Risk and capital management

32. Risk management

Risk policy and strategy

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

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

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

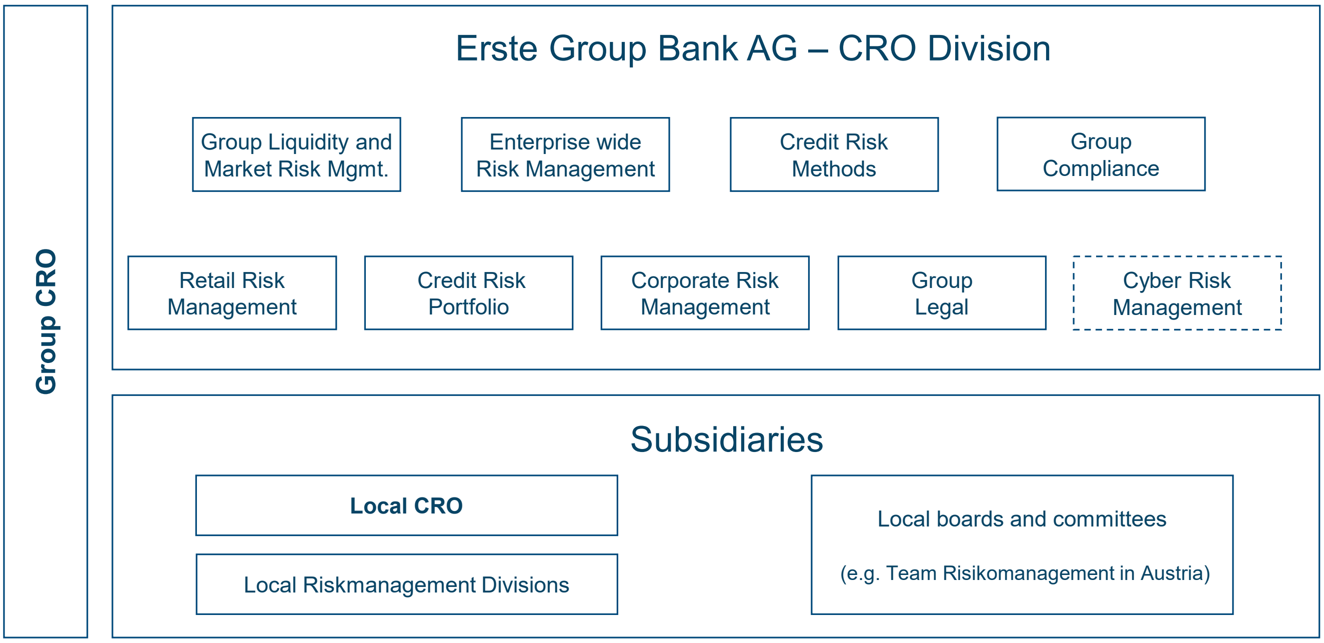
In 2021, management attention has been dedicated not only to ongoing Covid-19 pandemic, but also to Environmental, Social and Governance (ESG) risks as new risk type. ESG has been assessed as material risk in 2021 Group Risk Materiality Assessment (first-time assessment), based on climate-related and environmental risks ('E' component), while the assessment of social ('S') and governance ('G') risks is planned for 2022. In order to mitigate this risk, significant resources in both business and risk area have been dedicated to set-up and implement ESG action plan, which includes the establishment of comprehensive internal framework ranging from business strategy, dedicated governance, over risk management to disclosures.

Erste Group Bank AG uses the Internet as the medium for publishing its disclosures under Article 434 of the Regulation (EU) No. 575/2013 on prudential requirements for credit institutions and investment firms (Capital Requirements Regulation - CRR) and Regulation (EU) No. 876/2019 amending Regulation (EU) No. 575/2013. 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'.

Risk management organisation

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

The following chart presents an overview of Erste Group's risk management organisation:



In 2021 there were no organizational changes in the CRO area. The structure established in 2020 was continued and strengthened.

Risk management structure

The management board and in particular Erste Group's Chief Risk Officer (Group CRO) perform the oversight function within Erste Group's risk management structure. Risk control and risk steering within Erste Group are performed based on the business strategy and risk appetite approved by the management board. The Group CRO, working together with the chief risk officers of the subsidiaries, is responsible for the implementation and adherence to the risk control and risk management strategies across all risk types and business lines.

