complementing and rounding out the bank's core business through investment companies that provide financial products and services (esp. Bausparkasse der österreichischen Sparkassen Aktiengesellschaft, Erste Group Immorent GmbH, Erste Asset Management GmbH, s Real Immobilienvermittlung GmbH). Investments outside the bank's core business (except for providers of support services for banking operations) are being reduced in the interest of the strategic focus. Within its international business activities in Europe, the USA and Asia, Erste Group places particular emphasis on Central and Eastern Europe ("CEE") as it views the region as its core market.

## ORGANISATION

The responsibility for equity investments lies with Participation Management, a staff unit of Erste Group that reports to the Head of Group Accounting and Group Controlling of Erste Group Bank AG. The Participation Management unit assists the management board and business units of Erste Group Bank AG by providing coordination and information processing services as well as support for decision-making. Inside the Group, it acts as contact, interface, service provider and coordinator for the various units and governing bodies of the subsidiaries. Outside the Group, it serves as contact and coordinator for auditors, notaries, lawyers, public authorities and other parties for business, legal, tax and equity investment related matters. In the case of sub-groups with equity investments of their own (currently CEE subsidiaries and Erste Group Immorent GmbH), Group Participation Management fulfils its Group responsibilities by ensuring that an equity investment management framework in line with the system of Erste Group is established at these sub-groups (policy-making powers rest with Erste Group Bank AG) and by assuming Group-wide responsibility for defined topics (e.g. offshore investments).

In detail, this results in the following responsibilities of the Participation Management unit:

- \_ equity investment related decision support (relating to any kind of equity measure) to the management board and other governing bodies of Erste Group Bank AG in line with applicable guidelines on decision-making powers;
- \_ preparation of reports on equity investments (quarterly reports as reporting instrument and as basis for budget approvals);
- \_ preparation of valuations of equity investments
- \_ implementation, management and ongoing administration of the equity investment database AMI and central information distributor of the banks' equity investment data (for internal and external purposes);
- \_ implementation of notifications and reports to the OeNB, the Ministry of Finance and foreign authorities and organisations; and
- \_ implementation and support for company setups, acquisition and selling processes.

## RISK MEASUREMENT AND CONTROL

At least once a year, all equity investments are subject to a standardised earning-capacity value calculation based on future budgets and multiple year projections, taking into account, among other things, the valid (local) capital adequacy regulations for each of the entities. These calculations are based on standards for the valuation of goodwill from the acquisition of investments pursuant to IFRS from which the required depreciations and write-ups, capital measures and hidden reserves are derived. Since 2012, a standardised valuation tool has been used for this purpose. The valuation model has been developed and upgraded jointly with leading audit firms. The result of these calculations is discussed in detail with other units in Group Accounting and Group Controlling, and the corresponding measures (accounting entries, reports) are initiated. Moreover, any capital measures required are accorded with the business area responsible for operations prior to execution.

## REPORTING ON EQUITY EXPOSURES

As part of the monitoring and control process, the economic development of all significant direct and indirect equity investments and any risk provisions or revaluations that may become necessary during the course of the year are evaluated regularly on the basis of standardised reports and internal procedures. Any adjustments to provisions or valuations that may become necessary during the year are done



based on the actual and projected figures presented for each individual equity investment. Any corrections required are forwarded to the banks' accounting and controlling units for further processing.

## Description of the investment objectives

### DISCLOSURE REQUIREMENTS Art. 447 (a) CRR

The objective of Erste Group is to achieve market leadership in financial services for retail customers and corporates in the region of CEE by establishing a supranational network of banks. According to the core strategy, the objective of Erste Group is to offer a wide range of financial services, and for this reason, investments in banking-related entities (fully consolidated banks and financial institutions, ancillary units, financial holding companies and other financial services providers) are regularly made for business policy or strategic reasons. This usually also applies to minority interests in equity investments in the area of universal banking. If such services cannot be provided directly by Erste Group, investments are made in new subsidiaries or by acquiring existing entities.

In connection with the realisation of collateral, decisions to acquire ownership are taken on a case-by-case basis in order to facilitate orderly realisation, which is done primarily in the area of real estate. To a limited extent, Erste Group enters positions with the basic intention of earning returns on capital through its private equity investments.

## Accounting policies and valuation methods

### DISCLOSURE REQUIREMENTS Art. 447 (a) CRR

Equity investments are either classified as "Financial assets at fair value through other comprehensive income" (FVOCI) or "Financial assets at fair value through profit or loss" (FVPL).

#### **Financial assets at fair value through other comprehensive income**

For certain investments in equity instruments that are not held for trading, Erste Group makes use of the option to measure them at FVOCI. This election is applied to strategic, significant banking business relationship investments (except for insurance business). The fair value gains or losses for the period are reported as OCI in the line 'Fair value reserve of equity instruments' of the statement of comprehensive income. The cumulative gains or losses are included under 'Fair value reserve' in the statement of changes in equity. The amount recognised in OCI is never reclassified to profit or loss. However, upon derecognition of the investments in equity instruments at FVOCI the amount accumulated in OCI is transferred to retained earnings. Dividends received on these investments are reported under the line 'Dividend income' of the statement of income. On the balance sheet, financial assets measured at fair value through OCI are included as 'Equity instruments' under the line 'Financial asset at fair value through other comprehensive income'.

#### **Financial assets at fair value through profit or loss**

Investments in equity instruments that are not held for trading are measured at FVPL (unless they are designated at FVOCI). They are presented in the balance sheet under 'Non-trading financial assets at fair value through profit or loss', sub-item 'Equity instruments', sub-category 'mandatorily at fair value through profit or loss'.

In the statement of income, the profit or loss effects of such equity instruments measured at FVPL are split into dividend income and fair value gains and losses. The dividend income is presented in the line 'Dividend income'. The fair value gains or losses are calculated net of the dividend income and are reported in the line 'Gains/losses from financial instruments measured at fair value through profit or loss'.

## Quantitative disclosure on exposures in equities not included in the trading book

### DISCLOSURE REQUIREMENTS Art. 447 (b) (c) (d) (e) CRR

The following table presents an overview of the different valuations in the individual exposures not included in the trading book.

### Type of equity exposures

in EUR million	Type of instrument	Book value	Fair value	Market value
<b>Credit institutions</b>				
	Exchange traded instruments	1	16	16
	Instruments not traded on an equity exchange	21	46	0
	Other equity instruments	0	0	0
<b>Financial institutions</b>				
	Exchange traded instruments	0	0	0
	Instruments not traded on an equity exchange	0	0	0
	Other equity instruments	0	0	0
<b>Others</b>				
	Exchange traded instruments	0	0	0
	Instruments not traded on an equity exchange	932	1,069	0
	Other equity instruments	0	0	0
<b>Total</b>		<b>955</b>	<b>1,131</b>	

Table 76: Exposures in equities not included in the trading book (Art. 447 (b) (c) CRR)

The category instruments not traded on an equity exchange in the section others includes private equity exposures at a book value of EUR 31.6 million and a fair value of EUR 44.6 million.

