# Disclosure Report 2016

pursuant to Part Eight
of the Capital Requirements Regulation (CRR)

ERSTE Group

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# Definitions

## 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).

## EAD (Exposure at Default)

The EAD is shown pursuant to Article 111 of the CRR in the Standardised Approach and pursuant to Articles 153 to 157 of the CRR in the IRB Approach. The exposure value of an asset item is shown gross, i.e. before credit risk adjustments.

## PD class (Probability of Default)

Erste Group has defined ten PD classes, of which class 01 is the best while 10 represents the default grade with a PD of 100%. Where exposures are guaranteed by eligible protection providers, amounts are shown under the PD class of the protection providers.

## Credit risk adjustments

Credit risk adjustments comprise both specific and general credit risk adjustments. “Credit risk adjustments as of 31 December” are shown as at the reporting date, whereas "Credit risk adjustments as of 1 January" show the relevant amount at the beginning of the year. The presented split between specific and general credit risk adjustments is based on a split between impaired and not impaired exposures.

## Emerging Markets – Other

This geographic designation covers 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.)

# Disclosures in other published reports

## Annual Report 2016

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 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 44. Risk management | Note 44.2 Risk management organisation | 180-187 |
| 435 (1) (c) | Risk management objectives and policies | Scope and nature of risk reporting and measurement systems | Note 44. Risk management | Note 44.3 - 44.7 | 187-223 |
| 435 (2) (a) | Governance arrangements | Number of directorships held by members of the management body | Corporate governance chapter | | 78-80 |
| 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 chapter | | 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 chapter | | 86 |
| 436 (b) | Scope of application | Differences in the basis of consolidation for accounting and prudential purposes | Note 52. Own funds and capital requirements | Comparison of consolidation for accounting purposes and regulatory purposes | 239-242 |
| 436 (c) | Scope of application | Material practical or legal impediment to the prompt transfer of own funds or repayment of liabilities | Note 52. Own funds and capital requirements | Impediments to the transfer of own funds | 242 |
| 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 52. Own funds and capital requirements | Total capital shortfall of all subsidiaries not included in the consolidation | 242 |
| 436 (e) | Scope of application | Circumstance of making use of the provisions | Note 52. Own funds and capital requirements | Total capital shortfall of all subsidiaries not included in the consolidation | 242 |
| 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 52. Own funds and capital requirements | Own funds reconciliation | 247-251 |
| 437 (1) (d) | Own funds | Separate disclosure of the nature and amounts of the following: each prudential filter…, each deduction made…, items not deducted | Note 52. Own funds and capital requirements | Own funds template during the transitional period | 251-263 |
| 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 52. Own funds and capital requirements | Own funds template during the transitional period | 251-263 |

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 represent audited data, while the remaining information in the Pillar 3 Disclosure Report is unaudited.

### Own Funds - Capital Instruments

DISCLOSURE REQUIREMENTS COVERED: Art. 437 (1) (b) AND (c) CRR

On the website of Erste Group https://www.erstegroup.com/en/investors/reports/regulatory-reports/basel3/capitalinstruments, 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 COVERED: 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/basel3

### Remuneration Policy

DISCLOSURE REQUIREMENTS COVERED: 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 http://www.erstegroup.com/en/investors/reports/regulatory-reports/basel3.

# 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 α if the institution has received the permission of the competent authorities to estimate α | 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 2016-1 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 (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 2016-1 securitization 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

| | |
|---|---|
| **ABA** | Austrian Banking Act |
| **ALCO** | Asset Liability Committee |
| **ALM** | Asset Liability Management |
| **AMA** | Advanced Measurement Approach |
| **BaSAG** | Bundesgesetz über die Sanierung und Abwicklung von Banken; Austrian Banking Recovery and Resolution Law |
| **BIA** | Basic Indicator Approach |
| **CCF** | Credit Conversion Factor |
| **CEE** | Central and Eastern Europe |
| **CET1** | Common Equity Tier 1 |
| **CFO** | Chief Financial Officer |
| **CLO** | Collateralised Loan Obligation |
| **COREP** | Common Reporting Framework |
| **CRD IV** | Capital Requirements Directive IV |
| **CRM** | Credit Risk Mitigation |
| **CRO** | Chief Risk Officer |
| **CRR** | Capital Requirements Regulation |
| **EAD** | Exposure at Default |
| **EBA** | European Banking Authority |
| **EBOe** | Erste Bank der oesterreichischen Sparkassen AG |
| **ECB** | European Central Bank |
| **ERM** | Enterprise-wide Risk Management |
| **EU** | European Union |
| **FMA** | Austrian Financial Market Authority |
| **FTP** | Funds Transfer Pricing |
| **FX** | Foreign exchange |
| **G-SII** | Global Systemically Important Institution |
| **HMC** | Holding Model Committee |
| **IAS** | International Accounting Standards |
| **ICAAP** | Internal Capital Adequacy Assessment Process |
| **IFRS** | International Financial Reporting Standards |
| **ILAAP** | Internal Liquidity Adequacy Assessment Process |
| **IRB** | Internal Ratings Based |
| **ISDA** | International Swaps and Derivatives Association |
| **LCR** | Liquidity Coverage Ratio |
| **LGD** | Loss Given Default |
| **MARA** | Market Risk Committee |
| **MRS** | Market Risk Solution |
| **NFR** | Non-Financial Risks |
| **NSFR** | Net Stable Funding Ratio |
| **NPV** | Net Present Value |
| **OeNB** | Oesterreichische Nationalbank; Austrian National Bank |
| **OLC** | Operational Liquidity Committee |
| **OTC** | Over-the-counter |
| **PD** | Probability of Default |
| **QIS** | Quantitative Impact Study |
| **RAS** | Risk Appetite Statement |
| **RCC** | Risk-bearing Capacity Calculation |
| **RW** | Risk Weight |
| **RWA** | Risk-Weighted Assets |
| **ROCC** | Regional Operational Conduct Committee |
| **SCIM** | Severe Combined Idiosyncratic & Market Crisis Scenario |
| **SL** | Specialised Lending |
| **S&P** | Standard & Poor's |
| **SME** | Small and Medium-sized Enterprises |
| **SPA** | Survival Period Analysis |
| **SRC** | Standard Risk Costs |
| **SRM** | Single Resolution Mechanism |
| **SSPE** | Securitisation Special Purpose Entity |
| **sVaR** | Stressed Value at Risk |
| **VaR** | Value at Risk |

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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. 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. 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.

Pursuant to Article 434 (1) CRR, Erste Group has opted for the Internet as the medium of publication of the Disclosure Report. Details are available on the website of Erste Group at www.erstegroup.com/ir. Relevant disclosures are included in the annual report in the section "Reports" or published as separate documents in the section "Regulatory disclosure".

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

It is a core function of every bank to take risks in a conscious and selective manner and to manage such risks professionally. Erste Group's proactive risk policy and strategy aims at achieving balanced risk and return in order to generate a sustainable and adequate return on equity. Erste Group uses a risk management and control system that is forward-looking and tailored to its business and risk profile. This system is based on a clear risk strategy that is consistent with the group's business strategy and focused on early identification and management of risks and trends. In addition to meeting the internal goal of effective and efficient risk management, Erste Group's risk management and control system has been developed to fulfil external and, in particular, regulatory requirements.

Based on Erste Group's business strategy, the key risks are credit risk, market risk, interest rate risk in the banking book, liquidity risk, and non-financial risk. In addition, a risk materiality assessment is undertaken on an annual basis. It is ensured that all relevant material risks are covered by Erste Group's control and risk management framework. This entails a set of different tools and governance to ensure adequate oversight of the overall risk profile and sound execution of the risk strategy, including appropriate monitoring and escalation of issues that could materially impact the risk profile of the group. The bank always seeks to enhance and complement existing methods and processes in all areas of risk management.

In 2016, the management continues to steer critical portfolios, including active management and sales of non-performing exposures, and further strengthening of the risk profile. This has been particularly demonstrated by the continuous improvement of the credit quality and the ongoing decrease of non-performing loans and risk costs. Management actions resulted in improved profitability, asset quality, lending and capital levels. In addition, like last year, emphasis was put on strengthening risk governance and ensuring compliance with regulatory requirements. A further main aspect was non-financial risk which was incorporated into the risk appetite and thus integrated into the risk strategy.

## 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 2016, Note 44.2 to the Group financial statements.

### GROUP GOVERNANCE FOR RISK MANAGEMENT ACTIVITIES

The management board (holding board) deals regularly with risk issues of all risk types in its 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:

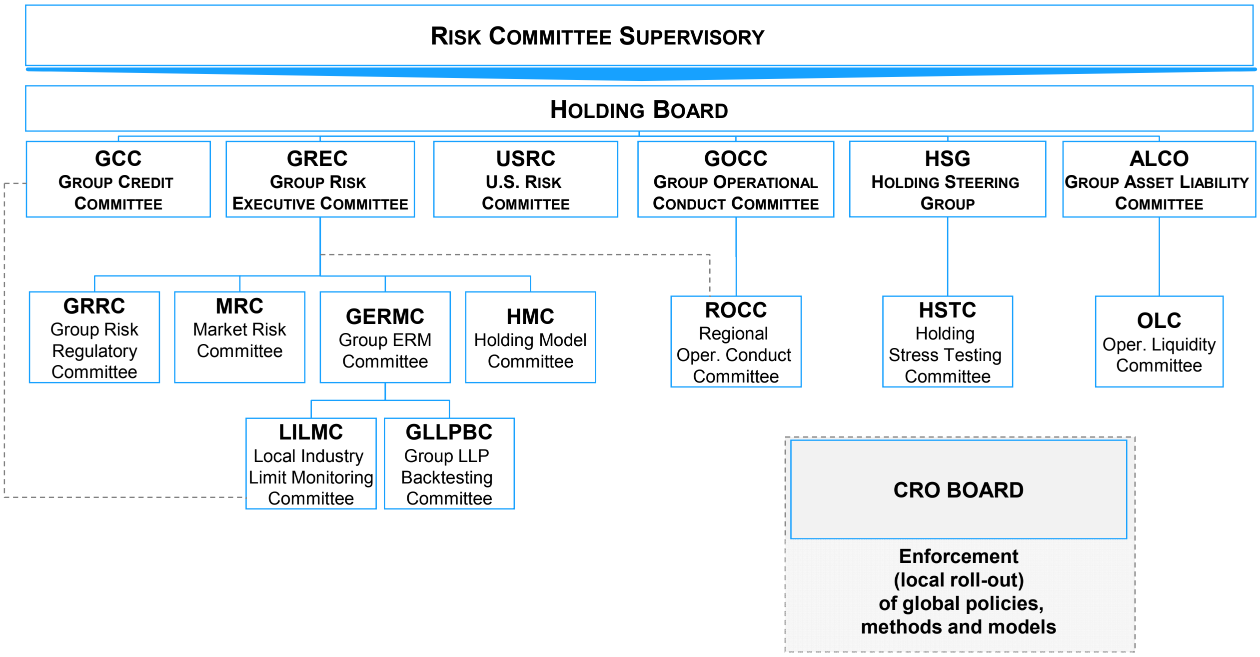


Figure 1: Risk Management Committees

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 the 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 Management Committee meets regularly. As the central risk control body, the Risk Management 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 including joint liabilities. The CRO Board consists of the Group CRO and the chief risk officers of the subsidiaries of Erste Group. Chaired by the Group CRO, the CRO Board has responsibility for Group-wide coordination of risk management and for ensuring uniformity of risk management standards across Erste Group.

The **Group Credit Committee** (GCC) is the supreme operative decision-making body for approvals of credit risks according to the existing regulations. Based on the advice of GCC, decisions of significant exposures and extended risks are decided by the risk management board of the supervisory committee. The GCC is headed by the Group CRO and comprises the chairman of Corporates & Markets, the head of Group Credit & Market Risk Management, the head of Group Workout, and the head of the requesting business line. Each subsidiary equips their own local credit committee established by the same principles.

The **Group Risk Executive Committee** (GREC) is the central forum for all joint resolutions and acknowledgements in the Erste Group Bank CRO division across all its departments and staff units. Its purpose is the division-wide coordination of all the risk management functions of Erste Group Bank AG. It discusses and decides on key risk management issues and topics; in particular it defines the division's strategy and ensures implementation of common risk management standards (e.g. pertaining to processes, systems, reporting and governance).

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 **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 01 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 **Holding Steering Group** (HSG) is responsible for the regular monitoring of 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 recommends the management board to 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 **Holding Stress Testing Committee** (HSTC) is the sole forum for all joint resolutions, decisions and acknowledgements in the stress testing area for Group-wide stress testing activities.

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 risks), and takes care of the setting of Group standards 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 the ALCO within the scope of the management policies and principles laid down in the Liquidity Risk Management Rule Book. Furthermore, members of the Group 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.

The **Market Risk Committee** (MARA) is the main steering body for market risk and trading book related issues of Erste Group. The Market Risk Committee approves group-wide market risk limits and elaborates on the current market situation.

The **Group ERM Committee** (GERMC) is the sole forum for all joint decisions and acknowledgements in the Enterprise-wide Risk Management (ERM) area across all Erste Group entities and Erste Group Bank AG. Its purpose is the group-wide coordination of the ERM functions, in particular on ICAAP and economic capital, stress testing, RWA, risk appetite and limit steering, risk strategies and alignment of risk input for capital planning, liquidity and market risk steering as well as pricing/provisioning. Furthermore, the GERMC ensures alignment on key ERM topics and the group-wide implementation of common ERM standards. Group Loan Loss Provisions Back testing Committee (GLLPBC), as a subcommittee of GERMC, agrees and approves back-testing results and remedial actions. In addition the Local Industry Limit Monitoring Committee (LILMC), as a subcommittee of the GERMC, is the steering and monitoring body to ensure comprehensive control of local industry limits and oversight of their breaches as well as any escalations to the Credit and/or Group ERM Committee.

The **Holding Model Committee** (HMC) is the steering and control body for the model development and validation process. All new models and changes of models and risk parameters in the Group as well as Group-wide methodology standards are reviewed by the Holding Model Committee and require its approval.

The **Group Risk Regulatory Committee** (GRRC) deals with all kinds of regulatory issues in the CRO area, i.e. implementation of new regulatory requirements, proper closure of regulatory findings, information about new regulatory initiatives, reports about regulatory communication and decisions on interpretative questions.

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.

In addition, committees are established at local level, such as the "Team Risikomanagement" in Austria. This implements a common risk approach within the Austrian savings banks.

## GROUP-WIDE RISK AND CAPITAL MANAGEMENT

As in prior years, Erste Group's risk management framework has been continuously strengthened. In particular, Enterprise-wide Risk Management (ERM) has continued to strengthen its comprehensive framework. This includes as its fundamental pillar the Internal Capital Adequacy Assessment Process (ICAAP), as 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 at all times adequate capital for the nature and magnitude of the bank's risk profile. ERM is tailored to Erste Group's business and risk profile, and it reflects the strategic goal of protecting shareholders and senior debt holders while ensuring the sustainability of the organisation.

ERM 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 internal added value, can be clustered as follows:
_ risk appetite statement;
_ Portfolio and risk analytics including risk materiality assessment, concentration risk management, and stress testing;
_ risk-bearing capacity calculation;
_ risk planning and forecasting including risk-weighted asset management and capital allocation;
_ 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 its risk strategy and Risk Appetite Statement (RAS) through the annual strategic planning process to ensure appropriate alignment of risk, capital and performance targets. The Group RAS represents a strategic statement expressing the maximum level of risk that Erste Group is willing to accept in order to deliver its business objectives. It consists of a set of core metrics providing quantitative direction for risk steering, from which top-down boundaries for limit and target setting are derived, creating a holistic perspective on optimizing capital, funding and risk-return trade-offs, and qualitative statements in the form of key risk principles that form part of the guidelines for managing risks. 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-return target setting;
- preserve and promote the market's perception of 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 sets its RAS on a forward-looking basis. External constraints such as regulatory requirements set 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 Red Amber Green 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.

- 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 triggers are defined for selected core metrics and integrated into the assessment of the stress testing results, which are reported to the management board to provide early warning signals and support proactive management of the risk and capital profile.

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

In 2016 the RAS horizon was extended to 5 years to ensure a stronger interplay between the RAS and other strategic processes such as long-term planning and, budgeting and stress testing. The remuneration program was also directly linked to the Group RAS to reinforce the risk culture and risk awareness within the Group. In that light, the determination of the annual bonus pool must consider if the relevant core metrics are within the Group RAS. The Group RAS 2016 was approved by both Management Board and the Risk Committee of the Supervisory Board as a part of increased role of the Supervisory Board in RAS setting and monitoring. The Group also developed an aggregated and consolidated risk appetite dashboard (RAS Monitor) illustrating the Group's and local entities' risk profile developments by comparing the risk exposure and risk limits. The RAS Monitor was regularly presented to the Risk Committee of the Supervisory Board to support its review, oversight and monitoring of the Group risk profile.

The table below provides an overview of the Group performance at year-end 2016 against the approved Group RAS:

| RAS core metrics | Category | Year-end 2016 | Status | Governance* |
|---|---|---|---|---|
| Solvency Ratio (fully loaded) | Capital | 18.2 % | ● | Holding Steering Group/ management board |
| Common Equity Tier 1 Ratio (fully loaded) | Capital | 12.8 % | ● | Holding Steering Group/ management board |
| Economic Capital Adequacy Ratio | Capital | 56.0 % | ● | Holding Steering Group/ management board |
| Leverage Ratio (fully loaded) | Capital | 6.2 % | ● | Holding Steering Group/ management board |
| Survival Period Analysis (SPA) | Liquidity | > 12 months; buffer kept | ● | Operational Liquidity Committee/ Group Asset Liability Committee |
| Liquidity Coverage Ratio (LCR) | Liquidity | 143.0% | ● | Operational Liquidity Committee/ Group Asset Liability Committee |
| Net Stable Funding Ratio (NSFR) | Liquidity | 123.0 % | ● | Operational Liquidity Committee/ Group Asset Liability Committee |
| Risk-Earnings Ratio | Earnings/Profitability | 4.9 % | ● | Holding Steering Group/ management board |

Table 3: Group Risk Appetite Assessment as of year-end 2016

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

The Group RAS is also broken down to local entities under consideration of the approved proportionality guidelines. The local RAS is approved by the management board to ensure alignment with the Group RAS. The Group may also decide to include further compulsory constraints and limits (top-down limits) in the local RAS to ensure alignment with the Group RAS and Group Risk Strategy.

As such, the Group RAS framework streamlines core capital, liquidity and risk/earnings metrics and reinforces key risk principles that form part of guidelines for managing risks. In addition, the Group RAS strengthens internal governance responsible for oversight of the 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. In 2016, core capital, liquidity and risk-earnings metrics developed within the tolerances defined in the Group RAS. Consistent follow-up on the Group RAS and limits with management actions implemented as part of the regular risk management and decision-making processes resulted in an improved group risk profile.