The management board and, in particular, the Group CRO ensure the availability of appropriate infrastructure and staff as well as methods, standards and processes to that effect; the actual identification, measurement, assessment, approval, monitoring, steering and limit setting for the relevant risks are performed on the operating entity level within Erste Group.

At group level, the management board is supported by several divisions established to perform operating risk control functions and exercise strategic risk management responsibilities. The following risk management functions report directly to the Group CRO:

- Group Liquidity and Market Risk Management;
- Enterprise wide Risk Management;
- Credit Risk Methods;
- Group Compliance;
- Retail Risk Management:
- Credit Risk Portfolio;
- Corporate Risk Management;
- Group Legal;
- Cyber Risk Management;
- Local Chief Risk Officers.

Group Liquidity and Market Risk Management

The division Group Liquidity and Market Risk Management comprises all market and liquidity risk functions in Erste Group. This division is responsible for steering, measuring, and controlling liquidity and market risk. It covers both banking book and trading book and ensures the development and validation of liquidity and market risk models for regulatory as well as for internal steering purposes.

Enterprise wide Risk Management

Enterprise wide Risk Management (ERM) focuses on holistic risk management and ensures comprehensive cross-risk group-wide risk portfolio steering, monitoring, analysis, and reporting. ERM drives key strategic initiatives to establish greater cohesion between risk strategy (including risk appetite and limit steering) and operational execution. It also comprises recovery & resolution planning as well as the management of non-financial risk. ERM works together with all risk functions and key divisions to strengthen risk oversight group-wide, covering capital, credit, liquidity, market, operational, and business risk.

Credit Risk Methods

The responsibilities of the area comprise the development, maintenance and validation of credit risk models in accordance with the regulatory requirements for the internal ratings-based approach. A dedicated organisational unit takes care of model risk governance and the strategic planning of model changes.

Group Compliance

In line with Austrian and European Union legislations, Group Compliance ensures the implementation and steering of measures to prevent money laundering, terrorism financing and fraud. Furthermore, it is responsible for standards and measures to comply with financial sanctions and embargoes. Another central task consists in the implementation and enforcement of regulatory provisions for insider trading, market manipulation and other misconduct in securities business.

Retail Risk Management

Retail Risk Management covers the operational credit decisions and the collection and workout activities for retail clients of Erste Bank der oesterreichischen Sparkassen AG (EBOe). Credit decision and collection systems are developed, validated and adapted to new requirements for EBOe and savings banks. In order to ensure the sustained performance of the retail loan portfolio, Retail Risk Management defines group-wide framework conditions and requirements for lending within the Group's risk/return profile.

Credit Risk Portfolio

Credit Risk Portfolio monitors the development of the overall loan portfolio of EBOe, Erste Group Bank AG and the Group with a specific focus on non-retail clients. Active steering ensures the operative implementation of the Group's credit risk strategies. The division is also in charge of continuously improving underwriting processes as well as for corporate and retail risk management projects with a particular focus on digital initiatives. Credit Risk Portfolio is also responsible for rating control, real estate valuations and credit analytics.

Corporate Risk Management

Corporate Risk Management is responsible for credit underwriting, restructuring (including sales of non-performing loans) for corporate and real estate clients, financial institutions, sovereigns and municipalities in EBOe and Erste Group Bank AG as well as group-wide for the local customers if their local credit limits are exceeded.

Group Legal

Group Legal acts as the central legal department of Erste Group Bank AG. This division provides legal support and counsel for the management board, the business units and the central functions, and mitigates legal risk. It also attends to legal sourcing and to dispute resolution and litigation.

Cyber Risk Management

Cyber Risk Management is a risk control unit segregated from IT and security operations, responsible for managing and overseeing cyber risks, monitoring and controlling adherence to cyber risk management framework.

Local Chief Risk Officers

Each subsidiary has separate risk control and management units with responsibilities tailored to the local requirements, which are headed by the respective local chief risk officer (Local CRO).

Group coordination of risk management activities

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

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

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

The **Risk Committee** meets regularly and it is responsible for supervising the risk management of Erste Group Bank AG. As the central risk control body it is regularly briefed on the risk status across all risk types.

The **CRO Board** is responsible for the coordination and implementation of risk management activities within Erste Group. The CRO Board consists of the Group CRO, the chief risk officers of major subsidiaries within Erste Group and the B-1 managers of the Holding CRO division. Chaired by the Group CRO, the CRO Board is the primary body for aligning on strategically relevant topics of the risk division across Erste Group entities, including (but not limited to) the group-wide strategic planning, the project portfolio and Change the Bank (CtB) investments. The CRO Board ensures a consistent flow of information from and to the group functions and supports the setting of the overall risk agenda.