The following gains and losses from sales and liquidations of investees were achieved in the reporting period:

### Realised and unrealised gains or losses from exposures in equities

in EUR million	Dec 18
Realised gains or losses from sales and liquidations	87
Unrealized gains or losses	302
Deferred revaluation gains or losses	0
values in core capital	0
values in supplementary capital	0

Table 77: Realised and unrealised gains or losses from exposures in equities not included in the trading book (Art. 447 (d) (e) CRR)

# Operational Risk

## Goals and principles of risk management

DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) CRR

Pursuant to Article 4 (52) CRR, Erste Group defines operational risk as the risk of loss resulting from inadequacy or failure of internal processes, people or systems, or from external events, including legal risks. Both quantitative and qualitative methods are used to identify operational risks, and are refined further in order to capture all information relevant to risk management.

## ORGANISATION

While the business areas and infrastructure units are responsible for the daily management of operational risks, Group Operational & Non-Financial Risk is responsible for operational risk control across all business areas and countries as well as for the uniform application of the strategy and Group standards for operational risk management in all areas of the bank. In detail, this results in the following tasks:

- \_ identification of potential risks; including measures for early detection and risk avoidance
- \_ definition of ratios, risk indicators and guidelines
- \_ implementation, management and ongoing administration of the loss database
- \_ calculation of scenarios and assessment of specific risk situations
- \_ Group-wide calculation of the own funds requirement for all operational risks and execution of stress tests
- \_ analysis and periodic reporting
- \_ promoting “three lines of defence” governance model through operational risk methods
- \_ definition of the Group’s risk appetite and setting the limits of the residual operational risk tolerated by Erste Group
- \_ further development of methods

Operational risk management as of 1.1.2019 is part of the division Enterprise wide Risk Management (until 31.12.2018 was part of Group Non Financial Risk division). The structure of operational risk management and control at Erste Group is also defined in the Group Risk Policy Framework in order to safeguard the complete identification of all risk components and consistent treatment of all operational risks.

## RISK MEASUREMENT AND CONTROL

The quantitative measurement methods are based on internal loss data, which is collected throughout the Group using a standard methodology and entered in a central data pool. In order to model losses that have not yet occurred but are nonetheless possible, scenarios and external data are used. In this context it is worth noting that Erste Group has been a member of the Operational Riskdata eXchange Association, an international risk loss data consortium, since 2006, and participates in the consortium on a Group-wide basis.

Apart from quantitative approaches, qualitative approaches are used to determine operational risk, primarily by performing risk analysis surveys (Risk Control Self Assessments). In order to also ensure early detection of potential risks, a series of risk indicators were developed and implemented at the Group level.

The results and proposals for risk control derived from the quantitative and qualitative processes are reported to line management and form the basis for measures to reduce operational risk. Furthermore, Erste Group defined its risk appetite for operational risk and all operational risk decisions are to be taken bearing in mind adequately balanced costs and benefits commensurate with the RAS.

## RISK HEDGING

Since the beginning of 2004, the insurance contracts for operational risks of Erste Group’s core institutions have been combined in a Group-wide insurance programme. This reduced the cost of meeting the Group’s traditional property insurance needs and thus made it possible to buy additional insurance for previously uninsured banking-specific risks. The savings potential and the additional cover are achieved – while keeping expenses unchanged as far as possible – by having a certain share of the loss or damage assumed by the Group’s own insurance company, Erste Reinsurance S.A. This makes it possible to diversify operational risk within Erste Group.

## OPERATIONAL RISK REPORTING

Information on operational risks is reported regularly to the management board. This is done within the scope of various reports, most importantly the quarterly Group Risk Report, which informs on recent losses, loss trends, qualitative information derived from Risk Control Self-Assessments, risk indicators, key ratios and the Erste Group VaR for operational risk.

## Approaches for the assessment of minimum capital requirements

### DISCLOSURE REQUIREMENTS Art. 446 CRR

In 2009, Erste Group was granted approval by the supervisory bodies to apply the AMA at the Group level for five entities:

- \_ Erste Group Bank AG
- \_ Erste Bank der Oesterreichischen Sparkassen AG
- \_ Česká spořitelna a.s.
- \_ Slovenská sporiteľňa a.s.
- \_ Erste Bank Hungary Zrt.

In 2010 the approval was extended to two further entities:

- \_ Banca Comercială Română
- \_ Erste & Steiermärkische Bank d.d.

The scope of application of the AMA was further enlarged in the second half of 2011 by two entities:

- \_ Bausparkasse der österreichischen Sparkassen AG
- \_ Stavební spořitelna České spořitelny, a.s.

In 2012, another five entities were approved:

- \_ Steiermärkische Sparkasse Bank AG
- \_ Kärntner Sparkasse AG
- \_ Salzburger Sparkasse AG
- \_ Tiroler Sparkasse Bank AG Innsbruck
- \_ Brokerjet Bank AG

In 2013 the following entity was approved:

- \_ ERSTE BANK AD NOVI SAD

In 2014 Brokerjet Bank AG was merged into EBOe.

The AMA is used in all entities listed above in all areas of application.

Risk mitigating effects within the Advanced Measurement Approach are applied to all entities as of Q4 2018. Steiermärkische Sparkasse Bank AG was added to the Insurance program on Group level (approved in Q4 2017);

Minimum capital requirements for those subsidiaries that do not yet apply the AMA are calculated using the BIA.

## Advanced Measurement Approach

### DISCLOSURE REQUIREMENTS Art. 454 CRR

The AMA is a complex approach used for the valuation of operational risk. The required capital is calculated using an internal VaR model taking into account the following factors:

- \_ internal loss data (historic gross loss)
- \_ external loss data (data from the external consortium Operational Riskdata eXchange Association)
- \_ scenario analysis (supplements the internal and external data by rare events that may lead to large loss or damage)
- \_ business environment and internal risk control factors (such as risk indicators and risk assessment)

The key ratio in this context for regulatory capital requirements is the VaR at a confidence level of 99.9% for one year, which is computed for all units using the AMA and is distributed across the respective subsidiaries based on a risk-sensitive allocation key.