## Portfolio and risk analytics

Erste Group uses dedicated infrastructure, systems and processes to actively identify, control 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 is an annual process with the purpose of systematically identifying new and assessing existing material risks for Erste Group. The process uses a combination of quantitative and qualitative factors in the assessment of each risk type.

This assessment represents the starting point of the ICAAP process, as identified material risk types need to be considered either directly by dedicating economic capital or indirectly through adequate consideration within other ICAAP framework elements. Insights generated by the assessment are used to improve risk management practices and further mitigate risks within the group. The assessment also serves as an input for the design and definition of Erste Group's Risk Strategy and Risk Appetite Statement. Key outputs and recommendations of the risk materiality assessment are used 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 covers 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 risk materiality assessment as well as to the Risk Appetite Statement 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 and steering impulses and help in optimising Erste Group's risk-return profile. The additional dimension of stress tests helps to factor in severe but plausible scenarios and provide further robustness to the measuring, steering and management system. 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 and budgeting process as well as in the risk-bearing capacity calculation.

Erste Group's most complex stress test is a scenario stress test that takes comprehensive account of the impact of various economic scenarios, including second-round effects on all risk types (credit, market, liquidity and operational) and in addition impacts on the associated volumes of assets and liabilities as well as on profit and loss sensitivities. In addition to the standard stress testing exercises, reverse stress tests are used 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, unemployment rate development) into risk parameters in order to support the stress testing process, which combines bottom-up and top-down approaches. In addition, Erste Group leverages the specific knowledge of its professionals located in the different regions to further calibrate the model-based stress parameters. Special attention is given to taking into account adequate granularity and special characteristics when defining the stress parameters (e.g. the particular developments in the respective region, industry, product type or segment).

Results from all of Erste Group's stress tests are assessed with regard to their explanatory power in order to decide on appropriate measures. Internal Comprehensive Stress Test performed in 2016 indicated no breach of stressed RAS triggers.

Additionally, Erste Group participated in the stress test executed by the European Central Bank (ECB) in cooperation with the European Banking Authority (EBA). Phase-in CET 1 ratio decreased to 8.2% in the adverse scenario (8.0% fully loaded) and increased to 13.8% in the baseline scenario (13.5% fully loaded).

## Risk-bearing capacity calculation

The risk-bearing capacity calculation (RCC) defines the capital adequacy required by the ICAAP. Within the RCC, all material risks are quantified, aggregated and compared to the coverage potential of the bank. The integral forecast, risk appetite limit and a traffic light system support management in its discussions and decision processes.

The traffic light system embedded in Erste Group's RCC helps to alert the management in case there is a need to decide on, plan and execute actions either to replenish the capital base or to take measures for reducing risk.

The management board and risk management committees are briefed on a quarterly basis in relation to the results of the capital adequacy calculation. The report includes movements in risks and available capital and coverage potential after consideration of potential losses in stress situations, the degree of the risk limit utilisation and the overall status of capital adequacy according to the traffic light system. The Group Risk Report also includes a comprehensive forecast of risk-weighted assets and capital adequacy.

Besides the Pillar 1 risk types (credit, market and operational risks), in the context of Pillar 2, interest rate risks in the banking book, foreign exchange risks arising from equity investments, credit spread risks in the banking book, risks from foreign currency as well as business and strategic risks are explicitly considered within the economic capital requirement via internal models. During 2016 the utilisation of the economic capital was between 54.5% and 56.8%. The methodologies that are applied for the different risk types are diverse and range from historic simulations and other value at risk approaches to the regulatory approach for residual portfolios. Moreover, calculations for 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.

In addition to the risk-bearing capacity calculation, liquidity, concentration and macroeconomic risks in particular are managed by means of a proactive management framework that includes forward-looking scenarios, stress testing, trigger levels and traffic light systems. Credit risk accounts for approximately 68% of the total economic capital requirement. Reflecting Erste Group's conservative risk management policy and strategy, the group does not offset diversification effects between risk types. The economic capital requirement for unexpected losses is computed on a one-year time horizon with a 99.95% confidence level, which reflects Erste Group's targeted credit rating as well as Erste Group's conservative approach and high risk management standards.

The capital or coverage potential required to cover economic risks and unexpected losses is based on Basel 3 fully loaded regulatory own funds adjusted by held-to-maturity reserves and the year-to-date profit. The coverage potential must be sufficient to absorb unexpected losses resulting from the group's operations at any point in time.

## Risk planning and forecasting

The responsibility for risk management within the group and each subsidiary includes ensuring sound risk planning and forecasting processes. The forecasts determined by risk management are the result of close cooperation with all stakeholders in the group's overall planning process and in particular with Group Controlling, Asset Liability Management and the business lines. The risk planning and forecasting process includes both a forward- and backward-looking component, focusing on both portfolio and economic environment changes.

### Risk-weighted asset management

As risk-weighted assets (RWA) determine the actual regulatory capital requirement of a bank and influence the capital ratio as a key performance indicator, particular emphasis is devoted to meeting targets and to the planning and forecasting capacity for this parameter. Insights from monthly RWA analyses are used to improve the calculation infrastructure and the quality of input parameters and data as well as the most efficient application of the Basel framework. There is a process in place for tracking compliance with RWA targets, forecasting their future development and thereby defining further targets. The management board is also informed about the current status, and findings are taken into account in the context of Erste Group's regular steering process. Furthermore, RWA targets are included in the Risk Appetite Statement.

### 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. Insights from the ICAAP and controlling processes are used to allocate capital with a view to 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 annually submits an updated Group Recovery Plan to ECB. 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. Erste Group collaborates with the resolution authorities in the drawing up of resolution plans as required by BaSAG and EU Regulation No 806/2014 establishing the Single Resolution Mechanism (SRM Regulation).

## RISK MONITORING

All risks and exposures are monitored on a continuous basis and managed at the 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.

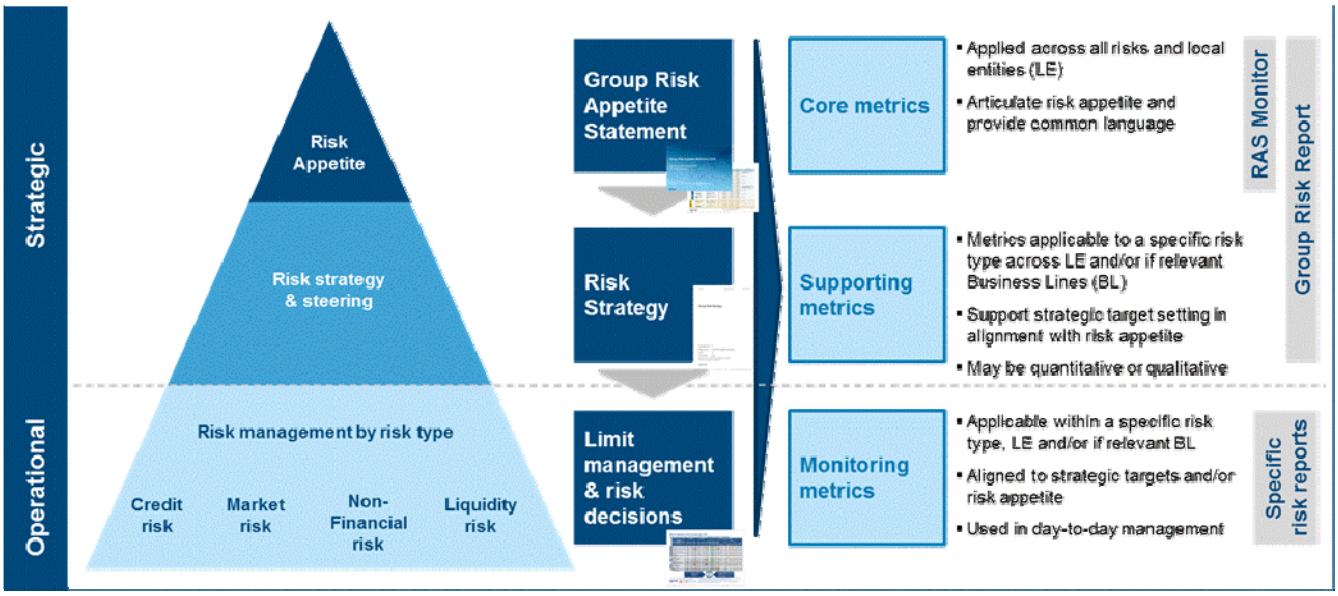

Figure 2: Strategic and operational risk oversight and management at Erste Group

### 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 RAS Monitor, including a traffic light overview together with respective measures to address deviations from strategic plans or objectives identified. The Group Risk Report and the RAS Monitor 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 stays in line with the risk strategy and operational limits and is supportive of the strategic targets. The development of the specific risk profile (i.e. retail credit, corporate credit, non-financial risk , etc.) is reported in dedicated risk reports at a more granular level (i.e. operational risk report, retail risk report, etc.) and supports risk decision making by the competent units to ensure that the risk profile remains within the defined risk strategy. These reports also include specific monitoring metrics that serve as an early warning signal of adverse developments regarding, for example, portfolio quality (client, segment, countries and industries) or risk drivers. In instances where certain risk portfolios or events are identified as potentially distressed, these are closely monitored by the competent risk units to manage the risk impact and to develop effective strategies to minimise potential losses. This process facilitates early risk detection and response.

# Management bodies

Erste Group has a two-tier governance structure with a management board and a supervisory board as management bodies. Details on the mandates of supervisory boards 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/management.

## 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 28a of the Austrian Banking Act if the carrying value of such an investment exceeds 10% of the company's eligible own funds or of the banking Group's eligible consolidated own funds (large exposure). 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. A report providing key information about the organisation, structure and operation of the risk management system in place for the company and major subsidiaries has to be submitted to the committee at least once a year. The supervisory board has delegated to the risk committee the right to approve the establishment and closure of branches, 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 and on the risk impact and costs of major IT projects as well as of reports on important audits of subsidiaries conducted by regulatory authorities.

The risk committee held seventeen meetings in 2016 at which it regularly took decisions and received reports that are within its duties and powers as outlined above.

# Material risks at Erste Group

At Erste Group, the risk materiality assessment is performed for risk types to which a credit institution may be 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 risks
- Concentration risk
- Business risk
- Reputational risk
- Cross-guarantee risk

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.

# 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 risks arising from equity investments, credit spread risk in the banking book, risks from foreign currency loans as well as business and strategic risks 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.

## 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".

Erste Group has the indication that the supervisor will require from the bank to reflect a future RWA increase on consolidated level in the context of the planned roll-out of IRB in Banca Comerciala Romana SA, whereas this increase will become effective already in the first half of 2017, this is before the rollout will take place (presumably in the second half of 2018). This RWA increase front-loads the expected difference in RWA between the treatments of exposure in Standardised Approach compared to the treatments in IRB. The impact on the CET1 ratio will be less than 30bps.

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

## Capital requirements by exposure class

| in EUR million | Capital requirements | Capital requirements (% of total) |
|---|---|---|
| **IRB Approach** | | |
| Central Governments and Central Banks | 32.9 | 0.5% |
| Institutions | 276.0 | 4.2% |
| Corporates | 3,347.4 | 51.1% |
| Specialised Lending | 898.1 | 13.7% |
| Retail | 1,287.0 | 19.6% |
| SME | 274.6 | 4.2% |
| Secured by immovable property collateral | 561.4 | 8.6% |
| Qualifying revolving | 11.0 | 0.2% |
| Other retail | 440.0 | 6.7% |
| Equity | 137.9 | 2.1% |
| Simple Risk Weight Approach (ER) | 40.6 | 0.6% |
| Private equity exposures in sufficiently diversified portfolios | 2.9 | 0.0% |
| Exchange traded equity exposures | 13.1 | 0.2% |
| Other equity exposures | 23.8 | 0.4% |
| PD/LGD Approach (PD) | 54.8 | 0.8% |
| Significant Investments with RW of 250% (FR) | 42.5 | 0.6% |
| Securitisation Positions | 10.8 | 0.2% |
| Other non-credit obligation assets | 261.5 | 4.0% |
| **IRB Approach Total** | **5,353.5** | **81.7%** |
| **Standardised Approach** | | |
| Central Governments and Central Banks | 81.2 | 1.2% |
| Regional Governments and Local Authorities | 33.9 | 0.5% |
| Public Sector Entities | 24.3 | 0.4% |
| Multilateral Development Banks | 0.0 | 0.0% |
| International Organisations | 0.0 | 0.0% |
| Institutions | 12.3 | 0.2% |
| Corporates | 470.0 | 7.2% |
| Retail | 217.6 | 3.3% |
| Exposures secured by mortgages on immovable property | 87.1 | 1.3% |
| Exposures in default | 40.8 | 0.6% |
| Exposures associated with particular high risk | 13.8 | 0.2% |
| Covered Bonds | 1.3 | 0.0% |
| Securitisation Positions | 0.0 | 0.0% |
| Exposures to institutions and corporates with a short-term credit assessment | 0.0 | 0.0% |
| Collective Investment Undertakings | 3.9 | 0.1% |
| Equity | 54.3 | 0.8% |
| Institutions in Standardised Approach | 15.3 | 0.2% |
| Permanent Partial Use | 3.2 | 0.0% |
| Grandfathering Provisions | 35.9 | 0.5% |
| Other items | 159.3 | 2.4% |
| **Standardised Approach Total** | **1,199.9** | **18.3%** |
| **Total** | **6,553.3** | **100.0%** |

Table 4: Art. 438 (c) (d) CRR: Capital requirements for credit risk by exposure class under the Standardised and IRB Approaches

# MARKET RISK

The table below gives an overview of the capital requirements to cover position risk, foreign-exchange risk and commodity risk and settlement risk.

| in EUR million | Capital requirements | Capital requirements (% of total) |
|---|---|---|
| Standardised Approach | 92.5 | 32.0% |
| position risk with interest rate instruments | 74.6 | 25.8% |
| position risk in equity instruments | 4.4 | 1.5% |
| commodities risk | 0.0 | 0.0% |
| foreign-exchange risk (incl. gold) | 13.5 | 4.7% |
| Internal Model | 196.5 | 68.0% |
| Settlement Risk | 0.0 | 0.0% |
| **Total** | **289.0** | **100.0%** |

Table 5: Art. 438 (e) CRR: Capital requirements for position risk, foreign-exchange risk, commodity risk and settlement risk

## 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 | 958.8 | 79.2% |
| Basic Indicator Approach | 252.4 | 20.8% |
| **Total** | **1,211.2** | **100.0%** |

Table 6: Art. 438 (f) CRR: Capital requirements for operational risk

## 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 an 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 risk 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 include the risk from foreign currency and repayment vehicle loans as well as business and strategic risks.

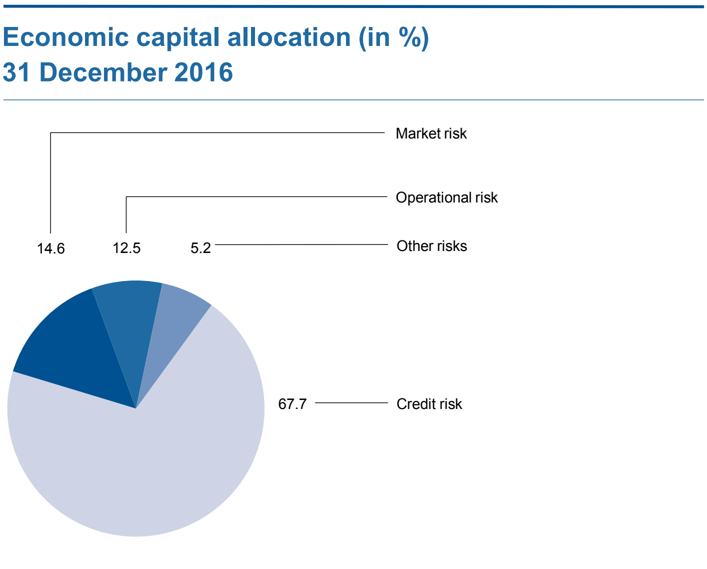


Figure 3: Economic capital composition

The results of the RCC are presented in the table below:

**Risk bearing capacity calculation**

| in EUR million | |
|---|---|
| Economic capital requirement | 11,804.9 |
| Coverage potential | 21,077.6 |
| **Excess** | **9,272.7** |

Table 7: Art. 438 (a) CRR: Risk-bearing capacity calculation as of 31 December 2016

# 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). As of 31 December 2016, only a very small number of jurisdictions (Hong Kong, Norway and Sweden) applied countercyclical buffer rates of more than 0%, resulting in an overall countercyclical buffer rate for the group of 0.0029%.