The **Holding Credit Committee** (HCC) is the highest operative decision-making body which decides on credit applications addressed to members of the Holding Board in accordance with the currently valid Credit Risk Approval Authority Regulations of Erste Group Bank AG, including acceptance of the nonfinancial risk related to reputational impact (amber and red). It also decides on annual corporate industry strategy report. HCC recommends the lending decision on the credit applications that exceed the approval authority of the HCC to the Risk Committee of the Holding Supervisory Board in accordance with the current valid credit risk approval authority regulations. The HCC is headed by the Group CRO and comprises the board member of Corporates & Markets, the head of Corporate Risk Management, Head of Credit Risk Portfolio, the head of the requesting business line, the head of Enterprise wide Risk Management (only with a veto right for nonfinancial risk related to reputational impact: 'amber' and 'red') and the Head of the Group ESG Office only with a sustainability-linked/justified veto right for credit applications of clients / client groups with a critical ESG assessment. Each subsidiary has their own local credit committee established by the same principles.

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

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

The **Strategic Risk Executive Committee** (SREC) holds specific delegated decision authority from the Holding and EBOe Board with respect to all group-wide and selected AT-wide material risk matters including: all risk relevant models and methodologies, as well as oversight of the group-wide consistency in the execution of group wide model governance and standards regarding model development, validation and monitoring. In regard to Market & Liquidity risk topics (ICAAP, model relevant), those are approved via ALCO/MRC (Market Risk Committee) and pre-approval is ensured by SRMC or SREC depending on the materiality. All topics/changes assessed as material are subject of SREC approval. Topics which are affecting the Group (e.g. group-wide aspects, local models used for P1/P2 group consolidated purposes etc.) are approved in line with dual approval principle (local pre-approval, followed by SREC-approval). The committee is chaired by the Group/EBOe CRO.

The **Strategic Risk Management Committee** (SRMC) is responsible for the approval/acknowledgment of the immaterial risk management topics for Holding and EBOe including all risk relevant models and methodologies, as well as oversight of the Group-wide consistency in the execution of group-wide model governance and standards regarding model development, validation and monitoring. In regard to Market & Liquidity risk topics (ICAAP, model relevant), those are approved via ALCO/MRC (Market Risk Committee) and pre-approval is ensured by SRMC or SREC depending on the materiality. Topics which are affecting the Group (e.g. group-wide aspects, local models used for P1/P2 group consolidated purposes etc.) are approved in line with dual approval principle (local pre-approval, followed by SRMC-approval). The committee is chaired by head of Credit Risk Methods, (Deputy) Head of Enterprise wide Risk Management or Head of Credit Risk Portfolio (quarterly rotating responsibility and deputy role).

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

The **Group Resolution Committee** (GRC) is the sole group-wide forum for all joint alignments, endorsements, decision making as well as acknowledgements related to resolution relevant topics in Erste Group's across all its divisions, departments and staff units. The Committee is created under the guidance set forth in SRBs (Single Resolution Board) 'Expectations for Banks (EfB)' document under paragraph 2.1.3, and clustered based on the resolvability dimensions set out by the SRB's guidance. GRC is chaired by Group CRO.

The **United States Risk Committee** (USRC) holds delegated decision authority from the Holding Board with respect to overseeing Combined U.S. Operations (CUSO) risk management policies and the implementation of such policies. The USRC must take appropriate measures to ensure that CUSO (comprised of the New York Branch (NYB) and Erste (Finance) Delaware LLC, the EGB-owned commercial paper subsidiary managed by the branch) implements the risk management policies that are overseen by the U.S. Risk Committee. Risk management policies must be commensurate with the nature, size and risk profile of its operations and activities.

The **Regional Operational Conduct Committee** (ROCC) (a) decides on strategic steering topics based on NFR reporting (holistic risk overview), (b) serves as a sounding board on business risk decisions concerning non-financial risks and ESG impacts and (c) decides on escalations to Holding Board. It facilitates lessons learned, initiates focus areas, decides on the implementation of corresponding group-wide measures and acts as a Committee for reputational risk and ESG related non-financial risk impact. The ROCC is a forum for joint alignments, decisions, and escalations in non-financial risk areas across Erste Group entities and Erste Group Bank AG itself.