Furthermore, apart from the regulatory capital requirement under the CRR, the economic risk capital is represented for the material part of the Group using the AMA. Here, all entities providing sufficient loss data information – irrespective of the AMA approval for regulatory capital requirement purposes - are covered within the AMA methodology calculating the VaR at a confidence level of 99.95% for one year. The remaining part is taken into account using the BIA method.

The quantitative methods outlined (based on the central data pool, scenarios and external data) and the qualitative methods (e.g. risk control self-assessments) including the insurance strategy and the modelling approaches, form the operational risk framework of Erste Group.

For the modelling of operational risk, Erste Group uses the Loss Distribution Approach. The modelling of the aggregate loss distribution is done in two steps. In a first step, the individual distributions of loss frequency and loss severity are calculated and then combined using a Monte Carlo simulation. The structure of the Loss Distribution Approach model complies with the CRR requirements.

Apart from internal and external loss data, scenario analyses, the business external and internal control factors (the outputs of risk and control self-assessments, key risk indicators, product approval process, outsourcing process, emerging risks analysis) and the resulting changes to the risk profile are all input factors for the Erste Group AMA model. Erste Group does not take any correlation effects into account in its model. The regulatory capital requirement is not reduced by the expected loss.

The AMA capital value of Erste Group takes into account both unexpected and expected losses of all banks using the AMA. Both the expected loss and the unexpected loss are reported to the management.

The model assumptions and input factors are validated annually by an independent validation function. Following the move of operational risk management to the division Enterprise wide Risk Management the results of the validation are reported to the Strategic Risk Management Committee (before it was reported to Regional Operational Conduct Committee). Furthermore, Erste Group conducts periodic stress tests and sensitivity analyses to assess risk potential.

#### **Differentiation of operational risk from credit and market risk**

A loss event relating to credit risk is reported as an operational risk event in the loss database when the operational risk was the actual cause of the loss. In line with regulatory requirements, these losses are not considered in the AMA model for the purposes of calculating operational risk capital requirements. Whenever an event occurs that may be attributed to operational risk or that triggers a loss or gain on the market side, then this is deemed an operational risk, reported as such and included in the AMA capital calculation.

The different types of event categories are defined as follows:

**Internal fraud.** Losses due to acts intended to defraud, misappropriate property or circumvent regulations, the law or company policy, excluding diversity/discrimination loss events, which involve at least one internal party.

**External fraud.** Losses due to acts of a type intended to defraud, misappropriate property or circumvent the law by a third party.

**Employment practices and workplace safety.** Losses arising from acts in breach of employment, health or safety laws and agreements; losses from payment of personal injury claims; from diversity/discrimination events.

**Clients, products and business practices.** Losses arising from an unintentional or negligent failure to meet a professional obligation to specific clients (including fiduciary and suitability requirements); losses due to the nature or design of a product

**Damage to physical assets.** Losses arising from loss or damage to physical assets caused by natural disasters or other events.

Business disruption and system failures. Losses arising from disruption of business or system failures.

**Execution, delivery and process management.** Losses from failed transaction processing or process management; from relations with trade counterparties and suppliers/vendors.

## **Use of insurance for risk mitigation in AMA**

#### **DISCLOSURE REQUIREMENTS Art. 454 CRR**

Risk mitigating insurance effects under existing insurance contracts, taking into account all applicable legal provisions, are included in the models developed for the insurance-related reduction of capital requirements for operational risk only when the risk is reinsured on the external insurance market. The risk mitigating insurance effects are calculated using a Monte Carlo simulation for all eligible losses. In selecting insurance partners, Erste Reinsurance S.A. strictly observes supervisory requirements. The insurance portfolio and the captive reinsurance activities are periodically audited by Group Audit.

# Other risks

## Liquidity risk

### GOALS AND PRINCIPLES OF RISK MANAGEMENT

DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) CRR

#### Liquidity risk management framework

Liquidity risk is defined in Erste Group in line with the principles set out by the Basel Committee on Banking Supervision, European and the Austrian regulations (Capital Regulations Requirement (CRR) – Regulation (EU) No 575/2013, Delegated Regulation (EU) 2015/61, ‘Kreditinstitute-Risikomanagement-Verordnung – KI-RMV’) as well as the Guidelines on ICAAP and ILAAP EBA/GL/2016/10. Accordingly, a distinction is made between market liquidity risk, which is the risk that the group entities cannot easily offset or close a position at the market price because of inadequate market depth or market disruption, and funding liquidity risk, which is the risk that the banks in the group will not be able to meet efficiently both expected and unexpected current and future cash flow and collateral needs without affecting either daily operations or the financial condition of the group members.

Funding liquidity risk is further divided into insolvency risk and structural liquidity risk. The former is the short-term risk that current or future payment obligations cannot be met in full and on time in an economically justified manner, while structural liquidity risk is the long-term risk of losses due to a change in the Group’s own refinancing cost or spread.

Erste Group has defined and implemented a Group Risk Strategy, which is approved by the Holding Board and the Supervisory Board on an annual basis. The Group Risk Strategy defines, inter alia, the Risk Appetite for liquidity risk as a part of the Group Risk Appetite Statement. In line with the Group Risk Appetite Statement, key liquidity principles are defined to ensure that processes are in place to manage the liquidity risk profile and the strategic limits are set in the Group Risk Strategy. These are further translated into operating limits and liquidity risk management policies. In addition to that, governance arrangements are in place to address any adverse developments of the Erste Group’s liquidity profile.

#### Structure and organization of the liquidity risk management function

Erste Group Bank AG has the central liquidity risk management function for Erste Group in addition to the responsibility for its solo level functions, i.e. it defines the principles and methodology for liquidity risk management for the other entities and ensures their proper implementation at local level. The legal entity structure of Erste Group consists of 3 levels, with Erste Group Bank AG as the top institute for the Group. Level 2 includes the core subsidiaries of Erste Group Bank AG and the Austrian savings banks, while Level 3 includes the other subsidiaries of Erste Group Bank AG and the subsidiaries of the entities at Level 2. They are also responsible for the accurate and timely delivery of the data relevant for liquidity risk measurement to the Erste Group Bank AG.