The 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 as of 31 December 2016. The disclosure follows the 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 geographic segmentation used in other tables in this report.

| | General credit exposures | | Trading book exposures | | Securitisations exposures | | Own funds requirements | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| in EUR million | SA | IRB | Sum of long and short positions of trading book exposure for SA | Value of trading book exposure for internal models | SA | IRB | General credit exposure | Trading book exposure | Securitisation exposure | Total | Own funds requirements weight | Countercyclical capital buffer rate | Institution specific countercyclical capital buffer rate |
| Hong Kong | 0.0 | 54.6 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 | 2.5 | 0.0% | 0.625% | 0.0003% |
| Norway | 1.1 | 23.4 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 | 1.2 | 0.0% | 1.500% | 0.0003% |
| Sweden | 2.3 | 147.3 | 4.0 | 4.0 | 0.0 | 0.0 | 8.7 | 0.3 | 0.0 | 9.0 | 0.2% | 1.500% | 0.0023% |
| Core Market - Austria | 4,260.1 | 77,489.9 | 139.2 | 139.2 | 0.0 | 1,440.2 | 2,425.6 | 7.3 | 10.8 | 2,443.7 | 42.4% | 0.000% | 0.0000% |
| Core Market - Croatia | 1,034.0 | 5,205.9 | 1.2 | 1.2 | 0.0 | 0.0 | 301.8 | 0.1 | 0.0 | 301.9 | 5.2% | 0.000% | 0.0000% |
| Core Market - Czech Republic | 1,327.7 | 25,411.9 | 101.3 | 101.3 | 0.0 | 0.0 | 1,146.5 | 8.1 | 0.0 | 1,154.6 | 20.0% | 0.000% | 0.0000% |
| Core Market - Hungary | 163.0 | 4,371.5 | 8.2 | 8.2 | 0.0 | 0.0 | 282.2 | 0.7 | 0.0 | 282.9 | 4.9% | 0.000% | 0.0000% |
| Core Market - Romania | 7,172.3 | 691.7 | 0.0 | 0.0 | 0.0 | 0.0 | 383.6 | 0.0 | 0.0 | 383.6 | 6.7% | 0.000% | 0.0000% |
| Core Market - Serbia | 879.6 | 167.8 | 104.4 | 0.0 | 0.0 | 0.0 | 53.7 | 8.4 | 0.0 | 62.0 | 1.1% | 0.000% | 0.0000% |
| Core Market - Slovakia | 298.7 | 11,816.7 | 0.1 | 0.1 | 0.0 | 0.0 | 380.8 | 0.0 | 0.0 | 380.8 | 6.6% | 0.000% | 0.0000% |
| Other EU Countries | 1,540.8 | 7,441.2 | 66.4 | 118.4 | 0.0 | 0.0 | 441.3 | 4.3 | 0.0 | 445.6 | 7.7% | 0.000% | 0.0000% |
| Emerging Markets - Asia | 0.1 | 521.9 | 7.6 | 7.6 | 0.0 | 0.0 | 31.9 | 0.9 | 0.0 | 32.8 | 0.6% | 0.000% | 0.0000% |
| Emerging Markets - Latin America | 1.0 | 22.1 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.1% | 0.000% | 0.0000% |
| Emerging Markets - Middle East/ Africa | 123.6 | 914.5 | 0.0 | 0.0 | 0.0 | 0.0 | 57.4 | 0.0 | 0.0 | 57.4 | 1.0% | 0.000% | 0.0000% |
| Emerging Markets - Other | 1,154.7 | 160.2 | 2.2 | 0.0 | 0.0 | 0.0 | 75.5 | 0.2 | 0.0 | 75.7 | 1.3% | 0.000% | 0.0000% |
| Other Industrialized Countries | 134.1 | 2,041.7 | 24.9 | 24.9 | 0.0 | 0.0 | 126.4 | 1.8 | 0.0 | 128.2 | 2.2% | 0.000% | 0.0000% |
| **Total** | **18,093.1** | **136,482.5** | **459.4** | **404.8** | **0.0** | **1,440.2** | **5,722.2** | **32.1** | **10.8** | **5,765.0** | **100.0%** | | |

Table 8: Art. 440 (1) (a) CRR: Geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer as of 31 December 2016

| in EUR million | |
|---|---|
| Total Risk Exposure amount | 101,808.5 |
| Institution specific countercyclical capital buffer rate | 0.0029% |
| **Institution specific countercyclical buffer requirement** | **3.0** |

Table 9: Art. 440 (1) (b) CRR: Amount of institution-specific countercyclical capital buffer

# 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 investment 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 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 Group and at 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 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 business and risk strategy is defined jointly by account managers 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. The corporate risk strategy defines the maximum level of risk Erste Group is willing to accept in the corporate credit portfolio in order to deliver its business objectives in accordance with the Group RAS. Quantitative portfolio limits and qualitative risk principles are defined to ensure that the risk profile remains in line with the risk strategy. To manage industry concentrations and align the portfolio composition to the business strategy, an industry limit framework is applied. Single name concentrations are managed through maximum lending limits defined at the single name level.

No transaction can be executed without prior approval by 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 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. An early warning framework is implemented to proactively identify negative developments. When early warning signals are identified, adequate risk mitigating actions are taken.

## ORGANISATION

Group Retail and SME Risk Management is responsible for steering the Group's retail lending portfolios. It defines the group-wide retail lending and analytical framework that serves as a basis for monitoring local banks' retail lending practices and for identifying potential adverse portfolio developments early on. This department comprises three sub-units:
- Group Retail Risk Policy and Collections,
- Group Retail Risk Analytics ,
- Retail and SME Risk Control

Group Retail Risk Policy and Collections defines the policy rules for the entire retail lending cycle including underwriting, portfolio management, early and late collection. This unit ensures implementation of and compliance with these policies, whereby countries' local lending practices are reviewed against the group-wide policy rules and the differences – if justified –are individually approved by the Head of Group Retail and SME Risk Management and/or the Group CRO.

The unit also reviews and assesses local entities' new lending products and lending criteria changes in order to ensure that these are prudent and are in line with the group-wide retail lending policies. In addition, this unit ensures retail lending specific knowledge transfer across Erste Group entities offering a tailor-made retail lending curriculum.

Group Retail Risk Analytics ensures oversight and independent management control through providing regular, operative retail risk management information. This unit defines the operative reporting requirements across the Group and ensures regular monitoring of underlying retail lending portfolio dynamics and identifying risk mitigation if required. This unit also provides topical, proactive analyses to support decision-making and background information related to key retail risk management developments in Erste Group.

Retail and SME Risk Control is a unit to ensure further strengthening of the existing group-wide operative steering and oversight of the SME loan portfolio. This unit defines, implements and operates a reporting and portfolio quality review mechanism to provide actionable management information of underlying SME loan portfolio dynamics for both business and risk management.

Group Corporate Risk Management is the operational credit risk management function for Erste Group's corporate business. It is responsible for the formal and material verification, recommendation and approval of all credit risks of Erste Group Bank AG as a holding company. Group Corporate Risk Management is also responsible for credit risk management for the Group Corporate segment as well as all credit applications where the amount involved exceeds the approval limits granted to the respective subsidiary. This unit covers country risk, sovereigns, credit institutions, securitisations and large corporate risk. Group Corporate Risk Management provides specific credit risk reports on the aforementioned portfolios managed centrally by Erste Group. It is in charge of process development for credit risk management and implementation of Group standards for these portfolios, and it monitors compliance with relevant credit risk limits. This unit is also responsible for establishing and monitoring appropriate credit analysis processes and systems for corporate business at the subsidiary level and co-ordinating and reviewing corporate credit and project analysis adopted across the business.

## RISK MEASUREMENT AND CONTROL

Prior to granting a loan, the creditworthiness of a retail client is determined and verified in view of the risk/reward trade-off. 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.

The regular credit risk reports contain information for the management board and the Risk Management Committee related to the development of loan exposures in each key segment, the quality of the portfolio by rating category and detailed risk-relevant information on customers at risk of default or already defaulted. These reports serve as the basis for audits of the credit policy of the business areas and their business and risk strategy.

Complementing the group-wide credit risk report, Group Retail and SME 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, 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.

A management summary of the key developments is distributed at least quarterly to senior management and key decision makers.

Credit decisions and credit processing for the non-retail business must be conducted in accordance with the currently valid authorisation matrix and the corresponding work instructions. Defined standards apply when granting loans. Among other things, credit analyses must be prepared using current business data and financial projections. This information serves to prepare an indicative analysis for the rating and credit decision.

It is the interest of the lender 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. 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. Transactions with holding companies and purely financing companies are entered into only in exceptional cases, and, if so, only by taking the assets and cash flows of the operating companies into account. 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 as part of the Group Risk Strategy to manage and ensure proper oversight of the 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

Apart from economic creditworthiness, the provision of collateral is a central element of risk limiting 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.

Retail risk mitigation is based, above all, on prudent lending criteria. 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.
In retail lending, 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

Customers experiencing financial difficulties are managed by Retail Collection. This unit proactively supports customers with payment difficulties as appropriate by offering them forbearance.

Subsidiaries or sub-groups of a customer group are financed only if all material documents are available. All customers of a group of connected clients or within a corporate group are subjected to a rating process. In such cases, the group rating and the "corporate ceiling" are taken into account. Beyond a predefined total debt level, companies or groups that have credit relations with more than one fully consolidated company of Erste Group are classified as limit 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.

## 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
The financial asset is classified as impaired as a result of one or more events that occurred after the initial recognition of the asset and which has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated, such as:
- significant financial difficulty of the issuer or obligor;
- a breach of contract, such as default or delinquency in interest or principal payments;
- the lender, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider;
- it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation;
- observable data indicating that there is a measurable decrease in the estimated future cash flows from a group of financial assets since their initial recognition, although the decrease cannot yet be identified in the individual financial assets.

If a customer is in default, an impairment process is triggered. Depending on the outcome of the discounted cash flow analysis, the financial asset of the defaulted customer is regarded as impaired or not.

# 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
- for financial assets carried at amortised cost (loans and advances, financial assets held to maturity) in accordance with IAS 39 and
- for contingent liabilities (financial guarantees, loan commitments) in accordance with IAS 37.

Credit risk adjustments are created in a process performed at customer level. The process includes the identification of default and impairment and the type of assessment (individual or collective) to be applied. 'At customer level' means in this context that if one of the customer's exposures is classified as defaulted then typically all of this customer's exposures are classified as defaulted. Depending on the characteristics of the exposure and the respective expected cash flows (e.g. considering collateral), some exposures may not be impaired.

The bank distinguishes between

- specific credit risk adjustments calculated for exposures to defaulted customers that are deemed to be impaired and
- general credit risk adjustments (credit risk adjustments for incurred but not reported losses) calculated for exposures to non-defaulted customers or defaulted customers that are not deemed to be impaired.

For the purposes of prudential reporting, no distinction is made between specific and general credit risk adjustments. Pursuant to Commission Delegated Regulation (EU) No 183/2014 in connection with EBA/RTS/2013/04[1], all credit risk adjustments are treated as specific credit risk adjustments in COREP.

Erste Group regularly reviews its specific and general 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 (in view of specific 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).

## CALCULATION OF SPECIFIC CREDIT RISK ADJUSTMENTS AND IMPAIRMENT

Objective evidence of impairment is given as a result of one or more events ("trigger event" or "loss event") that occurred after the initial recognition of the asset which has an impact on the estimated future cash flows of the financial asset or group of financial assets and that can be reliably estimated. This includes, for example, the observation of significant financial difficulty of an issuer or obligor, or a high likelihood of entering bankruptcy or other financial reorganisation.

Upon observation of such loss events, an impairment process is being triggered. Depending on the outcome of the discounted cash flow analysis, the financial asset of the defaulted customer is regarded as impaired or not.

For the calculation of specific credit risk adjustments, the discounted cash flow model is applied. This means that a difference between gross carrying amount and net present value (NPV) of the expected cash flows leads to an impairment and defines the amount of any adjustment requirement. All estimated interest and redemption payments as well as estimated collateral recoveries and costs for selling and obtaining collateral are considered as expected cash flows. The effective interest rate is used as the discount rate for the calculation of the NPV of the expected cash flows.
The calculation of specific credit risk adjustments is performed either on an individual basis or as a collective assessment (rule-based approach). In case of significant customers, expected cash flows are estimated individually by workout or risk managers. A customer is considered as significant if the total exposure defined as the sum of all on and off-balance sheet exposures exceeds a defined materiality limit. Otherwise, the customer is considered as insignificant and a rule-based approach is used for the calculation of the specific credit risk adjustment. Under this approach, specific credit risk adjustments are calculated as the product of the carrying amount and the loss given default (LGD), where LGD depends on relevant characteristics such as time in default or the stage of the workout process.

## CALCULATION OF GENERAL CREDIT RISK ADJUSTMENTS

Collective allowances/provisions are calculated for on-balance and off-balance sheet exposures to non-defaulted customers for which a default has not been detected or reported. The level of collective allowances depends on the carrying amount, the PD, the LGD, the credit conversion factor (CCF) in case of off-balance-sheet exposures, and the loss identification period. The loss identification period corresponds to the average period between the occurrence and the detection of the loss and ranges from four months to one year. The result of discounting future cash flows to their NPVs is taken into consideration in the LGD calculation.

Generally, risk parameters used in the calculation of collective allowances 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.

Collective allowances are also calculated in case of exposures to defaulted customers which are not identified as impaired. For these customers, no specific credit risk adjustments are allocated. Collective allowances are calculated based on the historical loss experience for the relevant customer segment.

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[1] [1] 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".[1] 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.

# Quantitative disclosure on credit risk

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

The total amount of exposures, represented by the EAD, is the basis for the calculation of credit risk weighted assets. The EAD is broken down by exposure class, group of countries (by country of risk), industry and maturity band. In addition, the exposure to SMEs and the average EAD over the reporting period are presented. Moreover, exposures classified as past due and as impaired are presented below in detail by main exposure classes and by group of countries. The breakdown of credit risk adjustments is shown by industries and by group of countries.

### Main exposure classes

| in EUR million | EAD | thereof SME | Average EAD in the reporting period |
|---|---|---|---|
| Sovereigns | 56,698.9 | 0.0 | 56,475.7 |
| Institutions | 15,481.7 | 0.0 | 18,014.1 |
| Corporates | 83,099.6 | 28,109.2 | 81,611.7 |
| Retail | 74,277.6 | 13,086.5 | 73,020.7 |
| **Total** | **229,557.8** | **41,195.7** | **229,122.2** |

Table 10: Art. 442 (c) (e) CRR: Credit Risk – EAD, exposure to SMEs and average EAD by exposure classes

### Group of countries

| in EUR million | EAD | EAD (% of total) |
|---|---|---|
| Core Market - Austria | 102,770.0 | 44.8% |
| Core Market - Croatia | 9,412.9 | 4.1% |
| Core Market - Czech Republic | 41,775.0 | 18.2% |
| Core Market - Hungary | 7,171.3 | 3.1% |
| Core Market - Romania | 16,717.8 | 7.3% |
| Core Market - Serbia | 1,424.1 | 0.6% |
| Core Market - Slovakia | 18,588.7 | 8.1% |
| Other EU countries | 23,631.5 | 10.3% |
| Emerging Markets - Asia | 925.8 | 0.4% |
| Emerging Markets - Latin America | 96.8 | 0.0% |
| Emerging Markets - Middle East/Africa | 512.1 | 0.2% |
| Emerging Markets - Other | 1,952.6 | 0.9% |
| Other industrialised countries | 4,579.3 | 2.0% |
| **Total** | **229,557.8** | **100.0%** |

Table 11: Art. 442 (d) CRR (1/2): Credit Risk – EAD by country group (based on country of risk)

## Group of countries

| in EUR million | Main asset classes | EAD |
|---|---|---|
| Core Market - Austria | Sovereigns | 17,925.0 |
| | Institutions | 2,029.3 |
| | Corporates | 43,675.5 |
| | Retail | 39,140.2 |
| Core Market - Croatia | Sovereigns | 2,800.0 |
| | Institutions | 225.2 |
| | Corporates | 3,545.0 |
| | Retail | 2,842.7 |
| Core Market - Czech Republic | Sovereigns | 14,668.2 |
| | Institutions | 390.7 |
| | Corporates | 11,918.4 |
| | Retail | 14,797.7 |
| Core Market - Hungary | Sovereigns | 2,147.3 |
| | Institutions | 338.3 |
| | Corporates | 2,365.2 |
| | Retail | 2,320.4 |
| Core Market - Romania | Sovereigns | 7,787.6 |
| | Institutions | 148.1 |
| | Corporates | 4,997.0 |
| | Retail | 3,785.1 |
| Core Market - Slovakia | Sovereigns | 5,381.2 |
| | Institutions | 363.5 |
| | Corporates | 4,231.9 |
| | Retail | 8,612.1 |
| Other EU countries | Sovereigns | 3,985.6 |
| | Institutions | 10,598.1 |
| | Corporates | 7,467.6 |
| | Retail | 1,580.1 |

Table 12: Art. 442 (d) CRR (2/2): Credit Risk – EAD by important country group (based on country of risk) and main exposure class

## Industry

| | | EAD | EAD by main exposure classes | | | | | |
|---|---|---|---|---|---|---|---|---|
| in EUR million | EAD | (% of total) | Sovereigns | Institutions | Corporate | there of SME | Retail | there of SME |
| Agriculture and forestry | 2,544.1 | 1.1% | 1.0 | 3.8 | 1,450.1 | 864.7 | 1,089.3 | 927.1 |
| Mining | 642.2 | 0.3% | 0.0 | 0.0 | 625.9 | 118.2 | 16.3 | 15.3 |
| Manufacturing | 13,174.0 | 5.7% | 0.0 | 0.0 | 12,074.7 | 3,737.8 | 1,099.3 | 984.3 |
| Energy and water supply | 3,522.2 | 1.5% | 0.0 | 44.8 | 3,333.0 | 1,701.8 | 144.4 | 126.9 |
| Construction | 7,234.6 | 3.2% | 0.0 | 82.2 | 6,036.5 | 2,767.5 | 1,115.8 | 1,050.8 |
| Development of building projects | 3,745.7 | 1.6% | 0.0 | 74.5 | 3,614.3 | 1,429.5 | 56.9 | 56.4 |
| Trade | 9,424.5 | 4.1% | 0.0 | 0.0 | 7,507.6 | 3,046.2 | 1,916.9 | 1,771.7 |
| Transport and communication | 5,171.1 | 2.3% | 0.0 | 204.0 | 4,205.4 | 1,333.7 | 761.6 | 635.0 |
| Hotels and restaurants | 4,059.7 | 1.8% | 0.0 | 0.0 | 2,854.0 | 2,321.1 | 1,205.7 | 1,160.0 |
| Financial and insurance services | 36,799.8 | 16.0% | 14,136.6 | 14,128.2 | 8,360.9 | 1,291.5 | 174.1 | 168.1 |
| Holding companies | 2,571.7 | 1.1% | 0.0 | 0.1 | 2,570.3 | 547.4 | 1.2 | 1.2 |
| Real estate and housing | 22,917.0 | 10.0% | 0.0 | 123.0 | 19,842.2 | 8,190.0 | 2,951.7 | 2,943.2 |
| Services | 10,164.3 | 4.4% | 0.0 | 218.0 | 8,007.9 | 1,843.7 | 1,938.6 | 1,870.6 |
| Public administration | 42,419.3 | 18.5% | 42,009.9 | 364.3 | 44.0 | 13.4 | 1.0 | 0.3 |
| Education, Health and Art | 2,760.2 | 1.2% | 0.0 | 216.2 | 1,301.3 | 802.0 | 1,242.6 | 1,213.5 |
| Private households | 61,532.0 | 26.8% | 0.0 | 0.8 | 1,264.5 | 45.2 | 60,266.7 | 214.2 |
| Other | 7,192.9 | 3.1% | 551.4 | 96.2 | 6,191.6 | 32.6 | 353.6 | 5.5 |
| **Total** | **229,557.8** | **100.0%** | **56,698.9** | **15,481.7** | **83,099.6** | **28,109.2** | **74,277.6** | **13,086.5** |

Table 13: Art. 442 (e) CRR: Credit Risk – EAD by industry group

## Maturity band

| in EUR million | EAD | EAD (% of total) | Sovereigns | Institutions | Corporates | Retail |
|---|---|---|---|---|---|---|
| | | | EAD by main exposure classes | | | |
| less than 3 months | 28,118.2 | 12.2% | 8,095.5 | 3,420.3 | 9,757.3 | 6,845.1 |
| 3 months to less than 1 year | 16,538.1 | 7.2% | 2,601.5 | 1,087.8 | 9,708.2 | 3,140.5 |
| 1 year to less than 2.5 years | 34,935.6 | 15.2% | 9,715.7 | 2,625.8 | 16,877.0 | 5,717.1 |
| 2.5 years to less than 5 years | 30,595.3 | 13.3% | 8,913.6 | 2,759.6 | 13,777.9 | 5,144.3 |
| 5 years to less than 10 years | 40,789.7 | 17.8% | 11,228.2 | 3,815.5 | 14,586.9 | 11,159.1 |
| 10 years to less than 15 years | 19,750.6 | 8.6% | 2,837.5 | 798.9 | 6,821.4 | 9,292.8 |
| 15 years to less than 20 years | 15,977.3 | 7.0% | 1,095.6 | 370.4 | 4,329.7 | 10,181.7 |
| more or equal than 20 years | 42,853.1 | 18.7% | 12,211.3 | 603.4 | 7,241.3 | 22,797.1 |
| **Total** | **229,557.8** | **100.0%** | **56,698.9** | **15,481.7** | **83,099.6** | **74,277.6** |