The **Group IT Risk & Security Committee** (GIRSC) is a designated sub-committee of the Management Board of Erste Group Bank AG (Holding Board). The decision authority of the GIRSC covers group-wide governance of Erste Group including Holding as a legal entity. The GIRSC is entitled to ensure group-wide consistency of standards, methodology, management processes in identification, assessment and reporting Cyber/ICT risk & Security, including monitoring of mitigation measures, controls and residual risk.

The **Group Asset/Liability Committee** (ALCO) manages the consolidated Erste Group balance sheet, focusing on trade-offs be-tween 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 a discussion forum and decision-making body on liquidity related topics organized by the local ALM units. It analyses the liquidity situation of the respective unit in the context of the current market situation and the future market outlook, decides on liquidity issues and reports directly to the ALCO. Furthermore, the Chairman of the OLC is the primary contact person for other departments or OLC members for liquidity related topics. Local OLC, which shall be held on a bi-weekly basis, is a regular committee dealing with liquidity related topics of the respective unit.

Since September 2021 the **Banking Book Committee** (BBC) is established on Holding level serving as a discussion forum and decision-making body on IRRBB related topics. It is organized by Group ALM. It analyses the IRRBB situation of the entire Group, decides on IRRBB related issues and serves as a sub-committee to Group ALCO. All relevant decisions made on this committee are reported to the Group ALCO.

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

Group-wide risk and capital management

Enterprise wide Risk Management (ERM) includes as its fundamental component the Internal Capital Adequacy Assessment Process (ICAAP) as required under Pillar 2 of the Basel framework and regulatory guides (e.g. ECB Guide to ICAAP).

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

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

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

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

Risk appetite

Erste Group defines the maximum level of risk it is willing to accept in order to meet its business objectives within the Group's risk appetite (Group RAS). The Group RAS acts as a binding constraint to Erste Group's business activities within its overall risk appetite via triggers and limits approved by the management board and the risk committee of supervisory board and acknowledged by the supervisory board. It is integrated and embedded into Erste Group's structural processes; including business and risk strategy, budgeting process, capital and liquidity planning, recovery plan, stress testing and remuneration framework. The Group RAS consists of a set of core risk metrics (capital, liquidity, risk/earnings) providing quantitative direction for overall risk-return steering and qualitative statements in the form of key risk principles that are part of the guidelines for managing risks.

The core risk metrics are set as ultimate boundaries for the Group risk-return target setting. They are also a key part of the annual strategic planning / budgeting process and give an overall picture of capital, liquidity and risk-return trade-offs. The key objective of the RAS is to:

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

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

- RAS is green: The target risk profile is within the specified boundaries.

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

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

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

Group RAS is also cascaded to local entities. Local RAS is approved by the management board to ensure compliance with the Group RAS and also approved by the local management board to ensure alignment with local regulatory requirements. The Group may also decide to include further compulsory constraints and limits in local RAS to ensure alignment with Group RAS and Group Risk Strategy.

The Group further developed an aggregated and consolidated risk appetite dashboard (Risk Dashboard) illustrating the group's and local entities' risk profile developments by comparing the risk exposure and risk limits. The Risk Dashboard is regularly presented to the management board and to the supervisory board (including risk committee of supervisory board) to support its review, oversight, and monitoring of the group risk profile and the risk profile of its local entities.

Group RAS 2021was approved by the management board and the risk committee of supervisory board and acknowledged by supervisory board in the last quarter of 2020.

Portfolio and risk analytics

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

Risk materiality assessment

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

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

Risk concentration analysis

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

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

Stress testing

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

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

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

Results from Erste Group's internal stress tests are analysed in order to decide on appropriate measures. The internal comprehensive stress tests performed in 2021 indicated no breach of stressed RAS triggers after the application of scenario contingent measures in the last year of adverse scenario.

Risk-bearing capacity calculation

The Risk-bearing Capacity Calculation (RCC) describes the methodology of Pillar 2 capital adequacy calculation. In contrast to the normative (regulatory) view of Pillar 1, referring to the Group's ability to fulfil all of its capital-related regulatory and supervisory requirements and demands, the RCC is based on an economic view of Pillar 1+ approach, assuming continuation of Erste Group as expected by the ECB Guide to ICAAP. The RCC determines whether the Group has sufficient internal capital for covering all (regulatory and economic) risks it is exposed to. Economic and normative perspectives at Erste Group are set in a way to mutually inform each other and are integrated into all material business steering activities and decisions. In addition, with applied Pillar 1+ approach the Group increases efficiency and ensures comparability with the Pillar 1 calculation. Based on the results of the RMA, economic capital is considered for relevant risk types as approved by the management board. The economic capital requirement is then compared to internally available capital (coverage potential) to cover the Group's risks in Pillar 2. Both economic capital and coverage potential are computed on the CRR scope of consolidation of Erste Group as ultimate parent entity based on IFRS accounting standards.