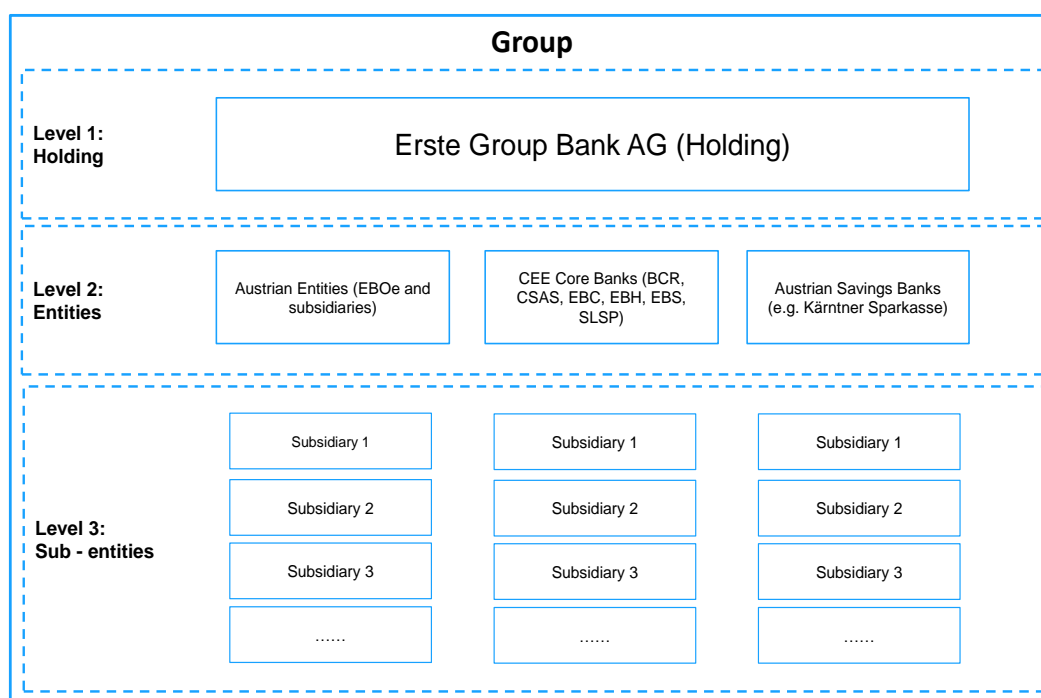


Figure 6: Levels of Erste Group’s legal entity structure

The organizational structure of Erste Group ensures the Liquidity Risk Management at both decision-making and operational level. The figure below provides an overview of the governance structure for liquidity risk management at Group level:

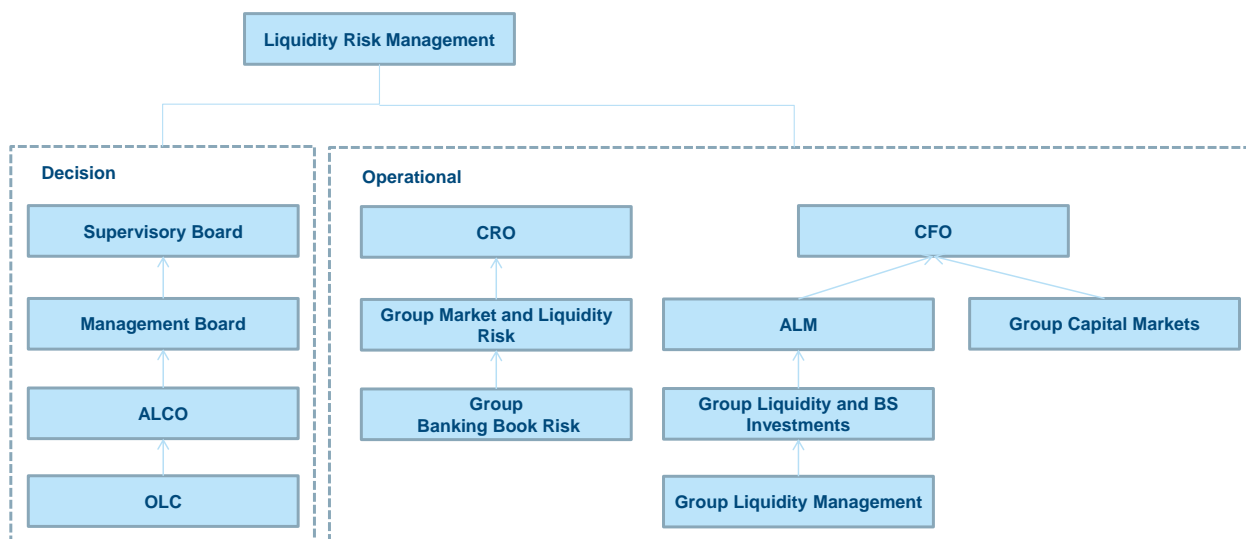


Figure 7: Governance structure for liquidity risk management

A detailed overview of the various bodies and organizational units involved in the liquidity risk governance process at both the group and local entity level is described in the Group Liquidity Risk Management Policy.

## RISK MEASUREMENT AND CONTROL

Erste Group produces a number of regular reports for both internal and external (predominantly supervisory authorities) stakeholders. These reports are covering both, structural liquidity risk as well as insolvency risk and are used to monitor and steer the liquidity position in Erste Group.

### Survival period analysis

The short-term insolvency risk is monitored and limited by calculating the survival period for each material currency on both entity and group levels. This analysis determines the maximum period during which the entity can survive a set of defined scenarios, including a severe combined market and idiosyncratic crisis while relying on its pool of liquid assets. The monitored worst-case scenario simulates very limited money market and capital market access and at the same time significant client deposit outflows. Furthermore, the simulation assumes increased drawdown on guarantees and loan commitments dependent on the type of customer, as well as the potential outflows from collateralized derivative transactions estimating the effect of collateral outflows in the case of adverse market movements.

### Structural Liquidity Ratio (STRL)

The structural liquidity metric is measuring the structural funding gap ensuring an appropriate balance between assets and liabilities in the medium and long term time horizons avoiding excessive maturities transformation and consequently avoiding increased pressure on the short term liquidity position.

### Liquidity coverage ratio (LCR)

Erste Group is reporting the Liquidity Coverage ratio according to the delegated regulation (EU) 2015/61 to the authorities on solo and group level. The LCR has been part of the Group RAS since 2014 targeting to be well above the regulatory requirement

### Net Stable Funding Ratio (NSFR)

Erste Group is calculating the Net Stable Funding Ratio (NSFR) according to the CRR based on the weights of the Basel Committee on Banking Supervision (BCBS) and is constantly participating and reporting the QIS monitoring according to the BCBS guidelines. Internally, these ratios are monitored on entity level as well as on group level. Erste Group is reporting the NSFR according to the CRR in the quarterly Short Term Exercise to the regulator.

### **Concentration analysis**

Concentration risks in terms of funding providers, products and assets in the counterbalancing capacity (CBC) are regularly monitored and reported to the regulator. Additionally, the diversification of the High Quality Liquid Assets is monitored internally on solo and Group level.

### **Comprehensive stress testing and recovery and resolution planning**

Additional scenarios are analysed to further elaborate on the main vulnerabilities of Erste Group's liquidity position. These scenarios are elaborated based on specific storylines. The scenarios and the relevant stress parameters are taken from historical evidence where available. When historical evidence is not available, expert opinions and assumptions are used.