Table 14: Art. 442 (f) CRR: Credit Risk – EAD by residual maturity band and main exposure class

## Main exposure classes

| in EUR million | EAD | | | |
|---|---|---|---|---|
| | Past due | Past due (% of total) | Impaired | Impaired (% of total) |
| Sovereigns | 162.1 | 2.4% | 8.9 | 0.1% |
| Institutions | 135.1 | 2.0% | 11.1 | 0.2% |
| Corporates | 2,664.5 | 39.5% | 3,817.3 | 56.3% |
| Retail | 3,781.6 | 56.1% | 2,939.5 | 43.4% |
| **Total** | **6,743.3** | **100.0%** | **6,776.7** | **100.0%** |

Table 15: Art. 442 (g) (i) CRR: Credit Risk – EAD by main exposure class for past due and impaired exposures

## Industry

| in EUR million | Credit risk adjustment | | | | Charges | | |
|---|---|---|---|---|---|---|---|
| | General | Specific | Total Credit risk adjustment | Credit risk adjustment (% of total) | General | Specific | Total charges |
| Agriculture and forestry | 26.3 | 67.0 | 93.2 | 1.8% | 5.0 | 10.1 | 15.1 |
| Mining | 4.6 | 27.1 | 31.7 | 0.6% | 3.2 | 4.2 | 7.4 |
| Manufacturing | 101.9 | 620.8 | 722.7 | 14.2% | 6.6 | 45.6 | 52.3 |
| Energy and water supply | 23.6 | 68.7 | 92.3 | 1.8% | 1.0 | 8.2 | 9.1 |
| Construction | 61.7 | 439.1 | 500.8 | 9.8% | 5.6 | -2.2 | 3.4 |
| Development of building projects | 14.1 | 148.1 | 162.2 | 3.2% | -14.5 | 13.7 | -0.8 |
| Trade | 88.5 | 414.4 | 502.9 | 9.9% | 5.9 | 26.7 | 32.6 |
| Transport and communication | 26.9 | 97.5 | 124.4 | 2.4% | 4.2 | 5.1 | 9.4 |
| Hotels and restaurants | 36.2 | 207.3 | 243.6 | 4.8% | -14.6 | 16.5 | 1.8 |
| Financial and insurance services | 63.6 | 101.4 | 165.0 | 3.2% | -1.3 | -2.3 | -3.6 |
| Holding companies | 15.3 | 82.3 | 97.5 | 1.9% | -8.9 | 6.3 | -2.6 |
| Real estate and housing | 110.7 | 466.6 | 577.3 | 11.3% | 1.8 | 84.6 | 86.5 |
| Services | 46.0 | 193.9 | 239.9 | 4.7% | -3.0 | 16.7 | 13.6 |
| Public administration | 18.7 | 5.1 | 23.7 | 0.5% | 2.6 | -1.3 | 1.3 |
| Education, Health and Art | 14.4 | 124.7 | 139.1 | 2.7% | 1.8 | 14.3 | 16.1 |
| Private households | 203.1 | 1,328.3 | 1,531.3 | 30.0% | -13.8 | 137.0 | 123.3 |
| Other | 59.2 | 56.9 | 116.0 | 2.3% | 1.7 | 22.6 | 24.3 |
| **Total** | **885.3** | **4,218.7** | **5,104.0** | **100.0%** | **6.7** | **385.8** | **392.5** |

Table 16: Art. 442 (g) (ii) (iii) CRR: Credit Risk – general and specific credit risk adjustments and charges (allocations – releases) by industry group

### Group of countries

| in EUR million | EAD<br>Past due (equal or more than 1 day) | Past due (% of total) | Impaired | Impaired (% of total) |
|---|---|---|---|---|
| Core Market - Austria | 2,017.6 | 29.9% | 2,302.6 | 34.0% |
| Core Market - Croatia | 1,089.7 | 16.2% | 812.9 | 12.0% |
| Core Market - Czech Republic | 599.1 | 8.9% | 799.7 | 11.8% |
| Core Market - Hungary | 504.4 | 7.5% | 406.3 | 6.0% |
| Core Market - Romania | 1,182.3 | 17.5% | 1,181.4 | 17.4% |
| Core Market - Serbia | 132.6 | 2.0% | 139.7 | 2.1% |
| Core Market - Slovakia | 739.9 | 11.0% | 510.3 | 7.5% |
| Other EU countries | 272.4 | 4.0% | 382.2 | 5.6% |
| Emerging Markets - Asia | 0.6 | 0.0% | 0.4 | 0.0% |
| Emerging Markets - Latin America | 0.4 | 0.0% | 17.4 | 0.3% |
| Emerging Markets - Middle East/Africa | 1.1 | 0.0% | 5.3 | 0.1% |
| Emerging Markets - Other | 179.8 | 2.7% | 160.2 | 2.4% |
| Other industrialised countries | 23.1 | 0.3% | 58.3 | 0.9% |
| **Total** | **6,743.3** | **100.0%** | **6,776.7** | **100.0%** |

Table 17: Art. 442 (h) CRR (1/2): Credit Risk – EAD by country group (based on country of risk) for past due and impaired exposures

### Group of countries

| in EUR million | Credit risk adjustment<br>General | Specific | Total credit risk adjustment | Credit risk adjustment (% of total) |
|---|---|---|---|---|
| Core Market - Austria | 211.8 | 1,246.1 | 1,457.9 | 28.6% |
| Core Market - Croatia | 86.0 | 547.4 | 633.3 | 12.4% |
| Core Market - Czech Republic | 149.6 | 508.5 | 658.1 | 12.9% |
| Core Market - Hungary | 61.5 | 282.7 | 344.1 | 6.7% |
| Core Market - Romania | 152.4 | 795.9 | 948.3 | 18.6% |
| Core Market - Serbia | 20.3 | 104.1 | 124.4 | 2.4% |
| Core Market - Slovakia | 85.0 | 328.0 | 413.0 | 8.1% |
| Other EU countries | 55.2 | 260.4 | 315.6 | 6.2% |
| Emerging Markets - Asia | 4.1 | 0.3 | 4.4 | 0.1% |
| Emerging Markets - Latin America | 1.8 | 3.3 | 5.1 | 0.1% |
| Emerging Markets - Middle East/Africa | 1.8 | 1.9 | 3.7 | 0.1% |
| Emerging Markets - Other | 40.0 | 83.0 | 123.0 | 2.4% |
| Other industrialised countries | 15.8 | 57.3 | 73.1 | 1.4% |
| **Total** | **885.3** | **4,218.7** | **5,104.0** | **100.0%** |

Table 18: Art. 442 (h) CRR (2/2): Credit Risk – general and specific credit risk adjustments by country group (based on country of risk)

Specific credit risk adjustments for impaired exposures developed as follows in the reporting period:

| in EUR million | Credit risk adjustments as of 1 Jan | Releases | Allocations | Write-off by use | Revaluation | Transferred | Credit risk adjustments as of 31 Dec |
|---|---|---|---|---|---|---|---|
| **Specific** | **5,743.0** | **-1,397.5** | **1,783.3** | **-1,816.0** | **-94.6** | **0.5** | **4,218.7** |

Table 19: Art. 442 (i) CRR (1/2): Credit Risk – development of specific credit risk adjustments for impaired exposures

The following direct write-offs and recoveries on written-off loans and advances were directly recognised in the income statement:

| in EUR million | Direct write off | Recoveries |
|---|---|---|
| **Total** | **226.0** | **-441.6** |

Table 20: Art. 442 (i) CRR (2/2): Credit Risk - direct write-offs and recoveries recorded directly to the income statement

# 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.

#### Allocation of external ratings to credit quality steps and risk weights

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

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

# Quantitative disclosure on credit risk – Standardised Approach

## DISCLOSURE REQUIREMENTS Art. 444 (e) CRR

The exposures in the Standardised Approach are presented below considering credit risk mitigation (CRM) per risk weight band for all exposure classes as well as those deducted from own funds.

### Standardised Approach - exposure classes

| in EUR million | Risk weight band | EAD | EAD after CRM | Collateral (% of EAD) | EAD (% of total) |
|---|---|---|---|---|---|
| Central governments or central banks | 0% RW | 45,729.4 | 45,419.0 | 0.7% | 58.7% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 35% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 50% RW | 4.3 | 4.3 | 0.0% | 0.0% |
| | >50% to 75% RW | 36.2 | 36.2 | 0.0% | 0.0% |
| | 100% RW | 589.0 | 589.0 | 0.0% | 0.8% |
| | 150% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 351.2 | 351.2 | 0.0% | 0.5% |
| **Total** | | **46,710.1** | **46,399.7** | **0.7%** | **59.9%** |
| Regional governments or local authorities | 0% RW | 5,281.0 | 5,278.6 | 0.0% | 6.8% |
| | >0% to 10% RW | 0.1 | 0.1 | 0.0% | 0.0% |
| | 20% RW | 1,137.4 | 1,137.4 | 0.0% | 1.5% |
| | 35% RW | 18.0 | 18.0 | 0.0% | 0.0% |
| | 50% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >50% to 75% RW | 0.1 | 0.1 | 0.0% | 0.0% |
| | 100% RW | 180.8 | 165.0 | 8.8% | 0.2% |
| | 150% RW | 17.0 | 17.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **6,634.4** | **6,616.1** | **0.3%** | **8.5%** |
| Public sector entities | 0% RW | 611.6 | 611.2 | 0.1% | 0.8% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 760.3 | 760.3 | 0.0% | 1.0% |
| | 35% RW | 7.9 | 6.9 | 12.5% | 0.0% |
| | 50% RW | 39.1 | 37.8 | 3.3% | 0.1% |
| | >50% to 75% RW | 0.1 | 0.1 | 0.0% | 0.0% |
| | 100% RW | 118.3 | 116.0 | 2.0% | 0.2% |
| | 150% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **1,537.2** | **1,532.2** | **0.3%** | **2.0%** |
| Multilateral development banks | 0% RW | 544.2 | 544.2 | 0.0% | 0.7% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 35% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 50% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >50% to 75% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 100% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 150% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **544.3** | **544.3** | **0.0%** | **0.7%** |
| International organisations | 0% RW | 389.6 | 389.6 | 0.0% | 0.5% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 35% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 50% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >50% to 75% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 100% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 150% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **389.6** | **389.6** | **0.0%** | **0.5%** |
| International organisations | 0% RW | 389.6 | 389.6 | 0.0% | 0.5% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 35% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 50% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >50% to 75% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 100% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 150% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **389.6** | **389.6** | **0.0%** | **0.5%** |

Table is continued on the next page.

Continuation of the table

| in EUR million | Risk weight band | EAD | EAD after CRM | Collateral (% of EAD) | EAD (% of total) |
|---|---|---|---|---|---|
| Institutions | 0% RW | 171.9 | 0.0 | 100.0% | 0.2% |
| | >0% to 10% RW | 1,878.8 | 1,878.7 | 0.0% | 2.4% |
| | 20% RW | 204.7 | 204.7 | 0.0% | 0.3% |
| | 35% RW | 68.4 | 68.4 | 0.0% | 0.1% |
| | 50% RW | 3.5 | 3.5 | 0.0% | 0.0% |
| | >50% to 75% RW | 0.1 | 0.1 | 0.0% | 0.0% |
| | 100% RW | 11.3 | 11.0 | 2.3% | 0.0% |
| | 150% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **2,338.6** | **2,166.4** | **7.4%** | **3.0%** |
| Corporates | 0% RW | 1,172.8 | 412.5 | 64.8% | 1.5% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 75.4 | 70.5 | 6.5% | 0.1% |
| | 35% RW | 175.2 | 168.4 | 3.9% | 0.2% |
| | 50% RW | 154.2 | 146.6 | 5.0% | 0.2% |
| | >50% to 75% RW | 58.8 | 56.0 | 4.7% | 0.1% |
| | 100% RW | 5,733.4 | 5,484.4 | 4.3% | 7.4% |
| | 150% RW | 88.6 | 88.6 | 0.0% | 0.1% |
| | >150% to 1250% RW | 2.0 | 2.0 | 0.0% | 0.0% |
| **Total** | | **7,460.4** | **6,429.0** | **13.8%** | **9.6%** |
| Retail | 0% RW | 7.8 | 0.0 | 100.0% | 0.0% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 215.1 | 201.0 | 6.6% | 0.3% |
| | 35% RW | 183.0 | 173.0 | 5.5% | 0.2% |
| | 50% RW | 99.6 | 99.3 | 0.3% | 0.1% |
| | >50% to 75% RW | 2,972.0 | 2,796.5 | 5.9% | 3.8% |
| | 100% RW | 429.3 | 429.3 | 0.0% | 0.6% |
| | 150% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **3,906.9** | **3,699.0** | **5.3%** | **5.0%** |
| Exposures secured by mortgages on immovable property | 0% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 157.7 | 0.0 | 100.0% | 0.2% |
| | 35% RW | 1,755.7 | 11.0 | 99.4% | 2.3% |
| | 50% RW | 935.6 | 15.4 | 98.4% | 1.2% |
| | >50% to 75% RW | 119.1 | 0.0 | 100.0% | 0.2% |
| | 100% RW | 5.4 | 2.6 | 50.9% | 0.0% |
| | 150% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **2,973.5** | **29.1** | **99.0%** | **3.8%** |
| Exposures in default | 0% RW | 152.9 | 150.1 | 1.9% | 0.2% |
| | >0% to 10% RW | 0.3 | 0.3 | 6.3% | 0.0% |
| | 20% RW | 13.1 | 13.1 | 0.3% | 0.0% |
| | 35% RW | 36.0 | 31.6 | 12.3% | 0.0% |
| | 50% RW | 2.6 | 0.5 | 79.3% | 0.0% |
| | >50% to 75% RW | 19.7 | 14.1 | 28.4% | 0.0% |
| | 100% RW | 1,182.2 | 1,023.4 | 13.4% | 1.5% |
| | 150% RW | 171.6 | 154.5 | 10.0% | 0.2% |
| | >150% to 1250% RW | 5.2 | 5.2 | 0.0% | 0.0% |
| **Total** | | **1,583.6** | **1,392.7** | **12.1%** | **2.0%** |
| Exposures associated with particular high risk | 0% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 35% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 50% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >50% to 75% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 100% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 150% RW | 123.7 | 123.7 | 0.0% | 0.2% |
| | >150% to 1250% RW | 0.4 | 0.4 | 0.0% | 0.0% |
| **Total** | | **124.0** | **124.0** | **0.0%** | **0.2%** |

Table is continued on the next page.

Continuation of the table:

| in EUR million | Risk weight band | EAD | EAD after CRM | Collateral (% of EAD) | EAD (% of total) |
|---|---|---|---|---|---|
| Covered bonds | 0% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >0% to 10% RW | 14.7 | 14.7 | 0.0% | 0.0% |
| | 20% RW | 0.7 | 0.7 | 0.0% | 0.0% |
| | 35% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 50% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >50% to 75% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 100% RW | 14.7 | 14.7 | 0.0% | 0.0% |
| | 150% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **30.1** | **30.1** | **0.0%** | **0.0%** |
| Securitisations | 0% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 35% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 50% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >50% to 75% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 100% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 150% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **0.0** | **0.0** | **0.0%** | **0.0%** |
| Exposures to institutions and corporates with a short-term credit assessment | 0% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 35% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 50% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >50% to 75% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 100% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 150% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **0.0** | **0.0** | **0.0%** | **0.0%** |
| Exposures in the form of units or shares in collective investment undertaking (CIUs) | 0% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >0% to 10% RW | 0.6 | 0.6 | 0.0% | 0.0% |
| | 20% RW | 8.8 | 8.8 | 0.0% | 0.0% |
| | 35% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 50% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >50% to 75% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 100% RW | 84.6 | 84.6 | 0.0% | 0.1% |
| | 150% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >150% to 1250% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **94.0** | **94.0** | **0.0%** | **0.1%** |
| Equity exposures | 0% RW | 7.1 | 7.1 | 0.0% | 0.0% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 35% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 50% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >50% to 75% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 100% RW | 561.4 | 561.4 | 0.0% | 0.7% |
| | 150% RW | 0.8 | 0.8 | 0.0% | 0.0% |
| | >150% to 1250% RW | 1.7 | 1.7 | 0.0% | 0.0% |
| **Total** | | 570.9 | 570.9 | 0.0% | 0.7% |
| Other items | 0% RW | 1,055.3 | 1,055.3 | 0.0% | 1.4% |
| | >0% to 10% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 20% RW | 1.0 | 1.0 | 0.0% | 0.0% |
| | 35% RW | 40.0 | 40.0 | 0.0% | 0.1% |
| | 50% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | >50% to 75% RW | 0.0 | 0.0 | 0.0% | 0.0% |
| | 100% RW | 1,968.3 | 1,968.3 | 0.0% | 2.5% |
| | 150% RW | 1.7 | 1.7 | 0.0% | 0.0% |
| | >150% to 1250% RW | 1.0 | 1.0 | 0.0% | 0.0% |
| **Total** | | 3,067.4 | 3,067.4 | 0.0% | 3.9% |
| **Standardised approach total** | | **77,965.1** | **73,084.5** | **6.3%** | **100.0%** |
| | | | | | |
| Exposures deducted from own funds | | 1,463.3 | | | |

Table 23: Art. 444 (e) CRR: Exposures in the Standardised Approach – EAD and EAD after CRM (EAD net of eligible collateral) by exposure class and risk weight band as well as exposures deducted from own funds

# 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. 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 CRR.

As of 31 December 2016, the leverage ratio for Erste Group Bank AG at consolidated level amounted to 6.2%, comfortably above the 3.0% minimum requirement expected to apply from 2018. The calculation is based on the Delegated Regulation (EU) 2015/62 of 10 October 2014, which was published in the Official Journal of the European Union on 17 January 2015. As such, the ratio is calculated on period-end values as of 31 December 2016 for both leverage exposure and Tier 1 capital, while the Tier 1 capital is determined based on fully-fledged Basel 3 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[2].