Besides the Pillar 1 risk types (credit, market and operational risks), interest rate risk in the banking book, foreign exchange risk arising from equity investments, credit spread risk in the banking book, risk from repayment vehicles as well as business risk are explicitly considered within the economic capital calculated over a horizon of one year and at a confidence level of 99.92%. For the calculation of the economic capital, Erste Group uses, where possible, more risk sensitive/advanced methodologies tailored to Erste Group's individual risk profile and specificities of the Group's individual risk exposures. Diversification effects between risks (inter-risk diversification) are not considered, reflecting the Group's prudent approach to maintain sufficient internal capital in times when correlations between risks may change dramatically (like in times of stress). The largest portion of economic capital requirements is coming from credit risk, which accounts for 72.6% of total economic capital requirements at the end of 2021.

The calculation of internal capital or coverage potential required to cover Pillar 2 risks/unexpected losses is based on Pillar 1+ approach. Namely, CRR and CRR II (Regulation (EU) No. 575/2013 and Regulation (EU) No. 876/2019 amending Regulation (EU) No. 575/2013) regulatory own funds are adjusted by internal capital components (Pillar 2 adjustments) necessary to come to the internally available capital deemed as risk-bearing and loss absorbing from the economic view (e.g. year-to-date profit (if not already considered in Pillar 1 capital), exclusion of Tier 2 capital instruments, Pillar 2 IRB expected loss excess/shortfall add-on, etc.).

The coverage potential must be sufficient to absorb Pillar 2 risks/unexpected losses resulting from the group's operations at any point in time (normal and stressed), as reflected in the Group's Risk Appetite through the limits set for Group economic capital adequacy and stressed capital adequacy utilisation. At the end of 2021, the economic capital adequacy was at 56.5%, fully in line with group RAS.

The management board, risk management committees and supervisory board are briefed quarterly on the results of the ICAAP capital adequacy through the Group Risk Report and the Risk Dashboard. The former includes risk profile developments, available capital (coverage potential), consideration of potential losses in stress situations, the degree of the risk limit utilisation and the overall status of capital adequacy. The latter outlines risk profile development in relation to risk appetite.

Risk planning

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

Methods and instruments applied

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

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

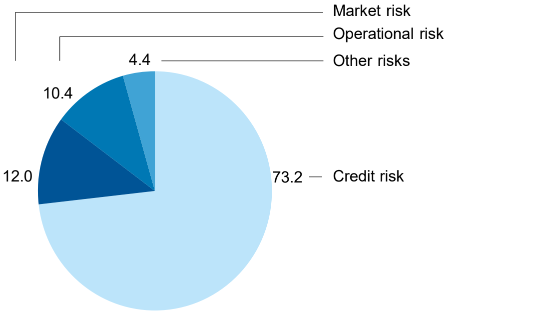
Capital allocation

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

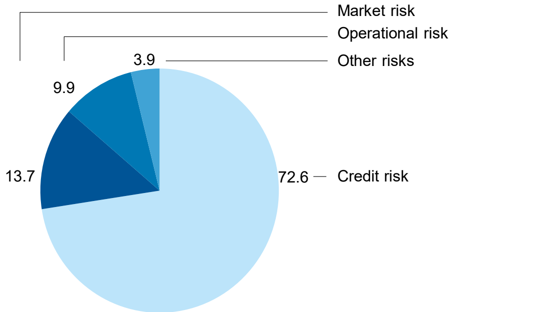
Erste Group's aggregate capital requirements by risk type

The following diagrams present the composition of the economic capital requirements according to type of risk:

Economic capital allocation (in %)
31 December 2020



Economic capital allocation (in %)
31 December 2021



Other risks include business risk.