### **Funds transfer pricing (FTP)**

The Funds Transfer Pricing (FTP) of Erste Group has proven to be an efficient control instrument for the management of structural liquidity risk.

## **METHODS AND INSTRUMENTS OF RISK MITIGATION**

Erste Group uses a number of measurement tools and metrics to quantify liquidity risk. In addition to regulatory measures (e.g. LCR, NSFR and LLSFR), Erste Group defines its own internal metrics. The key internal metric is the Survival Period Analysis, which serves as the key tool to measure insolvency risk in Erste Group. It focuses on a one-year horizon and uses a dynamic stress testing methodology. The FTP system is yet another important instrument for managing and steering the liquidity risk within Erste Group Bank AG in relation to its subsidiaries. Early warning indicators also form an integral part of the liquidity risk management framework, in particular with respect to detecting the type and severity of liquidity stress events.

Limits are defined centrally and locally in the Risk Appetite Statement and the Risk Strategies. Limit breaches are reported to the Operational Liquidity Committee (OLC) and the Group Asset Liability Committee (ALCO).

Additional important information for liquidity management can be obtained via the process of planning funding needs. Therefore, a detailed overview of funding needs is prepared over the whole planning horizon. It covers all major entities in the Group and is prepared at least annually as part of the Group ALM Strategy.

The Contingency Funding Plans (CFPs) of Erste Group's entities ensure an adequate set of liquidity enhancing actions in times of stress as well as the necessary coordination of all parties involved in the liquidity management process. The CFPs are reviewed at least annually and are checked for compliance with minimum standards set within the Group Liquidity Management Policy.

## **ADEQUACY OF LIQUIDITY RISK MANAGEMENT**

The concise statement on liquidity risk or more exact the Comprehensive Statement on Liquidity Adequacy provides an overview of major principles for managing the liquidity adequacy of Erste Group. It is following the bank's business strategy and operational environments in order to keep the current amount of liquid resources on an adequate level and to ensure a prudent funding profile. In addition major liquidity risk measures and limits for external and internal reporting and for internal steering of liquidity risk are included. The statement is updated on a yearly basis in course of ILAAP.



## Quantitative information on LCR

in EUR million	Total unweighted value				Total weighted value			
	Mar 18	Jun 18	Sep 18	Dec 18	Mar 18	Jun 18	Sep 18	Dec 18
Number of data points used in the calculation of averages	7	10	12	12	7	10	12	12
<b>High-quality liquid assets</b>								
1 Total high-quality liquid assets (HQLA)					44,134	45,611	47,697	49,562
<b>Cash-outflows</b>								
2 Retail deposits and deposits from small business customers, of which:	91,869	93,612	95,613	97,357	6,998	7,114	7,279	7,453
3 Stable deposits	52,292	53,642	54,972	55,645	2,615	2,682	2,749	2,782
4 Less stable deposits	39,439	39,837	40,493	41,543	4,246	4,299	4,382	4,502
5 Unsecured wholesale funding	44,690	46,991	49,945	51,474	23,568	24,929	26,826	27,692
6 Operational deposits (all counterparties) and deposits in networks of cooperative banks	5,343	5,687	6,037	6,216	1,200	1,272	1,348	1,387
7 Non-operational deposits (all counterparties)	39,092	41,074	43,652	45,002	22,113	23,427	25,222	26,049
8 Unsecured debt	256	230	256	256	256	230	256	256
9 Secured wholesale funding					169	204	194	288
10 Additional requirements	27,655	27,799	28,544	28,049	14,637	14,056	14,455	14,251
11 Outflows related to derivative exposures and other collateral requirements	13,273	12,686	13,031	12,878	13,273	12,686	13,031	12,878
12 Outflows related to loss of funding on debt products	77	53	115	95	77	53	115	95
13 Credit and liquidity facilities	14,305	15,060	15,398	15,077	1,288	1,317	1,309	1,278
14 Other contractual funding obligations	883	951	1,124	1,256	615	684	870	1,000
15 Other contingent funding obligations	29,904	29,246	28,727	28,779	1,790	1,719	1,609	1,447
16 Total cash outflows					47,778	48,706	51,233	52,130
<b>Cash-inflows</b>								
17 Secured lending (eg reverse repos)	10,134	13,034	14,854	16,074	572	649	674	687
18 Inflows from fully performing exposures	4,466	4,540	4,628	4,344	3,230	3,290	3,352	3,134
19 Other cash inflows	14,458	13,665	13,951	14,177	13,312	12,658	12,984	12,883
EU-19a (Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)					0	0	0	0
EU-19b (Excess inflows from a related specialised credit institution)					0	0	0	0
20 Total cash inflows	29,058	31,239	33,433	34,595	17,114	16,597	17,010	16,704
EU-20a Fully exempt inflows	-	-	-	-	-	-	-	-
EU-20b Inflows Subject to 90% Cap	-	-	-	-	-	-	-	-
EU-20c Inflows Subject to 75% Cap	28,993	31,154	33,412	34,575	17,114	16,597	17,010	16,704
21 Liquidity buffer					44,134	45,611	47,697	49,562
22 Total net cash outflows					30,664	32,109	34,223	35,426
23 Liquidity coverage ratio (%)					144%	142%	140%	140%

Table 77: Quantitative information on LCR (values are calculated as averages of month-end observations over the number of data points as outlined in the table)

## Further details on the items included in the quantitative information of LCR

Diversification of the liquidity buffer and funding sources in Erste Group is ensured by the relevant policies and the implementation of regular monitoring of the HQLA and funding concentration in diverse categories. Derivative exposures and all potential collateral calls are considered in Erste Group's LCR calculation and reported accordingly in the appropriate categories. The LCR is calculated and monitored for all significant currencies of Erste Group. The review of significant currencies is done either in case of significant business strategy changes or at least on an annual basis.

## LIQUIDITY MANAGEMENT IN ERSTE GROUP

Liquidity management is a joint effort of ALM units and Group Markets units within Erste Group. Generally ALM units are responsible for structural liquidity management while Group Markets units are responsible for day-to-day liquidity management and execution of liquidity relevant transactions.

Structural Liquidity Management is performed by local ALM units for the entities falling under their local scope of consolidation, thereby following the principles and guidelines outlined in the Group Liquidity Management Policy, whose owner is Group ALM. Hence, local ALM units are responsible to create a local Liquidity Strategy for their partial subgroup, which is approved by the local Board of Directors after alignment with Group ALM.