The table below provides a reconciliation of the Group's published financial statements to the total leverage ratio exposure as of 31 December 2016:

| in EUR million | Category | Applicable amount |
|---|---|---|
| 1 | Total assets as per published financial statements | 208,227.1 |
| 2 | Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation | -421.6 |
| 4 | Adjustments for derivative financial instruments | 457.7 |
| 5 | Adjustments for securities financing transactions (SFTs) | 2,256.5 |
| 6 | Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures) | 14,582.9 |
| 7 | Other adjustments | -2,104.1 |
| **8** | **Leverage ratio total exposure measure** | **222,998.5** |

Table 24: Art. 451 (1) (b) CRR / Table LRSum: Reconciliation of accounting assets and leverage ratio exposure

Under IFRS accounting standards, the 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[3].

[2] 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 improve the readability of the information. As a consequence, the numbering of rows in the tables may not be consecutive.

[3] 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 as of 31 December 2016.

| in EUR million | | CRR leverage ratio exposures |
|---|---|---|
| **On-balance sheet exposures (excluding derivatives and SFTs)** | | |
| 1 | On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral) | 200,166.0 |
| 2 | (Asset amounts deducted in determining Tier 1 capital) | -1,752.3 |
| 3 | Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2) | 198,413.8 |
| **Derivative exposures** | | |
| 4 | Replacement cost associated with all derivatives transactions (i.e. net of eligible cash variation margin) | 4,086.6 |
| 5 | Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method) | 1,726.2 |
| EU-5a | Exposure determined under Original Exposure Method | 48.5 |
| 9 | Adjusted effective notional amount of written credit derivatives | 498.0 |
| 11 | Total derivative exposures (sum of lines 4 to 10) | 6,359.5 |
| **SFT exposures** | | |
| 12 | Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions | 1,385.9 |
| 14 | Counterparty credit risk exposure for SFT assets | 2,256.5 |
| 16 | Total securities financing transaction exposures (sum of lines 12 to 15a) | 3,642.4 |
| **Other off-balance sheet exposures** | | |
| 17 | Off-balance sheet exposures at gross notional amount | 40,049.9 |
| 18 | (Adjustments for conversion to credit equivalent amounts) | -25,467.0 |
| 19 | Other off-balance sheet exposures (sum of lines 17 to 18) | 14,582.9 |
| **Capital and total exposure measure** | | |
| 20 | Tier 1 capital | 13,753.2 |
| 21 | Leverage ratio total exposure measure (sum of lines 3, 11, 16, 19) | 222,998.5 |
| **Leverage ratio** | | |
| 22 | Leverage ratio | 6.2% |

Table 25: Art. 451 (1) (b) CRR / Table LRCom: Leverage ratio common disclosure

The following table provides a breakdown of on-balance sheet exposures (excluding derivatives, SFTs and exempted exposures) by exposure class as of 31 December 2016:

| in EUR million | Category | CRR leverage ratio exposures |
|---|---|---|
| EU-1 | Total on-balance sheet exposures (excluding derivatives, SFTs and exempted exposures), of which: | 200,166.0 |
| EU-2 | Trading book exposures | 5,165.2 |
| EU-3 | Banking book exposures, of which: | 195,000.9 |
| EU-4 | Covered bonds | 539.4 |
| EU-5 | Exposures treated as sovereigns | 54,252.6 |
| EU-6 | Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns | 2,840.8 |
| EU-7 | Institutions | 2,946.1 |
| EU-8 | Secured by mortgages / immovable property | 53,112.0 |
| EU-9 | Retail exposures | 24,197.9 |
| EU-10 | Corporate | 43,138.3 |
| EU-11 | Exposures in default | 2,540.6 |
| EU-12 | Other exposures (e.g. equity, securitisations and other non-credit obligation assets) | 11,433.2 |

Table 26: Art. 451 (1) (b) CRR / Table LRSpl: Split-up of on-balance sheet exposures

# 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 RAG 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

In 2016, the overall leverage exposure increased by 6% to EUR 223 billion. This change was mainly driven by an increase in both on-balance sheet and off-balance sheet credit exposures as a result of business and loan growth in the retail and large corporate segments. In addition, part of the increased volume of client deposits was used to increase the liquidity reserves held with central banks.

# 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 (Austrian regional and local authorities remain under the Permanent Partial Use clause)
- Corporates
- Specialised Lending - Slotting Criteria approach

The following segment falls under the Advanced IRB Approach:
- Retail

For the equity portfolio, the grandfathering option is applied to all investments made up to 31 December 2007. For equity exposures entered into after 31 December 2007, the PD/LGD approach is applied. Equity exposures without a valid rating grade are treated under the simple risk weight method. Erste Group Bank AG, as the ultimate parent credit institution, and the subsidiary institutions of Erste Group uniformly apply the IRB Approach pursuant to Article 143 CRR.

The authorisation 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)
_ s Wohnbaubank AG (IRB Official Notice 1 January 2010)

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 28 March 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:
_ EBV Leasing Gesellschaft m.b.H & Co.KG (IRB Official Notice 1 Jan. 2007)
_ EGI AG (IRB Official Notice 1 Jan. 2007)

### IRB application planned

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 Comerciala Romana SA
_ Waldviertler Sparkasse Bank AG (only business area Czech Market)
_ Erste Bank Hungary Zrt (Micro and 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 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.

# Rating systems

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

A rating system comprises all models, methods, processes, controls, data collection and data processing processes that serve the assessment of credit risks, the allocation of exposures to rating grades and the quantification of default probabilities 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

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

Table 27: Art. 452 (c) (i) CRR: Map of rating methods

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. Since 2011, the models have been developed in competence centres in order to achieve higher quality, efficiency and consistency by pooling modelling expertise.

### 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 within 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

The SME rating procedure was developed at Erste Group. 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 book-keeping, 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

Rating Corporates was developed at Erste Group. 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. On the one hand, the capacity and the willingness to provide support are analysed, which may have a positive influence on the individual customer rating. On the other hand, 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 Bank Rating method 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:
- definition of persons who are authorised to assign ratings
- definition of rating and re-rating triggers
- rating method assignment
- rating approval process
- regulation of manual override of a rating
- mandatory downgrading rules in case of outdated financial information
- rating synchronisation for exposures to the same client

### Assignment of customers to an internal rating method

Clients are assigned a rating method according to the Basel customer class (i.e. portfolio) to which they have been allocated. The criteria for the selection of the rating method include factors such as occupational status, type of determination of income (i.e. whether the client uses simplified accounting, single-entry or double-entry book-keeping), and the company's legal form and its size as expressed by operating income.

For the Equity asset class, no special rating methods are used. The same rating methods are used for equity positions as for customers in the exposure classes Corporates and Institutions.

### 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 Country 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 key principle, the rating determined based on any of these methods must be confirmed by risk management (back office). 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

### Initial validation

Every new IRB model developed must be reviewed prior to use by the independent Group Validation department. Compliance with development standards and the quality of the results are assessed based on documented validation standards.
The final decision on a model's use is taken by the Holding Model Committee (HMC) that Erste Group has set up as a steering and control body for the model development and validation process and which reports to the Group Risk Executive Committee.

### Validation

The rating systems are regularly validated and reviewed by Group 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 rating models, 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 rating method to be used 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.

Work instructions covering the rating process, the use of rating methods, the allocation of customers to customer classes and of rating methods to customers as well as guidelines on financing, delegation authorities and overrides govern the use of the rating systems.

## 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). 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. 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.

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 by Group Validation in conjunction with the validation of the rating models. 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 .

| Rating method | Time period | Average PD estimates | Average observed default rates |
|---|---|---|---|
| Country rating | 01/1994 - 12/2015 | 1.8% | 1.1% |
| Bank rating | 04/2001 - 12/2015 | 0.6% | 0.2% |
| Rating Corporates | 01/2006 - 12/2015 | 3.9% | 3.1% |
| Rating SME | 01/2006 - 12/2015 | 4.4% | 3.2% |
| Rating of private individuals | 01/2006 - 12/2015 | 3.3% | 2.5% |

Table 28: Art. 452 (i) CRR (1/3): Back-testing PD

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

## 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.

Regular validation of the LGD risk parameter is performed by Group Validation 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 observation of at least five years (the years 2009 to 2015) were considered, with the model valid as of the beginning of 2013 being used for the calculation of estimated LGD. Segmentation was done by (retail) customer class. 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 | 30.5% | 17.2% |
| There of SME | 25.3% | 15.0% |
| There of Private Individuals | 32.1% | 17.9% |
| There of Secured by immovable property collateral | 35.6% | 10.3% |
| There of Qualifying revolving | 64.6% | 34.6% |
| There of Other retail | 28.7% | 20.4% |

Table 29: Art. 452 (i) CRR (2/3): Back-testing LGD

### 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 Group Validation 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 01/2011 to 12/2015. This procedure is analogous to LGD; however, the weighting of CCFs uses the off-balance volume (unused commitment) to calculate meaningful averages.

| Asset class | Average CCF estimates | Average observed CCF |
|---|---|---|
| Retail | 70.4% | 61.8% |
| thereof SME | 64.6% | 54.1% |
| thereof Private Individuals | 82.3% | 77.5% |
| thereof Secured by immovable property collateral | N/A | N/A |
| thereof Qualifying revolving | 42.7% | 36.9% |
| thereof Other retail | 84.3% | 63.4% |

Table 30: Art. 452 (i) CRR (3/3): Back-testing CCF

# 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 portfolio loan loss provisions when either the incurred loss concept according to IAS 39 (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 collective allowances 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 applying shifts to the current values of the rating grade and of the PD, LGD and CCF parameters 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 and recommendations are incorporated into the process for defining the RAS, subsequent financial projections and budgeting processes, the assessment of risk concentrations, as well into the calculation of risk-bearing capacity and the determination of the economic capital adequacy limit.

# 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 EAD of the IRB portfolio (including supervisory slotting) broken down by exposure classes is shown in the table below:

**IRB Approach - exposure classes**

| in EUR million | EAD | EAD (% of total) |
|---|---|---|
| Central governments and central banks | 1,928.8 | 1.3% |
| Institutions | 11,738.2 | 7.7% |
| Corporates | 62,775.9 | 41.4% |
| Specialised lending | 14,175.2 | 9.4% |
| Retail | 66,867.5 | 44.1% |
| SME | 12,533.0 | 8.3% |
| Secured by immovable properties collateral | 37,469.0 | 24.7% |
| Qualifying revolving | 592.6 | 0.4% |
| Other retail | 16,272.8 | 10.7% |
| Equity exposures | 743.4 | 0.5% |
| Securitisation positions | 1,443.5 | 1.0% |
| Other non-credit obligation assets | 6,095.6 | 4.0% |
| **IRB Approach Total** | **151,592.8** | **100.0%** |

Table 31: Art. 452 (d) CRR: IRB Approach (incl. supervisory slotting) – EAD by exposure classes

With respect to exposures under the IRB Approach, a breakdown is given below of the exposure classes of central governments and central banks, institutions, corporates, retail and equity by PD classes, exposure, outstanding loans, undrawn commitments, EAD and EAD-weighted average RWs. For the exposure class retail – which is the only exposure class for which LGD estimates are made – an additional presentation is given by EAD-weighted LGD and average CCF.

## IRB Approach – Central governments and central banks

| in EUR million | PD class | Exposure | Outstanding Loans | Undrawn commitments | EAD | RW (EAD weighted %) | EAD (% of total) |
|---|---|---|---|---|---|---|---|
| Central governments and central banks | 01 | 1,369.3 | 114.2 | 0.0 | 1,255.1 | 10.1% | 65.1% |
| | 02 | 495.9 | 137.2 | 0.0 | 524.9 | 24.4% | 27.2% |
| | 03 | 2.3 | 2.0 | 0.0 | 2.3 | 51.4% | 0.1% |
| | 04 | 0.0 | 0.0 | 0.0 | 0.0 | 48.2% | 0.0% |
| | 05 | 141.6 | 41.1 | 42.0 | 131.1 | 104.7% | 6.8% |
| | 06 | 14.5 | 8.1 | 0.3 | 14.4 | 118.0% | 0.7% |
| | 07 | 0.0 | 0.0 | 0.0 | 0.0 | 168.6% | 0.0% |
| | 08 | 0.7 | 0.0 | 0.0 | 0.7 | 168.6% | 0.0% |
| | 09 | 0.3 | 0.0 | 0.0 | 0.3 | 228.4% | 0.0% |
| | 10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0% | 0.0% |
| **Total** | | **2,024.5** | **302.5** | **42.3** | **1,928.8** | **21.4%** | **100.0%** |

Table 32: Art. 452 (e) CRR (1/4): IRB Approach – Exposure class: Central Governments and Central Banks by PD classes

## IRB Approach – Institutions

| in EUR million | PD class | Exposure | Outstanding Loans | Undrawn commitments | EAD | RW (EAD weighted %) | EAD (% of total) |
|---|---|---|---|---|---|---|---|
| Institutions | 01 | 30.7 | 0.2 | 30.5 | 0.6 | 15.4% | 0.0% |
| | 02 | 870.5 | 528.1 | 201.9 | 763.2 | 22.5% | 6.5% |
| | 03 | 10,202.8 | 1,097.6 | 219.6 | 9,896.7 | 27.9% | 84.3% |
| | 04 | 761.1 | 517.4 | 1.8 | 751.4 | 38.3% | 6.4% |
| | 05 | 216.7 | 72.6 | 25.9 | 199.6 | 44.5% | 1.7% |
| | 06 | 109.8 | 62.7 | 3.6 | 106.3 | 95.1% | 0.9% |
| | 07 | 1.7 | 1.6 | 0.0 | 1.7 | 147.8% | 0.0% |
| | 08 | 1.8 | 1.8 | 0.0 | 1.8 | 183.8% | 0.0% |
| | 09 | 14.4 | 11.5 | 0.0 | 14.4 | 267.3% | 0.1% |
| | 10 | 2.5 | 2.5 | 0.0 | 2.5 | 0.0% | 0.0% |
| **Total** | | **12,212.0** | **2,295.9** | **483.3** | **11,738.2** | **29.4%** | **100.0%** |

Table 33: Art. 452 (e) CRR (2/4): IRB Approach – Exposure class: Institutions by PD classes

## IRB Approach – Corporates (excluding SL)

| in EUR million | PD class | Exposure | Outstanding Loans | Undrawn commitments | EAD | RW (EAD weighted %) | EAD (% of total) |
|---|---|---|---|---|---|---|---|
| Corporates excluding SL | 01 | 2,724.9 | 372.2 | 2,273.9 | 858.4 | 15.3% | 1.8% |
| | 02 | 7,721.1 | 5,852.8 | 1,367.3 | 7,243.9 | 19.7% | 14.9% |
| | 03 | 15,083.7 | 7,647.0 | 2,901.3 | 10,901.0 | 47.9% | 22.4% |
| | 04 | 11,975.8 | 7,680.0 | 2,544.4 | 10,353.4 | 61.7% | 21.3% |
| | 05 | 10,565.5 | 7,126.0 | 2,015.3 | 9,213.5 | 84.5% | 19.0% |
| | 06 | 4,172.7 | 3,234.6 | 523.7 | 3,780.4 | 104.0% | 7.8% |
| | 07 | 2,194.6 | 1,809.9 | 208.8 | 2,058.9 | 115.7% | 4.2% |
| | 08 | 1,421.8 | 1,150.6 | 122.6 | 1,311.8 | 141.0% | 2.7% |
| | 09 | 1,246.0 | 995.4 | 89.4 | 1,159.4 | 203.6% | 2.4% |
| | 10 | 1,791.3 | 1,608.7 | 76.1 | 1,719.9 | 0.0% | 3.5% |
| **Total** | | **58,897.4** | **37,477.3** | **12,122.8** | **48,600.7** | **64.8%** | **100.0%** |

Table 34: Art. 452 (e) CRR (3/4): IRB Approach – Exposure class: Corporates (excluding SL) by PD classes