Recovery and resolution plans

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

The Group Recovery Plan identifies options for restoring financial strength and viability in case Erste Group comes under severe economic stress. The plan specifies potential options for the replenishment of capital and liquidity resources of the bank in order to cope with a range of scenarios including both idiosyncratic and market-wide stress (in 2021 two Covid-19 related scenarios were requested by ECB). The recovery governance described in the plan ensures timely identification and proper management of any recovery situation. Furthermore, the assessment of the Group Recovery Plan and the recently addressed assessment of the overall recovery capacity are part of the Supervisory Review and Evaluation Process (SREP) assessment. It is relevant to demonstrate that, in a severe stress which is close to a failing or likely to fail situation, there is sufficient recovery capacity available.

Erste Group collaborates with the resolution authorities in the drawing up of resolution plans based on BaSAG and EU Regulation No 806/2014 establishing the Single Resolution Mechanism (SRM Regulation). Based on a joint decision taken in the Resolution College, Erste Group in April 2020 received notification of the preferred Multiple Point of Entry (MPE) resolution strategy on cross-country level, but a Single Point of Entry (SPE) resolution strategy within a country. This results in being MPE in Austria, the Czech Republic, Croatia, Hungary, Romania and Slovakia.

The Bank Recovery and Resolution Directive (BRRD) introduced the Minimum Requirement for own funds and Eligible Liabilities (MREL), which is, in case of Erste due to the MPE resolution strategy, set on Resolution Group level. Based on the MREL joint decisions taken in 2021, the National Resolution Authorities provided their legal notifications including binding intermediate requirements as of January 2022 and binding requirements as of January 2024. MREL requirements are expressed as a percentage of the total risk exposure amount (TREA), as well as leverage ratio exposure (LRE).

In June 2019 a banking reform package was published, which includes the Bank Recovery and Resolution Directive (BRRD2). The transposition into national law (BaSAG) was published on 28 May 2021. Key changes include the MREL expression in terms of total risk exposure amount (TREA) and leverage ratio exposure (LRE) instead of total liabilities and own funds (TLOF), adapted transition arrangements (binding intermediate MREL targets as of January 2022 and a common deadline of January 2024 to meet the final MREL targets) as well as tighter eligibility criteria. Potential changes in the MREL requirement will be reflected in Erste Group Bank AG's funding plan as to ensure compliance with MREL and subordination targets.

33. Own funds and capital requirements

Regulatory Requirements

Since 1 January 2014, Erste Group has been calculating the regulatory capital and the regulatory capital requirements according to the Capital Requirements Regulation (CRR, Regulation (EU) No. 575/2013) and the Capital Requirement Directive (CRD IV, Directive (EU) 2013/36/EU)[10]. Both the CRD IV and CRD V[11] were transposed into national law in the Austrian Banking Act (ABA).

All requirements as defined in the CRR, the ABA and in technical standards issued by the European Banking Authority (EBA) are applied by Erste Group for regulatory purposes and for the disclosure of regulatory information.

Accounting Principles

The financial and regulatory figures published by Erste Group are based on IFRS. Eligible capital components are derived from the balance sheet and income statement which were prepared in accordance with IFRS. Adjustments to the accounting figures are considered due to the different definitions in the scopes of consolidation. Further details are explained in the section 'Regulatory scope of consolidation and institutional protection scheme'. The uniform closing date of the consolidated regulatory figures of Erste Group is the 31 December of the respective year.

Regulatory scope of consolidation and institutional protection scheme

The consolidated regulatory own funds and the consolidated regulatory capital requirements are calculated based on the scope of consolidation stipulated in the CRR. Based on Art. 4 para 1 (3), (16) to (27) CRR in line with Art. 18 and 19 CRR and para 30 ABA, the scope consists of credit institutions, financial institutions and ancillary service undertakings. Moreover, Art. 18 (7) CRR applies: Where an institution has a subsidiary which is an undertaking other than an institution, a financial institution or an ancillary services undertaking or holds a participation in such an undertaking, it shall apply to that subsidiary or participation the equity method. That method shall not, however, constitute inclusion of the undertakings concerned in supervision on a consolidated basis.
The definition pursuant to CRR differs from the scope of consolidation according to IFRS, which also includes insurance companies and other entities, that are subject to full consolidation.

Erste Group Bank AG is a member of the Haftungsverbund (cross-guarantee system) of the Austrian savings bank sector. As of the balance sheet date Erste Group Bank AG and Erste Bank der oesterreichischen Sparkassen AG as well as Bausparkasse der österreichischen Sparkassen AG and all Austrian savings banks form this cross-guarantee system. Based on the cross-guarantee contract these entities are included as subsidiaries in Erste Group´s regulatory scope of consolidation.
Furthermore, Erste Group Bank AG together with the Haftungsverbund entitiesforms an institutional protection scheme (IPS) according to Art. 113 para 7 CRR. Disclosure requirements for the institutional protection scheme according to Art. 113 para 7 e CRR are met by the publication of the consolidated financial statements, which cover all entities included in the institutional protection scheme.