Furthermore, Group ALM sets requirements on the set-up and statutes of the local Operative Liquidity Committees. In addition, Group ALM performs an analysis of whether each local entity's liquidity strategy meets the requirements set out in the Group Liquidity Management Policy. Based on all local entities' liquidity strategies, Group ALM creates the Group's (and Holding's) Liquidity Strategy which is approved by Group ALCO in the beginning of each year.

Throughout the year Group ALM oversees liquidity management across the Group by monitoring liquidity indicators and balance sheet developments of all entities on individual and on Group level. In addition, Group ALM manages the liquidity flows within the Group in its role as a central liquidity hub for all entities of the Group in major currencies and as the owner of the intra-group funding pricing policy. Furthermore, guidance is provided to local ALM units regarding principles and minimum standards for the management of local liquidity buffers. Group ALM is also responsible to reflect the costs and benefits of compliance with different liquidity-related limits and regulations in the internal Funds Transfer Price system, whose design and methodology are defined in the Group FTP policy. In terms of crisis management, Group ALM sets minimum standards for local entities' Contingency Funding Plans and performs a check of whether each entity's CFP is compliant with those requirements.

## Encumbered and unencumbered assets

### DISCLOSURE REQUIREMENTS Art. 443 CRR AND EBA GUIDELINES ON DISCLOSURE OF ENCUMBERED AND UNENCUMBERED ASSETS

Erste Group is obliged to report encumbered and unencumbered assets at Group level based on the CRR scope of consolidation in the manner set out in the EBA guidelines on disclosure of encumbered and unencumbered assets: The median value of the fair value of encumbered assets that are notionally eligible to the qualification of Extremely High Quality Liquid Assets (EHQLA) and of High Quality Liquid Assets (HQLA) are presented.

#### Template A – Assets

median in EUR million	Carrying amount of encumbered assets		Fair value of encumbered assets		Fair value of non-encumbered assets		Fair value of non-encumbered assets	
	of which notionally eligible EHQLA and HQLA		of which notionally eligible EHQLA and HQLA		of which EHQLA and HQLA		of which EHQLA and HQLA	
Assets of the reporting institution	32,777	4,661			198,091	26,600		
Loans on demand	2,115	0			9,800	0		
Equity instruments	13	0	11	0	614	1	592	1
Debt securities	5,775	4,661	5,731	4,675	33,592	24,257	34,338	24,840
Covered bonds	102	45	109	49	1,354	653	1,368	671
Asset-backed securities	0	0	0	0	4	2	4	2
Issued by general governments	4,577	4,374	4,691	4,265	26,626	22,641	27,062	23,212
Issued by financial corporations	809	500	893	502	5,273	1,512	5,452	1,528
Issued by non-financial corporations	283	169	280	170	1,762	632	1,818	644
Loans and advances other than loans on demand	23,134	0			141,156	0		
of which: mortgage loans	15,682	0			68,633	0		
Other assets	2,037	0			12,522	2,343		
IC & at equity valuation					407			

Table 78: Encumbered and unencumbered assets – assets

#### Template B – Collateral received

in EUR million	Fair value of encumbered collateral received or own debt securities issued		Non-encumbered fair value of collateral received or own debt securities issued available for encumbrance	
	of which notionally eligible EHQLA and HQLA		of which EHQLA and HQLA	
Collateral received by the reporting institution	1,859	1,566	18,125	17,368
Loans on demand	0	0	0	0
Equity instruments	31	0	230	1
Debt securities	1,828	1,566	17,352	16,887
Covered bonds	145	118	946	680
Asset-backed securities	0	0	0	0
Issued by general governments	265	228	2,536	4,773
Issued by financial corporations	178	9	1,951	672
Issued by non-financial corporations	6	0	384	236
Loans and advances other than loans on demand	0	0	-0	0
Other collateral received	0	0	543	480

Table 79: Encumbered and unencumbered assets – collateral received

#### Template C – Encumbered assets/collateral received and associated liabilities

in EUR million	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered	
Carrying amount of selected financial liabilities		24,480	34,646
Derivatives		2,597	2,540
Deposits		9,619	12,869
Debt securities issued		11,109	14,279
Covered bonds issued		10,820	14,464
Other sources of encumbrance		694	5,301

Table 80: Encumbered and unencumbered assets – encumbered assets/collateral received and associated liabilities

Any difference between the regulatory consolidation scope used for the purpose of the disclosures on asset encumbrance and the scope retained for the application of the liquidity requirements on a consolidated basis as defined in Part II, Chapter 2 of Regulation (EU) No 575/2013 are evaluated on Erste Group Bank AG level and considered negligible (Average 2017 >EUR 25mn).

In 2018 EUR 34.63 bn (2017 EUR 34.65 bn of the Group's own and received assets were identified as being encumbered based on the EBA definition. Main sources of encumbrance in Erste Group are:

- \_ issuance of covered bonds,
- \_ collateralised trading activities as well as
- \_ collateralised open market transactions with the ECB.

Asset classes used for the above mentioned purposes are loans and advances to customers (mortgage and public cover pool collateral assets) and debt securities predominately made up of assets both being central bank eligible collateral as well as qualifying as HQLA under the LCR Delegated Act. As a result of the total unsecured funding position, predominantly made up of customer savings and current accounts, the median amount of encumbered assets stemming from secured funding is relatively low in proportion to the total balance sheet of Erste Group Bank AG at around 14% over 2018.

There is material intragroup encumbrance in Erste Group which does not affect the external encumbrance whereby it should be distinguished between long term and short term intragroup encumbrance. The long term portion is almost exclusively driven by intragroup encumbrance due to the Austrian covered bond issuance platform involving Erste Group Bank AG (Holding) and the Austrian entities (Erste Bank der Oesterreichischen Sparkassen AG and Savings Banks belonging to the IPS. The subsidiaries contribute mortgage and public loan assets to the cover pool in Erste Group Bank AG (Holding) which in turn issues covered bonds on said pool of assets. The Austrian cover pool model and central bank eligible non-marketable assets pooling platform constitute approximately half of the total intragroup encumbrance within the banking group. The short term portion making up the remaining third of intra-group encumbrance is driven by collateralized transactions for the purpose of liquidity optimization and market making across the Group.