## IRB Approach – Retail

| in EUR million | Exposure classes | PD class | Exposure | Outstanding loans | Undrawn commitments | EAD | LGD | RW | Average CCF | EAD (% of total) |
|---|---|---|---|---|---|---|---|---|---|---|
| Retail | SME | 01 | 0.0 | 0.0 | 0.0 | 0.0 | 28.3% | 14.4% | 21.7% | 0.0% |
| | | 02 | 54.9 | 45.0 | 6.3 | 53.0 | 16.7% | 4.0% | 80.5% | 0.1% |
| | | 03 | 3,878.6 | 2,777.1 | 679.2 | 3,282.0 | 25.9% | 12.3% | 59.8% | 4.9% |
| | | 04 | 1,743.7 | 1,448.7 | 197.1 | 1,626.0 | 22.5% | 14.9% | 59.5% | 2.4% |
| | | 05 | 2,726.4 | 2,362.9 | 252.3 | 2,579.9 | 24.9% | 27.2% | 59.2% | 3.9% |
| | | 06 | 1,132.9 | 1,031.5 | 74.5 | 1,093.8 | 27.8% | 41.3% | 61.2% | 1.6% |
| | | 07 | 1,752.5 | 1,528.3 | 138.1 | 1,666.7 | 24.0% | 51.1% | 59.6% | 2.5% |
| | | 08 | 798.7 | 673.3 | 79.6 | 742.5 | 30.7% | 72.6% | 55.5% | 1.1% |
| | | 09 | 851.3 | 799.6 | 30.5 | 832.6 | 26.4% | 87.2% | 63.0% | 1.2% |
| | | 10 | 664.0 | 650.0 | 4.2 | 656.5 | 25.8% | 21.0% | 44.1% | 1.0% |
| | **Total** | | **13,603.0** | **11,316.3** | **1,461.8** | **12,533.0** | **25.5%** | **32.4%** | **59.5%** | **18.7%** |
| | Secured by immovable property collateral | 01 | 3,064.1 | 3,043.5 | 18.5 | 3,060.5 | 13.2% | 1.3% | 82.3% | 4.6% |
| | | 02 | 5,351.8 | 5,313.7 | 29.0 | 5,344.7 | 13.0% | 2.6% | 81.2% | 8.0% |
| | | 03 | 8,685.7 | 8,633.7 | 32.2 | 8,678.0 | 22.4% | 9.2% | 100.0% | 13.0% |
| | | 04 | 10,453.5 | 9,765.5 | 675.8 | 9,804.5 | 13.3% | 9.4% | 84.8% | 14.7% |
| | | 05 | 5,642.6 | 5,603.9 | 23.0 | 5,637.2 | 21.5% | 31.8% | 86.8% | 8.4% |
| | | 06 | 951.4 | 942.9 | 4.6 | 950.6 | 26.3% | 66.3% | 96.7% | 1.4% |
| | | 07 | 1,457.2 | 1,449.6 | 4.9 | 1,456.0 | 18.4% | 58.8% | 89.3% | 2.2% |
| | | 08 | 874.5 | 870.9 | 2.6 | 873.6 | 17.6% | 79.2% | 86.6% | 1.3% |
| | | 09 | 694.0 | 690.2 | 1.7 | 693.2 | 20.7% | 121.4% | 84.5% | 1.0% |
| | | 10 | 971.4 | 967.8 | 1.4 | 970.6 | 23.4% | 31.4% | 93.2% | 1.5% |
| | **Total** | | **38,146.2** | **37,281.6** | **793.8** | **37,469.0** | **17.6%** | **18.7%** | **87.6%** | **56.0%** |
| | Qualifying revolving | 01 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0% | 0.0% | 0.0% | 0.0% |
| | | 02 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0% | 0.0% | 0.0% | 0.0% |
| | | 03 | 509.4 | 124.3 | 385.1 | 365.9 | 57.2% | 6.1% | 69.6% | 0.5% |
| | | 04 | 39.7 | 19.1 | 20.6 | 27.7 | 65.7% | 11.3% | 41.7% | 0.0% |
| | | 05 | 124.5 | 90.7 | 33.8 | 103.9 | 57.1% | 24.9% | 67.1% | 0.2% |
| | | 06 | 30.0 | 24.7 | 5.4 | 27.1 | 55.1% | 50.8% | 78.7% | 0.0% |
| | | 07 | 27.3 | 21.7 | 5.7 | 24.0 | 58.5% | 72.4% | 60.3% | 0.0% |
| | | 08 | 18.1 | 15.6 | 2.5 | 16.5 | 58.4% | 98.6% | 57.9% | 0.0% |
| | | 09 | 23.8 | 21.7 | 2.1 | 22.2 | 59.1% | 152.1% | 55.5% | 0.0% |
| | | 10 | 5.6 | 4.4 | 0.7 | 5.1 | 60.1% | 97.6% | 56.0% | 0.0% |
| | **Total** | | **778.5** | **322.2** | **455.9** | **592.6** | **57.7%** | **23.2%** | **68.0%** | **0.9%** |
| | Other retail | 01 | 1,681.6 | 814.0 | 149.5 | 1,536.2 | 39.7% | 4.2% | 75.4% | 2.3% |
| | | 02 | 4,999.8 | 1,779.0 | 618.4 | 3,204.7 | 39.4% | 7.3% | 38.0% | 4.8% |
| | | 03 | 2,008.7 | 1,505.3 | 358.7 | 1,842.6 | 46.1% | 20.2% | 70.5% | 2.8% |
| | | 04 | 3,263.0 | 2,768.1 | 240.9 | 3,159.3 | 37.2% | 24.9% | 73.5% | 4.7% |
| | | 05 | 3,387.4 | 2,948.9 | 278.8 | 3,298.3 | 45.6% | 51.8% | 78.5% | 4.9% |
| | | 06 | 699.1 | 609.4 | 62.9 | 687.7 | 53.5% | 78.3% | 86.7% | 1.0% |
| | | 07 | 853.0 | 768.5 | 57.5 | 836.6 | 45.2% | 69.5% | 79.0% | 1.3% |
| | | 08 | 500.0 | 466.2 | 24.6 | 493.3 | 43.5% | 72.6% | 79.4% | 0.7% |
| | | 09 | 564.7 | 541.6 | 11.5 | 560.6 | 44.7% | 104.6% | 80.4% | 0.8% |
| | | 10 | 655.3 | 643.3 | 5.4 | 653.6 | 44.9% | 41.2% | 79.7% | 1.0% |
| | **Total** | | **18,612.6** | **12,844.4** | **1,808.3** | **16,272.8** | **42.4%** | **33.8%** | **62.4%** | **24.3%** |
| **Total** | | | **71,140.3** | **61,764.5** | **4,519.8** | **66,867.5** | **25.5%** | **25.0%** | **62.9%** | **100.0%** |

Table 35: Art. 452 (f) CRR: IRB Approach – Exposure class: Retail by exposure classes and PD classes

## IRB Approach – Equity

| in EUR million | PD class | EAD | RW (EAD weighted %) | EAD (% of total) |
|---|---|---|---|---|
| Equity | 01 | 0.0 | 276.6% | 0.0% |
| | 02 | 63.1 | 220.5% | 8.5% |
| | 03 | 276.5 | 161.4% | 37.2% |
| | 04 | 48.8 | 217.7% | 6.6% |
| | 05 | 2.6 | 325.6% | 0.4% |
| | 06 | 1.4 | 332.0% | 0.2% |
| | 07 | 0.7 | 501.5% | 0.1% |
| | 08 | 0.8 | 482.4% | 0.1% |
| | 09 | 16.8 | 235.3% | 2.3% |
| | 10 | 0.0 | 0.0% | 0.0% |
| | not applicable | 332.5 | 290.4% | 44.7% |
| **Total** | | **743.4** | **231.1%** | **100.0%** |

Table 36: Art. 452 (e) CRR (4/4): IRB Approach – Exposure class: Equity by PD classes

## IRB Approach – Group of countries

| in % - EAD weighted | Retail LGD | Retail PD | Non-Retail PD |
|---|---|---|---|
| Core Market - Austria | 20.7% | 4.1% | 3.1% |
| Core Market - Croatia | 34.1% | 12.2% | 9.6% |
| Core Market - Czech Republic | 35.1% | 4.2% | 3.0% |
| Core Market - Hungary | 40.5% | 1.0% | 0.3% |
| Core Market - Romania | 28.2% | 14.9% | 1.6% |
| Core Market - Serbia | 35.0% | 0.9% | 27.8% |
| Core Market - Slovakia | 25.6% | 5.7% | 2.6% |
| Other EU countries | 17.7% | 10.8% | 1.3% |
| Emerging Markets - Asia | 26.0% | 2.5% | 0.5% |
| Emerging Markets - Latin America | 22.7% | 7.2% | 2.8% |
| Emerging Markets - Middle East/Africa | 19.4% | 22.7% | 0.8% |
| Emerging Markets - Other | 42.0% | 5.8% | 20.8% |
| Other industrialised countries | 19.1% | 12.3% | 1.3% |
| **Total** | **25.5%** | **4.6%** | **2.9%** |

Table 37: Art. 452 (j) CRR: IRB Approach – Retail and non-retail by country groups (based on country of risk)

SL exposures for which the Supervisory Slotting Approach is used pursuant to Article 170 (2) CRR have the following exposure amounts by remaining time to maturity in the different regulatory categories (supervisory slots):

## Maturity band

| in EUR million | Supervisory Slot | EAD | EAD (% of total) |
|---|---|---|---|
| Below 2.5 years | Category 1 | 1,315.9 | 9.3% |
| | Category 2 | 1,457.4 | 10.3% |
| | Category 3 | 387.4 | 2.7% |
| | Category 4 | 264.9 | 1.9% |
| | Category 5 – Default | 597.1 | 4.2% |
| **Below 2.5 years** | | **4,022.6** | **28.4%** |
| 2.5 years and higher | Category 1 | 4,000.3 | 28.2% |
| | Category 2 | 3,962.3 | 28.0% |
| | Category 3 | 1,074.7 | 7.6% |
| | Category 4 | 445.0 | 3.1% |
| | Category 5 – Default | 670.4 | 4.7% |
| **2.5 years and higher** | | **10,152.6** | **71.6%** |
| **Total** | | **14,175.2** | **100.0%** |

Table 38: Art. 452 (d) CRR: Portfolio in the Supervisory Slotting Approach – Exposure by residual maturity bands and supervisory slots

The following table shows the development of 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<br>1 Jan | <br>31 Dec | Change (%) | Specific credit risk adjustments<br>(% of total) |
|---|---|---|---|---|
| Sovereigns | 6.2 | 5.2 | -16.6% | 0.1% |
| Institutions | 9.3 | 10.1 | 8.0% | 0.2% |
| Corporates | 3,415.1 | 2,451.8 | -28.2% | 58.1% |
| Retail | 2,312.4 | 1,751.7 | -24.2% | 41.5% |
| **Total** | **5,743.0** | **4,218.7** | **-26.5%** | **100.0%** |

Table 39: Art. 452 (g) CRR: Specific credit risk adjustments and changes in specific credit risk adjustments by main exposure class

Concerning the retail portfolio the specific provision stock decreased further in 2016 mainly driven by a reduction of the NPL stock during the year. In the last two years the retail NPL stock decreased by more than 40%. The majority of the improvement came from Hungary, Romania and Croatia where significant NPL sale took place. Meanwhile, the overall NPL coverage kept stable. Additionally, increase in the retail late collection efficiency also contributed to better overall results. The retail NPL stock decreased in all other countries both in relative as well as in amount terms, which resulted in a fall of specific provisions.

In the corporate portfolio, the decrease in specific credit risk adjustments was driven by the ongoing reduction in NPL portfolio volumes as a significant number of workout exposures (mainly located in BCR, EBC and Austria) were settled or sold. Positive economic developments in our core markets supported the lower NPL inflow resulting in an overall decrease in specific credit risk adjustments. Since the NPL stock declined faster than allowances, the NPL coverage ratio was further improved.

# 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 Workout division. Group Collateral Management is responsible for the standardised and consistent management of 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 enforceability and criteria for eligibility of collateral. 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.

## 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 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 collateral is performed pursuant to the following process:

| Base value | Valuation rate | Reduction of the base (encumbrances) | Nominal value and Exposure ceiling | Acceptable (Allocated) value |
|---|---|---|---|---|
| The base value is the conservative market value of the collateral asset according to the definition in the Collateral Catalogue. | The valuation rate is a percentage applied to the base value representing a prudential haircut to the base value. | A reduction of the base considers prior-ranking rights on the collateral asset, e.g. encumbrances in favour of other creditors registered in the land register. | The nominal value ceiling limits the acceptable value in case of a contractual ceiling defined in the collateral contract. The exposure ceiling limits the acceptable value to the maximum exposure amount. | The acceptable value is the result of the calculation and represents an internal risk view on collateral. The allocated value is the part of the acceptable value assigned to a specific credit exposure. |

Figure 4: 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 Collateral Management. In the collateral valuation process, a pre-defined prudential haircut, i.e. the 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 the workout departments and on the results of the data collected regarding the proceeds from the realisation of collateral.
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 Risk Management monitors compliance supported by 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 collateral are accepted:
_ real estate: both residential and commercial real estate
_ financial collateral: securities, cash deposits and life insurance policies
_ guarantees: guarantees provided by sovereigns and public sector entities, financial institutions, companies and individuals.
_ movables: equipment, investment goods, machinery and motor vehicles
_ 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. Only independent appraisers, who are not involved in the lending decision process, are permitted to conduct real estate valuations to ensure a high quality of real estate evaluation and the fulfilment of regulatory requirements. The valuation methods to be applied are defined. For quality assurance purposes, real estate valuations are validated on an ongoing basis and real estate appraisers who do not work up to standard are eliminated from future valuations as a consequence. The decision as to who can be used as an appraiser and which valuation procedures are to be applied is taken by Local Collateral Management.

The regular monitoring of the value of real estate assets is automated based on publicly available indices provided these are recognised by the national supervisory authority. For real estate located in Austria, a software application has been developed that performs annual automatic adjustments based on the value determined by an appraiser for both private and commercial real estate. Similar procedures are also used for residential real estate located in Romania, Slovakia, Hungary and the Czech Republic.

### Financial collateral
Financial collateral assets are mainly security accounts, cash deposits and life insurance policies. 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 security accounts (securities) is their market value, whereas the base value of life insurance policies is the cash surrender value. The revaluation is carried out automatically, and 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. Guarantees by individuals are used regularly in transactions with private individuals and SME clients, but these are of minor importance from a recovery perspective. The guarantee must represent a direct claim on the guarantor. All guarantors must have a minimum credit rating which is reviewed annually.

## 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 EAD of each exposure class is secured by the following eligible collateral values split up by type of collateral:

| in EUR million | Guarantees | Mortgage collateral | Financial and other collateral |
|---|---|---|---|
| **IRB Approach** | | | |
| Central Governments and Central Banks | 115.3 | 0.0 | 4.0 |
| Institutions | 504.8 | 37.7 | 3,431.6 |
| Corporates | 778.1 | 11,480.2 | 1,880.8 |
| Specialised Lending | 0.0 | | |
| Retail | 355.3 | 34,081.4 | 3,176.0 |
| SME | 239.6 | 4,419.1 | 977.7 |
| Secured by immovable property collateral | 65.8 | 29,662.2 | 1,142.9 |
| Qualifying revolving | 0.0 | 0.0 | 0.0 |
| Other retail | 49.8 | 0.0 | 1,055.4 |
| Equity | 0.0 | 0.0 | 0.0 |
| Securitisation Positions | 0.0 | 0.0 | 0.0 |
| Other non-credit obligation assets | 0.0 | 6.4 | 0.3 |
| **IRB Approach Total** | **1,753.5** | **45,605.7** | **8,492.7** |
| **Standardised Approach** | | | |
| Central Governments and Central Banks | 2,701.0 | 0.0 | 0.3 |
| Regional Governments and Local Authorities | 1,953.4 | 0.1 | 2.7 |
| Public Sector Entities | 17.7 | 2.3 | 5.6 |
| Multilateral Development Banks | 0.3 | 0.0 | 0.0 |
| International Organisations | 0.0 | 0.0 | 0.0 |
| Institutions | 5.5 | 0.0 | 379.8 |
| Corporates | 342.1 | 77.8 | 979.6 |
| Retail | 792.8 | 36.5 | 170.8 |
| Exposures secured by mortgages on immovable property | 0.0 | 2,956.4 | 1.1 |
| Exposures in default | 9.1 | 164.6 | 25.7 |
| Exposures associated with particular high risk | 0.0 | 0.0 | 0.0 |
| Covered Bonds | 0.0 | 0.0 | 0.0 |
| Securitisation Positions | 0.0 | 0.0 | 0.0 |
| Exposures to institutions and corporates with a short-term credit assessment | 0.0 | 0.0 | 0.0 |
| Collective Investment Undertakings | 0.0 | 0.0 | 0.0 |
| Equity | 0.0 | 0.0 | 0.0 |
| Other items | 0.0 | 0.0 | 0.0 |
| **Standardised Approach Total** | **5,821.9** | **3,237.7** | **1,565.7** |
| **Total** | **7,575.4** | **48,843.4** | **10,058.4** |

Table 40: Art. 453 (f) (g) CRR: Collateral values by exposure class and type of collateral

# Counterparty credit risk

## Goals and principles of risk management

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

Counterparty credit risk for OTC derivatives and securities financing transactions (securities 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 the 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 and Market 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 Swap 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.

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 only in the context of collateral agreements under derivative contracts. 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). Based on the existing contracts, a rating downgrade of Erste Group would not have a material impact on collateral posting requirements.

# Quantitative disclosure on counterparty risk

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

The table below contains the gross positive fair value of derivative transactions, the netting benefit and the net derivative credit exposure after consideration of collateral agreements.

### Derivatives

| in EUR million | Gross positive fair value of contracts | Netting benefits | Netted current credit exposure | Collateral held | Net derivatives credit exposure |
|---|---|---|---|---|---|
| **Total** | **7,317.6** | **4,458.7** | **2,858.9** | **1,598.4** | **1,260.4** |

Table 41: Art. 439 (e) CRR: Fair values of derivatives

The amounts of EAD are determined by the following methods:

### Calculation method

| in EUR million | EAD |
|---|---|
| Mark-to-market method | 4,191.1 |
| Original exposure method | 55.3 |
| Standardised method | 0.0 |
| Internal model method | 0.0 |
| **Total** | **4,246.4** |

Table 42: Art. 439 (f) CRR: Distribution of derivative risk exposure by calculation method

The table below shows the notional values of derivative positions within Erste Group. The table groups the positions by banking book and trading book and subdivides them further into protection purchased and protection sold. Erste Group does not use purchased credit derivatives for hedging in the banking book.

| | Banking book | | Trading book | |
|---|---|---|---|---|
| in EUR million | Protection purchased | Protection sold | Protection purchased | Protection sold |
| **Credit derivatives** | **0.0** | **0.0** | **605.2** | **548.0** |
| Single name credit event/default swaps | 0.0 | 0.0 | 531.1 | 490.9 |
| Portfolio credit event/default swaps | 0.0 | 0.0 | 74.1 | 57.1 |
| Total return swaps | 0.0 | 0.0 | 0.0 | 0.0 |
| Credit spread forward | 0.0 | 0.0 | 0.0 | 0.0 |
| Credit spread options | 0.0 | 0.0 | 0.0 | 0.0 |
| Other credit derivatives | 0.0 | 0.0 | 0.0 | 0.0 |

Table 43: Art. 439 (g) (h) CRR: Notional values of credit derivative transactions

# 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 largely phase out this portfolio through amortisations.

The risks of “re-securitisation” investments are considered negligible. All resecuritisations arise from US CLO investments, which had been issued prior to the financial crisis. These CLOs have a low limit for investments in other CLOs. Though in most cases this limit is not utilised, the securitisation is nevertheless characterised as a re-securitisation. All of the US CLOs have reached the end of the re-investment period, are amortising fast and are rated at least single A.

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 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 various 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 are furthermore tracked in a watch list that is regularly updated.

To value securitisation positions, Erste Group receives third-party pricing for each of its CLO investments on a monthly basis. For the European ABS Portfolio, Erste Group receives prices from external market data providers on a daily basis. Third party pricing for US CLOs is based on observable inputs including (i) discount margins, (ii) conditional prepayment rate (“CPR”) and (iii) yield curves. Additional observable inputs include cumulative default rates (“CDR”) and recovery rates obtained from 3rd party sources; however, these two inputs have an immaterial impact on Erste Group’s CLO pricing, because all CLOs in which Erste Group holds positions have exited their reinvestment periods resulting in substantially increased subordination and shorter weighted average lives (“WALs”) to the benefit of Erste Group’s positions. 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.

Until 30. December 2016 Erste Group treated its invested and originated positions for which a 1250 % risk weight applied pursuant to Article 261 CRR and included the positions in its calculation of 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 2016 include the two first loss positions of the two originated transactions Edelweiss 2013-1( EUR 3.3 million) and Bee SME 2016-1 (EUR 25.6 million), as well as three invested positions, which have been written off to EUR 1 each.

## Securitisation activities at Erste Group

DISCLOSURE REQUIREMENTS Art. 449 (a) (b) (d) (e) (g) (h) (i) (j) (k) (l) (n) (r) 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 EBV-Leasing Gesellschaft m.b.H., through the Edelweiss 2013-1 transaction with a volume of EUR 266.9 million. There was no gain recognised for the sale of leasing receivables by EBV-Leasing 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 the goal of decreasing RWAs 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.