Consolidated own funds

Own funds according to CRR consist of CET1, additional tier 1 (AT1) and tier 2 (T2). In order to determine the capital ratios, each respective capital component – after application of all regulatory deductions and filters – is considered in relation to the total risk amount.

The items of own funds as disclosed are also used for internal capital management purposes, except T2 capital instruments. Erste Group fulfilled the capital requirements throughout the reporting period. The regulatory minimum capital ratios including the capital buffers as of 31 December 2021 amount to

- 9.18% for CET1 capital (4.5% CET1, +2.5% capital conservation buffer, +1.0% systemic risk buffer, +1.0% O-SII buffer and +0.18% countercyclical capital buffer),
- 10.68% for tier 1 capital (sum of CET1 and AT1) and
- 12.68% for total own funds.

Capital buffer requirements are set out in sections 22 (capital conservation buffer), 23a (countercyclical buffer), 23d (Other Systemic Important Institution (O-SII) buffer) and 23e (systemic risk buffer) of the ABA and further specified in the regulation of the Financial Market Authority (FMA) on the establishment and recognition of the countercyclical buffer rate in accordance with section 23a para 3 ABA, on the establishment of the systemic risk buffer in accordance with section 23e para 3 ABA. All capital buffers have to be met entirely with CET1 capital and relate, except the countercyclical buffer, to total risk.

In addition to minimum capital ratios and capital buffer requirements, institutions also have to fulfil capital requirements determined in the Supervisory Review and Evaluation Process (SREP).

[10] Both CRD IV and CRR have been amended since the entry into force in 2014 inter alia with directive (EU) 2019/878 (CRD V) as well as regulations (EU) 2019/876 (CRR 2) and (EU) 2020/873 (CRR Quick Fix).
[11] CRDV has been transposed by an amendment of the BWG (BGBl I 2021/98; BWG-Novelle) which entered into force on 31 May 2021.

The ECB Banking Supervision adjusted the SREP approach for 2020 in light of the Covid-19 crisis. Therefore the ECB chose a pragmatic SREP 2020 approach which keeps the SREP 2019 decision in place. Thus Erste Group applies a Pillar 2 requirement (P2R) of 1.75% as of 31 December 2021.

After having enacted the transposition of the CRD V into national law, the relief regarding the composition of capital for the Pillar 2 requirement under article 70b (7) ABA can be applied. Therefore, the minimum CET1 ratio of 5.48% encompasses the Pillar 1 minimum requirement of 4.5% and the Pillar 2 requirement of 0.98% (56.25% of 1.75%) as of 31 December 2021.

The regulatory minimum capital ratios including the capital buffers and SREP requirements as of 31 December 2021 amount to
- a CET1 requirement of 10.16%
  (Pillar 1 requirement of 4.5%, combined capital buffers of 4.68% and 56.25% of 1.75% Pillar 2 requirement),
- a T1 requirement of 11.99%
  (CET1 requirement plus Pillar 1 AT1 requirement of 1.5% and 18.75% of 1.75% Pillar 2 requirement) and
- a total own funds requirement of 14.43%
  (Tier 1 requirement plus Pillar 1 T2 requirement of 2.0% and 25% of 1.75% Pillar 2 requirement).

Following the SREP 2019, Erste Group is expected to meet a Pillar 2 Guidance (P2G) of 1.0% valid as of 1 January 2020 onwards. The ECB press release of 12 March 2020[12] and 1 July 2021[13] also indicated that the Pillar 2 Guidance need not be fully complied with temporarily by credit institutions during the current Covid-19 crisis. The Pillar 2 Guidance is not MDA (maximum distributable amount) relevant.