Unchanged to previous year the main drivers of asset encumbrance in Erste Group are the 4 rated covered bond programs with relevant over collateralization levels required for external ratings. The programs are situated in countries with different risk profiles regarding the issuance of covered bonds. The issuance models differ significantly between certain jurisdictions (e.g. Austria: Off balance asset pooling on Holding level and on balance issuance of covered bonds; Hungary: Issuance from specialised mortgage bank institution) and therefore have varying effects on the level of encumbrance of the relevant issuing entity. With EUR 8.8 bn (carrying amount as of Q4 2018) out of the total consolidated Group covered bond issuance of EUR 10.6 bn, Erste Group Bank AG (Holding) is the main driver of encumbrance stemming from covered bond issuance. The over collateralization requirement for Erste Group Bank AG's current covered bond ratings as of Q2 2018 is 8.0% (NPV for the mortgage program currently rated Aaa by Moody's down from 12.5% in 2017) and 10.0% (NPV for the public program currently rated Aaa by Moody's down from 14% in 2017) both of which are used to determine assets encumbered resulting from the issuance of covered bonds. The other programs' over collateralization requirements currently range from 5% (in voluntary form for Erste Bank Hungary Mortgage Bank) to 7.5% (SLSP in committed form).

Erste Group Bank AG currently holds retained own covered bonds in the amount of EUR 4.4 bn (nominal). The assets backing the mentioned covered bonds are considered unencumbered unless the covered bonds are used to collateralize any transactions pursuant the EBA ITS on asset encumbrance reporting under Article 100 of the Capital Requirements Regulations (EUR 1.8 bn nominal used).

The actual Group level of asset encumbrance is reviewed quarterly by the Asset Liability Committee (Group ALCO) of Erste Group Bank AG, where material changes are discussed and potential steering measures approved. It is worth mentioning that the levels of individual asset encumbrance vary on single entity level mainly due to heterogeneous business models within the Group and secured intragroup transactions not affecting external business. Any risk arising from such discrepancies is sufficiently monitored and managed at both Group and individual entity level (local ALCO equivalent). To further ensure proper management of asset encumbrance throughout the group, an internal governance framework is in place, which includes a Group-wide policy on reporting, steering and limiting the level of asset encumbrance on Group and individual entity level. Furthermore, asset encumbrance is an integral part of the Group's ALM and Risk Strategies. Local levels are monitored and managed by the relevant local committees (ALCO equivalent). The prevailing as well as projected encumbrance levels (Group and local) are taken into consideration when setting up the Group's and individual entities funding plans and the respective liquidity risk profiles during the yearly budgeting process.

## Macroeconomic risk

DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) CRR

Macroeconomic risk is the risk that the bank incurs losses due to adverse changes in the overall economic environment, i.e. business cycle risk.

### METHODS AND INSTRUMENTS APPLIED

In the course of stress testing, scenarios are developed based on the assumption of deteriorating economic conditions. These macroeconomic scenarios apply not only to the entire portfolio of the Group, but also to earnings and capital adequacy. This method reveals how the changed economic conditions affect the risk and earnings situation as well as own funds.

Risk modelling and stress testing are vital forward-looking elements of the ICAAP. Sensitivities and macroeconomic stress scenarios are considered within the Group's planning and budgeting process.

## Credit risk concentration

DISCLOSURE REQUIREMENTS 435 (1) (a) (b) (c) (d) CRR

Credit risk concentration refers to the potential adverse consequences, which may arise from concentrations, such as exposures to same counterparties, groups of connected counterparties, and counterparties in the same economic sector, geographic region or from the same activity or commodity, the application of credit risk mitigation techniques, and including in particular risks associated with large indirect credit exposures (e.g. to a single collateral issuer).

### METHODS AND INSTRUMENTS APPLIED

Erste Group has implemented a comprehensive system for the identification, measurement, control, reporting and management of credit risk concentration. This is of key importance for securing the long-term viability of credit institution especially in phases with an adverse macroeconomic environment.

Credit risk concentration management at Erste Group is based upon a framework of processes, methods and reports covering both single name and industry concentrations. Diverse analyses are conducted on a regular basis, reviewed and reported. Credit risk concentration is also taken into account systematically in the stress factors of stress tests.

The output of the risk concentration analysis additionally contributes to the identification of material risks within the risk materiality assessment as well as to the Risk Appetite Statement and to the setting/calibration of Erste Group's limit system.

## Strategic risk

DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) CRR

Strategic risk is the current or prospective risk to earnings and capital arising from the changes in the business environment and from adverse business decisions, improper implementation of decisions or lack of responsiveness to changes in the business environment. Within the strategic risk, four components are differentiated:

- Business risk is the risk of suffering unexpected operating losses due to decreases in operating revenues or increases in costs, which cannot be compensated by cost reduction or revenue increases, respectively. All revenue or cost fluctuations which are attributable to position taking, credit losses or operational events are excluded
- Capital risk is the risk of losses due to the possible erosion of capital as a result of dividend policy, ownership structure, remuneration policy and lack of access to supplementary capital sources.
- Profitability risk means the risk which arises due to inadequate composition and distribution of earnings or inability of the credit institution to ensure adequate and constant level of profitability.
- Management risk means the risk of loss caused by the fact that credit institutions, due to its size, have a limited capacity to put in place sophisticated operational mechanisms, systems and controls.

## METHODS AND INSTRUMENTS APPLIED

Erste Group has implemented a comprehensive framework for the identification, measurement, control, reporting and management of strategic risk. As part of its overall risk management framework, Erste Group is regularly reviewing strategic risk at both Group and local entity levels, reflecting current developments in different macroeconomic environments, legal jurisdictions as well as different business strategies and balance sheet structures.

For pillar 2 purposes, Erste Group quantifies business risk using a quantitative model, using the deviation of budgeted vs realised values. The results of the model are used in economic capital and risk bearing capacity computations.

## Reputational risk

### DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) CRR

Reputational risk is the current or prospective risk arising from negative perceptions on the part of customers, suppliers, stakeholders, the public or other relevant parties that can adversely affect the bank's earnings, funds and liquidity. Reputational risk issues usually arise from transactions with clients or through different business activities.

Reputational risk ('impact') can be considered as a secondary effect of other risk categories, such as credit, market, operational and liquidity risk ('source' risks).

## GOALS AND PRINCIPLES OF RISK MANAGEMENT

Erste Group does not quantify reputational risk explicitly in the economic capital calculation under pillar 2. The quantification of reputational risk distinguishes two types of losses:

- \_ losses the bank is willing to accept in order to avoid reputational damage, typically quantified in terms of market, credit and operational risk economic capital;
- \_ negative reputational damage on future earnings, e.g. reduced operating revenues due to the loss of customers covered by the business risk economic capital.