Erste Group's Edelweiss 2013-1 securitisation transaction of Austrian car leasing receivables is structured and rated as shown in the table below:

| in EUR million | Notional value outstanding as of 11 Oct 16 (last payment date) | Share (in %) | Current rating (Moody's/Fitch) | Spread (in bps) |
|---|---|---|---|---|
| Tranche A | 68.6 | 66.6% | Aaa/AAA | 47 |
| Tranche B | 18.4 | 17.9% | Aa3/AA | 92 |
| Tranche C | 9.3 | 9.0% | Baa2/A | 200 |
| Tranche D | 6.7 | 6.5% | -/BBB- | 300 |
| **Total** | **103.0** | **100.0%** | | |
| Reserve fund | 3.3 | 3.2% | | |

Table 44: Art. 449 (e) (k) CRR: Overview of Edelweiss 2013-1 securitisation tranche structure as well as external ratings

As of the last payment date, which was on 11 October 2016, tranche A has been paid down by 70% of its initial balance. On 26 October 2015, Fitch Ratings Limited upgraded the rating of tranche B from A to AA, the rating of tranche C from BBB to A and the rating of tranche D from BB+ to BBB- reflecting the transaction's better than expected performance to date. The latest rating action was done on 28 September 2016 by Fitch Ratings Limited. The rating agency upgraded the rating of tranche B from AA to AAA and the rating of tranche C from A to A+.

The reserve fund (first-loss piece) of EUR 3.3 million is provided by EBV-Leasing 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 100% of 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 EBV level by random selection and on each quarterly replenishment date.

Jointly with the Royal Bank of Scotland plc, Erste Group acted as co-arranger and joint lead manager 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 EBV-Leasing Gesellschaft m.b.H. fulfils the functions of the seller, servicer and subordinated loan provider in the transaction.

In July 2016, Erste Group executed its first synthetic securitisation transaction ("Bee SME 2016-1"). The main objective of the EUR 1.425 billion 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 1 March 2035 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 four tranches whereby the two mezzanine tranches are guaranteed by the European Investment Fund 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:

| in EUR million | Notional value outstanding as of 31 Dec 16 | Seniority of tranche | Tranche characteristic |
|---|---|---|---|
| Senior Tranche | 1,146.3 | Senior | Retained |
| Senior Mezzanine Tranche | 32.9 | Senior Mezzanine | Guaranteed |
| Junior Mezzanine Tranche | 18.3 | Junior Mezzanine | Guaranteed |
| Junior Tranche | 25.6 | First Loss | Retained |
| **Total** | **1,223.1** | | |

Table 45: Art. 449 (e) (k) CRR: Overview of Bee SME 2016-1 securitisation tranche structure and characteristics

The share of SMEs or small mid-caps amounted to 83% at closing, in line with the investor's requirement of at least 75%. The transaction has no replenishment period.

As of 31 December 2016 the tranches of the transaction have been paid down by 14% 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 starting with the junior tranche. The Junior Tranche is 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 first loss piece.

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 work-out process. After completion of the work-out process the total loss accounted for in respect of the credit event loan is the final loss. In case of losses above the junior tranche and up to the senior mezzanine tranche Erste Bank der oesterreichischen Sparkassen Bank 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 75 million or 5% prior to securitisation at Erste Bank der oesterreichischen Sparkassen AG level by random selection.

Erste Group acted together with Unicredit as joint arranger for the structuring and placement of the transaction. The administration and monitoring is executed according to the policy "process documentation for execution and administration of synthetic securitisation transactions" in the newly set-up 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.

After Edelweiss 2013-1, Erste Group plans to issue another EUR 250 million true sale Austrian leasing receivables securitisation in 2017.

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 | 88.6 | 6.8% |
| Synthetic | Corporate and SME loans | 1,223.1 | 93.2% |
| **Total** | | **1,311.7** | **100.0%** |

Table 46: Art. 449 (n) (i) CRR: Overview on outstanding exposures securitised as of 31 December 2016

The total amount of outstanding exposures securitised increased due to the issuance of Bee SME 2016-1 by EUR 1.16 billion compared to 31 December 2015.

### Risk category

| in EUR million | Type of exposure | Exposure | Exposure (% of outstanding exposures) |
|---|---|---|---|
| Impaired / past due assets | Car finance | 2.0 | 2.2% |
| Losses | Car finance | -0.3 | -0.3% |
| Impaired / past due assets | Corporate and SME loans | 0.1 | 0.0% |
| Losses | Corporate and SME loans | 0.1 | 0.0% |

Table 47: Art. 449 (p) CRR: Impaired/past due assets

The amount of impaired/past due car finance assets securitised refers to leases in arrears as of 31 December 2016 and to defaulted car finance assets in 2016. Losses recognised 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 2016.

The amount of impaired/past due corporate and SME loans under Bee SME 2016-1 refers to the notional amount of credit event loans in 2016. The amount of losses for Bee SME 2016-1 are the initial specific provisions as well as positive and negative loss adjustments of the loans with a credit event in 2016.

## EXPOSURE AMOUNTS FOR INVESTMENTS IN SECURITISATION

DISCLOSURE REQUIREMENTS Art. 449 (o) CRR

Investments in securitisation positions differ by type of securitisation and are broken down by risk weight bands and rating approach: Securitisation that is deducted from own funds is also included in total EAD figure presented in tables below.

### By type of securitisation

| in EUR million | | EAD | EAD (% of total) | Capital requirements |
|---|---|---|---|---|
| Asset Backed Securities | ABS | 95.5 | 6.6% | 0.6 |
| out of which retained | | 3.3 | 0.2% | 0.0 |
| Collateralised Bond Obligation | CBO | 0.0 | 0.0% | 0.0 |
| Collateralised Loan Obligation | CLO | 1,255.0 | 86.9% | 7.2 |
| out of which retained | | 1,171.9 | 81.2% | 6.4 |
| Commercial Mortgage Backed Securities | CMBS | 0.0 | 0.0% | 0.0 |
| Collateralised Mortgage Obligation | CMO | 0.0 | 0.0% | 0.0 |
| Other Collateralised Debt Obligation | Other CDO | 0.0 | 0.0% | 0.0 |
| Residential Mortgage Backed Securities | RMBS | 5.9 | 0.4% | 0.1 |
| Resecuritisations | Resecuritisations | 87.2 | 6.0% | 2.9 |
| **Total** | | **1,443.5** | **100.0%** | **10.8** |

Table 48: Art. 449 (o) (i) CRR (1/3): Exposure class securitisation positions – EAD and associated capital requirements by type of securitisation

## By risk weight band

| in EUR million | EAD | EAD (% of total) | Capital requirement |
|---|---|---|---|
| <=10% RW | 1,270.9 | 88.0% | 7.2 |
| >10% to 20% RW | 53.5 | 3.7% | 0.6 |
| >20% to 50% RW | 67.4 | 4.7% | 1.7 |
| >50% to 100% RW | 14.2 | 1.0% | 0.6 |
| >100% to 350% RW | 8.6 | 0.6% | 0.7 |
| >350% to 650% RW | 0.0 | 0.0% | 0.0 |
| >650% to <1250% RW | 0.0 | 0.0% | 0.0 |
| 1250% RW | 28.9 | 2.0% | 0.0 |
| **Total** | **1,443.5** | **100.0%** | **10.8** |

Table 49: Art. 449 (o) (i) CRR (2/3): Exposure class securitisation positions – EAD and associated capital requirements by risk weight band

For the amount of EUR 28.9 million disclosed under 1250% RW band, instead of RW calculation, deduction from own funds is applied.

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

| in EUR million | | EAD | EAD (% of total) |
|---|---|---|---|
| IRB Approach | Resecuritization Exposure | 87.2 | 6.0% |
| | Securitization Exposure | 1,356.3 | 94.0% |
| Standardised Approach | Resecuritization Exposure | 0.0 | 0.0% |
| | Securitization Exposure | 0.0 | 0.0% |
| **Total** | | **1,443.5** | **100.0%** |

Table 50: Art. 449 (o) (i) CRR (3/3): Exposure class securitisation positions – EAD by rating approach and by securitisation and re-securitisation exposures

# 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 departments Market and Liquidity Risk Methods and Models, Banking Book Risk Management and Market Risk Control and Infrastructure. This split allows a clear separation between market risk methods and implementation of risk models and reporting. In detail, the departments are responsible for the following tasks:

Market and Liquidity Risk Methods and Models:
_ functional responsibility, development, inclusion of new products, parameterisation of the VaR-System (MRS)
_ calculation of capital requirement for the trading book position within the scope of the internal model
_ further improvement and development of methodology.

Banking Book Risk Management (until 30 April 2016: Liquidity and Market Risk Steering):
_ risk materiality assessment
_ limits proposals to RAS and ICAAP/ILAAP
_ measurement framework.

Banking Book Risk Management (until 30 April 2016: Market and Liquidity Risk Reporting):
_ reporting for liquidity risk and market risk to senior management
_ external risk reporting for regulatory purposes and for Investor Relations
_ defining and analysing data and process requirements
_ contribution to data & reporting projects

Market Risk Control and Infrastructure:
_ coordination and setup of market risk limits within Erste Group
_ reporting and limit control for all trading and sales units of Group Markets Division
_ owner of the Product Approval Process Committee for Group Markets Products
_ definition and maintenance of all market data used for the valuation of capital market products
_ independent price verification
_ system ownership for all components used in the Market Risk Solution (MRS)
_ market conformity check
_ management and support function for local risk management units.

### 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 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 distribution follows a proposal of the risk management department Market Risk Control and Infrastructure, which is subject to approval by the MARA. The MARA is the ultimate decision-making body for market risk of trading book-related issues of all entities of Erste Group. Its purpose 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 the Risk Manual. The chairman of the MARA is the CRO. In addition, the CFO, the board member responsible for the Group capital markets business and other managers from Risk Management and the responsible business units are members of the MARA. Limit compliance is verified at several levels by the appropriate local decentralised risk management units as well as by the department Market Risk Control and Infrastructure.

## 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), extreme value theory, scenario analysis). These assessments help to analyse the effects of market movements of low probability; the results are made available to the management board.

## 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)
- detailed monthly reports including the banking book sent to the management board and supervisory board
- 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, extreme value theory, 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

The table below provides an overview of the capital requirements to cover market risk, broken down by risk types in the trading book as well as by commodities, FX risk (incl. gold positions) and settlement risk not included in the trading book in accordance with Article 445 and Article 364 CRR.

### Own funds requirement for exposure to market risk

| in EUR million | Capital requirements | Capital requirements (% of total) |
|---|---|---|
| Standardised approach | 92.6 | 32.0% |
| position risk with interest rate instruments | 74.6 | 25.8% |
| position risk in equity instruments | 4.4 | 1.5% |
| commodities risk | 0.0 | 0.0% |
| foreign-exchange risk (incl. gold) | 13.5 | 4.7% |
| Internal model (VaR model) | 196.4 | 68.0% |
| VaR | 32.7 | 11.3% |
| sVaR | 163.8 | 56.7% |
| Incremental default and migration risk | 0.0 | 0.0% |
| Correlation trading | 0.0 | 0.0% |
| Settlement risk | 0.0 | 0.0% |
| Specific interest rate risk of securitisation positions | 0.0 | 0.0% |
| Large exposures | 0.0 | 0.0% |
| **Total** | **289.0** | **100.0%** |

Table 51: Art. 445 CRR and 455 (e) CRR: Exposure to market risk

In accordance with Art 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 of 3.5 determined by the regulator. Based on the results of the back-testing no additional add-on to the multiplier was applied. 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.

# 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. On 6 April 2006, the approval of the model was expanded to cover the subsidiaries. As of the end of 2011, the method for the integration of event risk of equity instruments in the internal model as well as the implementation of sVaR was approved by the Austrian supervisory authority, FMA.

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).

A multiplier of 3.5 applies at present.

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.

The standard method is used for trading units not covered by the approval of the FMA for the internal model and for risks in positions that do not qualify for being captured by the internal model (e.g. new shares whose price history is too short or certain types of collective investment undertakings). The standard method is also applied to the specific risk of interest-linked instruments.

## CHARACTERISTICS OF THE INTERNAL MODEL

DISCLOSURE REQUIREMENTS COVERED: 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 on the following three steps: First, the probabilities and sizes of idiosyncratic events are calibrated for each equity risk factor separately, based on the full available risk factor history for the respective underlying equity. In a second step, for each equity risk factor, some of the scenarios in the original 2-year sample are selected by a random generator, i.e. by Monte-Carlo simulation, based on the calibrated idiosyncratic event probability of the risk factor, and all selected scenario values are adjusted based on the calibrated idiosyncratic event size of the risk factor. Furthermore, some of the scenarios in the original 2-year sample are selected randomly based on the systemic event probability (detected form equity index times series), and for these scenarios all equity risk factors are adjusted at once based on the calibrated systemic event size. In the third step, a VaR is calculated for each of the samples generated in the second step. 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 independent unit Group Validation.

At the end of 2015, Erste Group applied for a material model change in the internal market risk model. The new internal model contains several methodological enhancements like OIS discounting for derivatives, the introduction of FX-derived curves for VaR calculation, usage of par-rate instead of zero rates as risk factors, flexible shift methodology for the generation of historical scenarios and the introduction of industry benchmark curves. The product coverage was enhanced and the improved technical infrastructure allows harmonisation for market data and valuation processes between the internal model and the independent price verification as well as a more flexible reporting infrastructure. The new internal model was approved by the ECB on 19 December 2016.

## 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.

### Extreme value theory

The extreme value theory is a statistical theory about the behaviour of extreme values in probability distributions. As stress tests are concerned with exactly these extreme values, the extreme value theory is particularly suitable for determining crisis-level values.

The extreme value theory uses observations in the simulated profit-and-loss time series to determine a theoretical profit-and-loss distribution of the highest losses, known as the Pareto distribution. Based on this distribution, VaR can be determined at a confidence level of 99.95%. The 99.95% level here represents a probability of one occurrence every eight years. From the hypothetical profit-and-loss results of the last two years for the trading book positions, the crisis amount under the extreme value theory is calculated at a confidence level of 99.95% and scaled to achieve a 10-day holding period.

### 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 Market Risk Control and Infrastructure 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 risks 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 Group Validation, a unit reporting directly to the CRO. 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 MARA, 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, Erste Group implemented additional value adjustments under the 'core approach' (which is more elaborate than the 'simplified approach'), due to its absolute sum of fair-valued assets and liabilities of more than EUR 15 billion. 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 unfavourable 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 CET1 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. Figures from Q1-Q3/2016 are based on calculations in KVaR; for Q4/2016, the figures are based on the new Market Risk Solution MRS.

**Value at risk**

| in EUR million | Maximum | Mean | Minimum | 31 Dec 16 |
|---|---|---|---|---|
| VaR | 4.0 | 2.6 | 1.6 | 3.4 |
| sVaR | 18.4 | 10.7 | 6.4 | 14.2 |

Table 52: Art. 455 (d) CRR: Market Risk – VaR 2016

The figure below shows the back-testing results referring to the market risk in the trading book. It provides a comparison of the daily VaR estimates with the actual gains/losses of the bank.

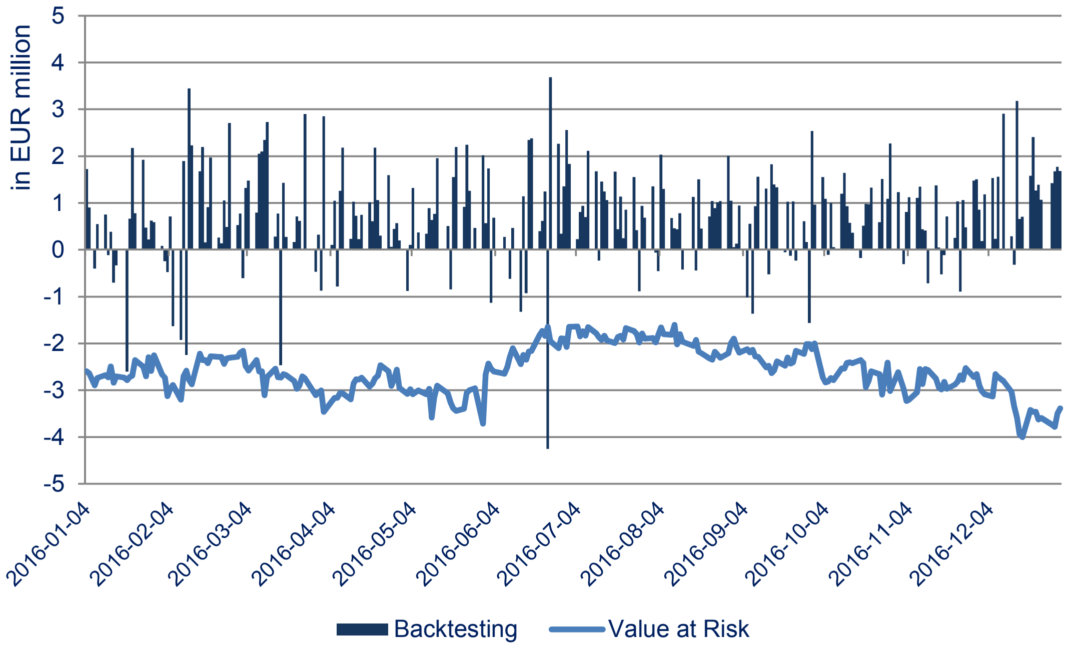


Figure 5: Back-testing results

The internal market risk model experienced one overshooting in the actual back-testing, which occurred in June 2016 following the publication of EU referendum results in the UK on 24 June. The result of the referendum lead to strong market movements in swap rates (EUR, CZK) and European government bond yields impacting the Money Market and Government Bond Trading Desk as main contributors.

# 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 and the amounts of interest expenses. 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 forms 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 many 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.

### ORGANISATION

Interest rate risk is dealt with by management in the Group Asset Liability Committee. The purpose of the Asset Liability Committee (ALCO) is the steering of assets and liabilities on the balance sheet. 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. Banking Book Risk Management is responsible for risk controlling. For the Group's Austrian subsidiaries and the savings banks, all analyses and ALCO documents are prepared by ALM of EBOe. The foreign subsidiaries have their own ALM 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 is to safeguard uniform standards of analysis and ensure that the ALM tasks in the subsidiaries are performed in accordance with Group guidelines.

### RISK MEASUREMENT AND CONTROL

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 are 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. The portfolios are analysed once a month with the exception of the savings banks (review intervals are usually every quarter).

The interest rate risk strategy of the Group 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 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.

#### Key assumptions used in risk modelling

Products without fixed terms are modelled. For modelling the interest rate risk behaviour of products with administered interest rates (i.e. valid until changed), Erste Group currently uses the applicable internal transfer pricing interest rate (moving average of short and long term interest rates) plus a static margin. The weighting used reflects the historic pattern of the interest rate curves of products with variable interest rates (valid until changed). The assumptions are reviewed and updated regularly.

## RISK HEDGING AND MONITORING SUSTAINABLE EFFECTIVENESS OF HEDGING POSITIONS

The investment process is part of the ALM process. Investment decisions are made by the ALCO on the basis of the overall risk profile of the bank and the expected development of the economy. Balance Sheet Management/Group ALM provides regular updates on economic trends and forecasts of interest rate trends (Market Report).