## METHODS AND INSTRUMENTS APPLIED

Reputational Risk Management is embedded in the "Group Operational & Non-Financial Risk management" Governance, where two committees with the following responsibilities are established:

- \_ The "Group Operational Conduct Committee" (GOCC) is responsible for enforcement of the Code of Conduct and management of non-financial risks (NFR). Furthermore this committee ensures the execution of NFR - it decides on critical non-financial risk decisions and serves as an escalation committee for the ROCC
- \_ The "Regional Operational Conduct Committee" (ROCC) is steering non-financial risks via the NFR Profile. Furthermore it is responsible for the Group-wide definition of standards for respective NFR topics, as well as significant decisions on business applications based on the risk-return evaluation

The primary responsibility for the identification, escalation and resolution of reputational risk issues resides with the business and the relevant risk type owner supports their resolution. As an example, reputational risk is mitigated by the following measures:

- \_ statement of purpose
- \_ code of conduct
- \_ new product approval process
- \_ credit policies
- \_ pro-active press and investor communication
- \_ outsourcing policy
- \_ conflicts of interest and anti-corruption policy
- \_ Responsible Finance Policy.

Identified risks are assessed and escalated in line with the risk appetite. The residual risk after mitigation is accepted using the unified method ("Risk Return Decision"). Reputational risk is also part of the annual risk materiality assessment and the RAS.

## Cross-guarantee risk

DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) CRR

Cross-guarantee risk is the risk arising from legal obligations due to Erste Group's membership in cross guarantee schemes (e.g. Sparkassen Haftungsverbund in Austria). The Haftungsverbund scheme in Austria supplements the statutory deposit guarantee and investor compensation schemes as an additional safety net. When a guaranteed event occurs (i.e., a member of the Haftungsverbund declares bankruptcy), the Haftungsverbund is a subsidiary tool that takes effect once the statutory deposit guarantee has been exhausted.

### METHODS AND INSTRUMENTS APPLIED

In order to guarantee adequate capitalisation, liquidity and a consistent understanding and treatment of the various risk types, standardised regulations were implemented at every Austrian savings bank that is member of Sparkassen Haftungsverbund. These regulations are regularly reviewed and further developed.

Furthermore, Haftungsverbund GmbH, the steering company of the Austrian Sparkassen Haftungsverbund scheme, has implemented an early warning system to identify potential liability events and to facilitate early counteraction.

## Compliance risk

DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) CRR

Compliance risk is the risk of legal or regulatory sanctions, material financial loss, or loss to reputation a bank may suffer as a result of its failure to comply with laws, regulations, rules, related self-regulatory organization standards, and codes of conduct applicable to its banking activities (together, "compliance laws, rules and standards").

### GOALS AND PRINCIPLES OF RISK MANAGEMENT

To appropriately address Compliance risk, Erste Group sets the "tone at the top" and oversees management's role in fostering and maintaining a sound corporate and risk culture. Erste Group establishes an appropriate framework for identifying, assessing, measuring and monitoring Compliance risk, in line with the institution's size and complexity. In accordance with the RAS non-compliance with regulatory or legal requirements is not eligible to any risk acceptance.

### METHODS AND INSTRUMENTS APPLIED

Compliance Risk Management is embedded in the "Group Operational & Non-Financial Risk management" Governance, where two committees with the following responsibilities are established:

- The "Group Operational Conduct Committee" (GOCC) is responsible for enforcement of the Code of Conduct and management of non-financial risks (NFR). Furthermore this committee ensures the execution of NFR - it decides on critical non-financial risk decisions and serves as an escalation committee for the ROCC
- The "Regional Operational Conduct Committee" (ROCC) is steering non-financial risks via the NFR Profile. Furthermore it is responsible for the Group-wide definition of standards for respective NFR topics, as well as significant decisions on business applications based on the risk-return evaluation

Compliance risk has to be mitigated or accepted by assessing the appropriate balance between risk and return.

## Model risk (credit risk, market risk and operational risk related)

DISCLOSURE REQUIREMENTS Art. 435 (1) (a) (b) (c) (d) CRR

Model risk is risk relating to the underestimation of own funds requirements by regulatory approved models (e.g. internal ratings-based (IRB) models for credit risk).

### Credit Risk

Erste Group has in place an operating model with a goal to reduce the risk of potential losses and underestimation of own funds requirements as a result of flaws in the development, implementation or use of the models. In order to mitigate such risks, EG has an operating

framework in place that allows to identify, understand and manage its models risk for internal models across its IRB Credit Risk model landscape.

To support execution of such operating model, EG has in place several policies such as:

- \_ Group IRB model governance policy
- \_ Credit Risk Model life-cycle policy
- \_ IRB Model Validation policy
- \_ Rating Model Development standards
- \_ Holding Model Committee (HMC) By-laws.

These policies, define operating model for IRB Credit Risk model development, monitoring and validation across the model life-cycle, namely, organizational set-up of the area incl. roles & responsibilities, description of three-line of defense principles, execution of the model life-cycle process steps, standards for development of rating models, validation tests and measurement as an evaluation of models fit-for-purpose, decision authorities of model related aspects.

Target Operating Model (TOM) was re-designed to ensure coverage of full model lifecycle, centred around the following principles:

- \_ a subsidiarity model for development to balance development effort and to foster local ownership
- \_ a hub-and-spoke model for validation to ensure independence and control of validation standards
- \_ a dual model for approval reflecting ownership requirements across Group entities
- \_ a subsidiary model for monitoring to synchronise with model development and ensuring close ongoing local coordination

Operationalization of the re-designed Target Operating Model considering the above mentioned principles started in October 2017 that lead to the strengthening of the steering functions of the Holding, enforcement of common standard across the whole Erste Group and accountability for local model development in larger subsidiaries.

## **Market Risk**

Erste Group has the GLMRM Model Risk Management Policy in place. It describes the framework for model risk management within the market risk area. Among others it provides a definition for models and model risk, describes the model governance, roles and responsibilities, model approval process and treatment of model deficiencies. Apart from group processes the policy also outlines the process for local model development and validation. Furthermore, model validation procedure exists providing additional guidance on minimum validation standards.

To have a comprehensive overview of the market risk models GLMRM has a register of market risk models. This register provides all model relevant information like model owner, validation status, quantitative and qualitative model assessment, and model risk classification. The internal approval body for model changes with respect to internal market risk model and respective validation findings is the Market Risk Committee.

All the applied models within the market risk area do follow the life cycle framework and are under continuous validation, particularly back-testing. The internal market risk model for calculating the capital requirements of market risk shows low model risk as the model performed well, which is reflected in a low number of overshootings (as defined in Article 366 of CRR).

## **Operational Risk**

The Advanced Measurement Approaches (AMA) model is developed, implemented and governed centrally by Holding and the economic capital are allocated to entities based on an allocation key on quarterly basis. The AMA model received ECB approval for a material model change in October 2018, the updated model is first used for the Q4 2018 capital calculation. The new model is developed in compliance with the new RTS on AMA for operational risk and is subject to an independent model validation on a regular basis.