Group ALM analyses the banking book by means of NPV simulations of the market value, for example the effect of a 100 bps interest rate shock (understood to mean a sudden and unexpected change in interest rates on the money and/or capital markets) on market value and interest income, and also by means of net interest income simulations. Based on the results and the economic forecast, investment 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 currency (EUR, CHF, JPY, USD, CZK, HRK, HUF, RON, RSD) and reported at the monthly Group ALCO meeting. Furthermore, materials on the following topics are prepared for the Group ALCO:
_ Market overview;
_ Periodic and economic risk ratios related to market risk for the Group and subsidiaries;
_ 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 instruments 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 an upward parallel shift of the interest rate curve by 100 bps. At Erste Group, monthly upward and downward shocks of 100 bps and 200 bps (not considering any interest rate floors) are calculated and analysed for all entities and all currencies. The 200 bps shock is used for the calculation of the internal Basel 2 ratio. As shown in the table, the +100 bps shock resulted in a negative impact on the economic value of equity at Group level (while a -100bp shock would have had a positive impact).

**Interest rate risk**

| in EUR million | EGB | EBOe | SPK | BSPK | EGI | sAL | WBB | CS | SLSP | EBH | BCR | EBC | EBS | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EUR | -242.1 | 61.6 | -56.1 | -10.2 | 0.6 | 0.4 | -3.4 | -46.3 | -55.4 | 11.9 | -33.6 | 19.5 | 0.6 | -352.4 |
| USD | -95.2 | -7.4 | -1.3 | 0.0 | 0.0 | 0.0 | 0.0 | -4.7 | -1.9 | -0.1 | 6.1 | 2.4 | 0.2 | -102.0 |
| CZK | -3.8 | 0.0 | -1.0 | 0.0 | -0.1 | 0.0 | 0.0 | 198.0 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 193.9 |
| HUF | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7.0 | 0.0 | 0.0 | 0.0 | 7.0 |
| HRK | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.3 | 0.0 | 6.2 |
| JPY | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.4 |
| CHF | -4.6 | 0.8 | -0.6 | 0.0 | -0.2 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 1.1 | -0.6 | -4.1 |
| RON | -1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -35.8 | 0.0 | 0.0 | -36.8 |
| RSD | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -2.0 | -2.0 |
| **Total** | **-346.8** | **54.9** | **-59.1** | **-10.2** | **0.3** | **0.4** | **-3.4** | **146.9** | **-56.5** | **18.7** | **-63.3** | **29.3** | **-1.7** | **-290.5** |

EGB Erste Group Bank; EBOe Erste Bank Oesterreich; SPK Savings Banks; BSPK Bausparkasse der österreichischen Sparkassen; EGI Erste Group Immorent; sAL s Autoleasing; WBB s Wohnbaubank; CS Česká spořitelna; SLSP Slovenská sporiteľňa; EBH Erste Bank Hungary; BCR Banca Comercială Română; EBC Erste Bank Croatia; EBS Erste Bank Serbia

Table 53: Art. 448 (b) CRR: Changes in the market value by interest rate shock

# 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 investees and includes all investees 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 AG, 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 a greater strategic focus. Within its international business activities in Europe, the USA and Asia, Erste Group places particular emphasis on Central Europe as it views the region as its extended core market.

As of December 2016, the investees of Erste Group AG included 64 direct holdings of various legal forms and size with a carrying value of EUR 6.8 billion (of which 33 are fully consolidated companies under IFRS with a book value of EUR 6.6 billion, 24 fully consolidated companies under CRR with a book value of EUR 6.5 billion) and 9 fully consolidated companies under the de minimis concept (book value EUR 26.6 million).

### ORGANISATION

The responsibility for investees 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. Erste Bank der oesterreichischen Sparkassen AG has a separate Participation Management staff unit which reports directly to the CEO of Erste Bank der oesterreichischen Sparkassen 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 investee-related matters. In the case of sub-groups with investees of their own (currently CEE subsidiaries and Erste Group Immorent AG), Central Participation Management fulfils its Group responsibilities by ensuring that an investee 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:
- investee-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 investees (quarterly reports as reporting instrument and as basis for budget approvals);
- implementation, management and ongoing administration of the investee database AMI and central information distributor of the banks' investee 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

Once a year, all investees are subjected 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 evaluation tool has been increasingly used for this purpose which was developed jointly with a major audit firm. 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 investees 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 investee. 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 investees from the area of combined banking. If such services cannot be provided directly by Erste Group, investments are made in new subsidiaries or by acquiring existing entities. A further strategic focus is the adjustment to constantly changing customer behaviour by integrating mobile banking and brokerage services into the bank's range of services.

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 venture capital units.

## Accounting policies and valuation methods

DISCLOSURE REQUIREMENTS Art. 447 (a) CRR

Investees are measured in accordance with general commercial accounting principles (historic cost principle, modified lower-of-cost or market-value principle), based on capitalised income value and net asset value as well as the value derived from the investee's functional integration in the Group, as determined by periodic analyses regarding provisioning requirements and hidden reserves. Under IFRS standards applied to the Group, investees are classified as available-for-sale in accordance with IAS 39 and are generally measured at fair value.

## 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 as of 31 December 2016:

### Type of equity exposures

| in EUR million | Type of instrument | Book value | Fair value | Market value |
|---|---|---|---|---|
| **Credit institutions** | | | | |
| | Exchange traded instruments | 1.4 | 19.0 | 19.0 |
| | Instruments not traded on an equity exchange | 20.9 | 64.4 | 0.0 |
| | Other equity instruments | 0.0 | 0.0 | 0.0 |
| **Financial institutions** | | | | |
| | Exchange traded instruments | 0.0 | 0.0 | 0.0 |
| | Instruments not traded on an equity exchange | 25.3 | 32.2 | 0.0 |
| | Other equity instruments | 0.0 | 0.0 | 0.0 |
| **Others** | | | | |
| | Exchange traded instruments | 54.3 | 68.9 | 68.9 |
| | Instruments not traded on an equity exchange | 664.6 | 736.0 | 0.0 |
| | Other equity instruments | 0.0 | 0.0 | 0.0 |
| **Total** | | **766.5** | **920.5** | |

Table 54: Art. 447 (b) (c) CRR: Exposures in equities not included in the trading book

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 | Value |
|---|---|
| Realised gains or losses from sales and liquidations | 90.3 |
| Unrealised gains or losses | 72.2 |
| Deferred revaluation gains or losses | 0.0 |
| values in core capital | 0.0 |
| values in supplementary capital | 0.0 |

Table 55: Art. 447 (d) (e) CRR: Realised and unrealised gains or losses from exposures in equities not included in the trading book

# 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 Risk Management 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

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 and the Operational 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 entities 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 at all entities except for:
- Steiermärkische Sparkasse Bank AG

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 weighting is evaluated and calculated on a quarterly basis using quantitative and qualitative features.

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 AMA 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 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 Group Validation and the results of the validation are reported to the Holding Model 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.

## 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.

## Quantitative disclosure on operational risk

DISCLOSURE REQUIREMENTS Art. 454 CRR

The figure below shows the percentage composition by type of event of operational risk as defined in the CRR. The observation period runs from 1 January 2012 to 31 December 2016.

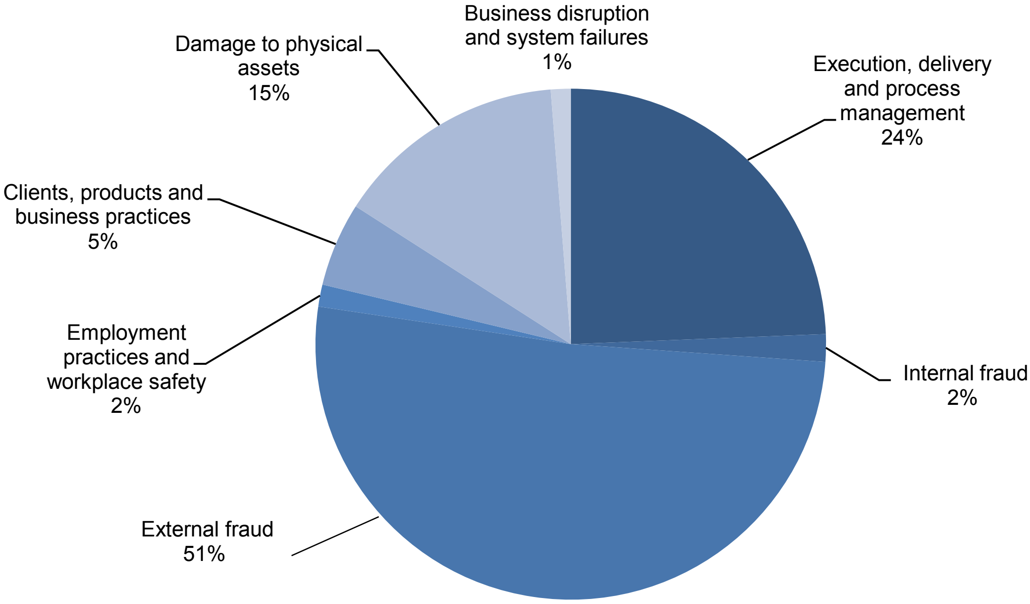


Figure 6: Percentage composition by type of event of operational risk

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.

# 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 and the Austrian regulator ("Kreditinstitute-Risikomanagement-Verordnung – KI-RMV"). 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 broken down further into insolvency risk and structural liquidity risk. The former is the short-term risk that current or future payment obligations will not be fully met in a timely and economically appropriate manner, while structural liquidity risk refers to the long-term risk of losses due to a change in the refinancing costs or in the issuer spreads of the Group.

The figure below presents an overview of the functions of liquidity risk management within the Group for liquidity/funding management and risk management.

**Liquidity Risk Management Functions**

| Methods and Models | |
|---|---|
| Method resdponsibility for risk measurement | Selection of risk measures |
| | General risk method specification |
| Scenario development | Setting/defining deterministic scenarios |
| Design/parameterization of models for stress scenarios | Deposit outflow s in stress situation |
| | Availability of funding markets |
| | Management of Liquidity buffer* |
| Technical application | Propose IT systems |
| Data concept management | Operative employment on data generation |
| Methods and Models documentation | |

| Measurement/ Monitoring/ Reporting | |
|---|---|
| Operative liquidity management | Import/checking data |
| | Process results |
| Monitoring development/ limit compliance | Analyse development |
| | Check limit utilisation |
| | Initiate escalation process |
| Reporting | Operational monitoring |
| | Limit control functions |
| | Designated governance |

| Limits |
|---|
| Liquidity risk limits proposal |

| Validation |
|---|
| Back testing |
| Validation of statisticaly derived/ assumed parameter review |

Figure 7: Functions of liquidity risk management

This framework for liquidity/funding management and risk management includes general provisions on competencies, responsibilities and powers of Erste Group decision-making bodies, committees and units.

The supervisory board acknowledges and approves the RAS, receives Group risk reports which include RAS development and the liquidity risk profile and approves credit limits and funding tools.

The management board sets the strategic framework for liquidity management within the Group, approves the risk tolerance appropriate to the business strategy, approves the Group strategy, policies and practices to manage liquidity risk in accordance with risk tolerance and reviews the information on the bank's liquidity development.

Group ALCO is the highest decision-making committee concerning all aspects of Group Liquidity Risk Management and includes all management board members. It approves and is responsible for the definition and implementation of a sound liquidity risk analysis framework for identifying, measuring, monitoring and controlling all liquidity risk types across the Group.

The Operational Liquidity Committee (OLC) consists of the relevant stakeholders of Group Liquidity Management and Liquidity Risk Management functions and monitors the liquidity position of the holding and major entities.

## RISK MEASUREMENT AND CONTROL

### Survival period analysis

The short-term liquidity risk (insolvency risk) is measured and limited by applying a "Survival Period Analysis" for every currency at the single-entity level and the Group level. This analysis provides the maximum period during which a bank survives in idiosyncratic, market and combined scenarios, while relying on its pool of liquid assets. For all three scenarios, two severity levels are calculated and analysed, mild and severe. The worst-case scenario (SCIM – severe combined idiosyncratic and market crisis scenario) simulates very limited funding, 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 the customer, as well as potential outflows from collateralised derivative transactions estimating the effect from collateral outflow in the case of adverse market movements. In order to reflect the reputational risk from callable own issues, the principal outflows from these liabilities are modelled to the next call date in all stress scenarios.

### Liquidity coverage ratio (LCR)

Since 30 September2016, the regulatory requirements of reporting the Liquidity Coverage Ratio (LCR) changed from LCR according to the CRR to LCR according to the Delegated Act (Regulation (EU) 2015/61). Due to this new requirement, Erste Group fully replaced the reporting of the LCR according to the CRR with the LCR according to the Delegated Act by switching to a new IT solution which is compliant with the new regulation. The LCR has been part of the Group RAS since 2014.

### Net Stable Funding Ratio (NSFR)

Erste Group is reporting the Net Stable Funding Ratio (NSFR) according to the CRR (with weights according to the BCBS) and is constantly participating in the QIS monitoring according to the BCBS guidelines. The ratio is monitored at both entity and Group level. Erste Group is reporting the NSFR according to the CRR in the quarterly Short Term Exercises to the ECB.

### Concentration analysis

Concentration risks in terms of funding providers, products and assets in the counterbalancing capacity (CBC) are regularly monitored and reported to the supervisor. Additionally, the diversification of the High Quality Liquid Assets is monitored internally on solo and Group level.

At the end of 2016, the top 10 counterparties provided 7% of the total funding. By customer group, funding was provided by wholesale with a share of 28% (of which 3% is secured, 25% is unsecured), by SME/corporates with 20% (all unsecured) and by retail with 52% (all unsecured). Concerning the remaining contractual maturity of the deposits, 59% was on demand, 26% had maturity shorter than 1 year and 15% had maturity longer than 1 year.

### 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

The general standards of liquidity risk controlling and management (standards, limits and analyses) are defined by Erste Group, documented in the respective internal guidelines and are constantly reviewed and further developed.

Liquidity risk is controlled by the Survival Period Concept and by LCR compliance at the Group and single-entity level. Breaches to limits are reported to the Group ALCO. A further instrument for monitoring liquidity risk within Erste Group and its subsidiaries is the FTP system. The planning of refinancing needs is of fundamental significance for liquidity management and is analysed in detail for the entire Group on a quarterly basis.

The Contingency Funding Plan provides a framework for managing both temporary and long-term liquidity disruptions that risk the bank's ability to fund some or all of its activities in a timely manner and/or at reasonable cost. The Contingency Funding Plan is defined in all local banks as part of the local Liquidity Risk Manuals. Contingency funding plans are tested and revised at least annually. Testing shall ensure that roles and responsibilities are appropriate and understood, contact information is up to date and the transferability of cash and collateral is still present.

# 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:

### Assets

| in EUR million (median value) | Carrying amount of encumbered assets | Fair value of encumbered assets | Carrying amount of unencumbered assets | Fair value of unencumbered assets |
|---|---|---|---|---|
| **Assets of the reporting institution** | **29,607.0** | | **176,142.0** | |
| Equity instruments | 177.0 | 178.0 | 1,960.0 | 1,959.0 |
| Debt securities | 5,743.0 | 6,078.0 | 34,670.0 | 36,320.0 |
| Other assets | 4,266.0 | | 13,060.0 | |

Table 56: Art. 443 CRR: Encumbered and unencumbered assets – assets

### Collateral received

| in EUR million | Fair value of encumbered collateral received or own debt securities issued | Fair value of collateral received or own debt securities issued available for encumbrance |
|---|---|---|
| **Collateral received by the reporting institution** | **651.0** | **5,039.0** |
| Equity instruments | 68.0 | 339.0 |
| Debt securities | 583.0 | 4,495.0 |
| Other collateral received | 0.0 | 247.0 |
| Own debt securities issued other than own covered bonds or ABSs | 0.0 | 0.0 |

Table 57: Art. 443 CRR: Encumbered and unencumbered assets – collateral received

### 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 | 21,928.0 | 27,929.0 |

Table 58: Art. 443 CRR: Encumbered and unencumbered assets – encumbered assets/collateral received and associated liabilities

In 2016 EUR 30,258 million (median) of the Group's own and received assets were identified as being encumbered based on the official definition. The main sources of encumbrance in Erste Group AG are the issuance of covered bonds, collateralised trading activities as well as collateralised open market transactions with the ECB. Asset classes predominately used for the above mentioned purposes were loans and advances to customers and debt securities qualifying as HQLA under the LCR Delegated Act.

The Group level of asset encumbrance is reviewed quarterly by the ALCO of Erste Group, where material changes are discussed and potential steering measures approved. The prevailing as well as projected levels of asset encumbrance are taken into consideration when setting up the funding plan and the liquidity risk profile.

As a result of the total unsecured funding position, predominantly made up of customer savings and current accounts, the total amount of encumbered assets compared to matching liabilities stemming from secured funding is relatively low and has decreased slightly in the course of 2016 (2015: EUR 30.3 billion). It is worth mentioning that the levels vary at single entity level of the banking Group, mainly due to heterogeneous business models within the Group. Any risk arising from such discrepancies within the Group is sufficiently monitored and managed at both Group and individual entity level. In addition, an internal governance framework including appropriate risk measures is in place.

# 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, ie 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 explicitly considered within the Group's planning and budgeting process.

# Concentration risk

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

Concentration risk is the risk of possible adverse consequences that may result from concentrations or mutually reinforcing effects of similar and divergent risk factors or risk types. These include, for example, the risk that may arise from loans to the same customer, to a Group of associated companies or to customers from the same region or industry or to customers offering the same services and goods, from the use of credit risk mitigation techniques and especially from indirect large volume loans.

## METHODS AND INSTRUMENTS APPLIED

Erste Group has implemented a comprehensive system for the identification, measurement, control, reporting and management of concentration risks. This is of key importance for securing the long-term viability of every single credit institution especially in phases with an adverse macroeconomic environment.

Concentration risk management at Erste Group is based upon a framework of processes, methods and reports covering both intra-risk and inter-risk concentrations. Diverse analyses are conducted on a regular basis, reviewed and reported. Concentration risks are 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.

# Business risk

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

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; however, the materialisation of strategic risk is included in this risk type.

## METHODS AND INSTRUMENTS APPLIED

Erste Group has implemented a comprehensive framework for the identification, measurement, control, reporting and management of business risks. As part of its overall risk management framework, Erste Group is regularly reviewing business and strategic risks 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 risks 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. In addition, they are incorporated into the risk appetite and risk strategy of Erste Group. Finally, the effects of the model are also analysed in the context of the Group's regular stress testing framework.

# 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. It mostly depends on competence, integrity, social responsibility and reliability of the bank. Reputational risk issues usually arise from transactions with clients or through different business activities.

However, due to its nature reputational risks usually materialise as secondary effects of other risk types.

## 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 strategic risk EC

## METHODS AND INSTRUMENTS APPLIED

Reputational Risk Management is embedded in the "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 in "run" or "change the bank" activities are assessed and decided using the unified method ("Risk Return Decision" for Risk Acceptance) and monitored by relevant risk type owners. 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.