Overview of capital requirements and capital buffers

	Dec 20	Dec 21
Pillar 1		
Minimum CET 1 requirement	4.50%	4.50%
Minimum Tier 1 requirement	6.00%	6.00%
Minimum Own Funds requirement	8.00%	8.00%
Combined buffer requirement (CBR)	**4.68%**	**4.68%**
Capital conservation buffer	2.50%	2.50%
Countercyclical capital buffer	0.18%	0.18%
Systemic risk buffer	2.00%	1.00%
O-SII capital buffer	2.00%	1.00%
Minimum CET 1 requirement (incl.CBR)	9.18%	9.18%
Minimum Tier 1 requirement (incl.CBR)	10.68%	10.68%
Minimum Own Funds requirement (incl.CBR)	12.68%	12.68%
Pillar 2	**1.75%**	**1.75%**
Minimum CET1 requirement	0.98%	0.98%
Minimum T1 requirement	1.31%	1.31%
Minimum Own Funds requirement	1.75%	1.75%
Total CET 1 requirement for Pillar 1 and Pillar 2	**10.16%**	**10.16%**
Total Tier 1 requirement for Pillar 1 and Pillar 2	**11.99%**	**11.99%**
Total Capital requirement for Pillar 1 and Pillar 2	**14.43%**	**14.43%**

The combined buffer requirement consists of the capital conservation buffer, the countercyclical capital buffer, the systemic risk buffer and the O-SII capital buffer. Previously the combined buffer requirement was calculated as the sum of the capital conservation buffer, the countercyclical capital buffer and the maximum of the O-SII capital buffer or the systemic risk buffer.

As announced by the European Central Bank (ECB) in its press release on 12 March 2020 and 1 July 2021, Erste Group is not obliged to fully comply with the capital conservation buffer of 2.5% during the current Covid-19 crisis. In the 'Frequently Asked Questions - FAQs'[14] published on 20 March 2020, however, the ECB states that the incomplete fulfillment of the combined buffer requirement leads to restrictions on distributions and banks are only allowed to make distributions within the limits of the maximum distributable amount (MDA).

Taking into account ECB's communication on the temporary capital relief measures with regard to the Pillar 2 requirement, the full usage of the capital conservation buffer as well as the Pillar 2 guidance (P2G), Erste Group's CET1 requirement amounts to 7.66%, its T1 requirement amounts to 9.49% and its total own funds requirement amounts to 11.93%.

[12] ECB Banking Supervision:https://www.bankingsupervision.europa.eu/press/pr/date/2020/html/ssm.pr200312~43351ac3ac.en.html
[13] ECB Banking Supervision: https://www.bankingsupervision.europa.eu/press/speeches/date/2021/html/ssm.sp210701~3f0230c51f.en.html
[14] ECB Banking Supervision: FAQs on ECB supervisory measures in reaction to the coronavirus (europa.eu)

Capital structure

in EUR million	Dec 20 Phased-in	Dec 20 Final	Dec 21 Phased-in	Dec 21 Final
Common equity tier 1 capital (CET1)				
Capital instruments eligible as CET1	2,337	2,337	2,337	2,337
Retained earnings	13,002	13,002	14,156	14,156
Accumulated other comprehensive income	-1,690	-1,690	-1,706	-1,706
Minority interest recognised in CET1	4,891	4,891	5,219	5,219
Common equity tier 1 capital (CET1) before regulatory adjustments	**18,540**	**18,540**	**20,006**	**20,006**
Own CET1 instruments	-63	-63	-263	-263
Prudential filter: cash flow hedge reserve	-36	-36	206	206
Prudential filter: cumulative gains and losses due to changes in own credit risk on fair valued liabilities	289	289	207	207
Prudential filter: fair value gains and losses arising from the institution's own credit risk related to derivative liabilities	-3	-3	-4	-4
Value adjustments due to the requirements for prudent valuation	-58	-58	-86	-86
Securitizations with a risk weight of 1,250%	-29	-29	-33	-33
Goodwill	-544	-544	-550	-550
Other intangible assets	-720	-720	-392	-392
DTA that rely on future profitability and do not arise from temporary differences net of associated tax liabilities	-48	-48	-178	-178
IRB shortfall of credit risk adjustments to expected losses	0	0	0	0
CET1 capital elements or deductions – other	-270	-270	-109	-109
Common equity tier 1 capital (CET1)	**17,057**	**17,057**	**18,804**	**18,804**
Additional tier 1 capital (AT1)				
Capital instruments eligible as AT1	2,733	2,733	2,236	2,236
Instruments issued by subsidiaries that are given recognition in AT1	7	7	7	7
Additional tier 1 capital (AT1) before regulatory adjustments	**2,740**	**2,740**	**2,243**	**2,243**
Own AT1 instruments	-2	-2	-1	-1
AT1 instruments of financial sector entities where the institution has a significant investment	0	0	0	0
Additional tier 1 capital (AT1)	**2,738**	**2,738**	**2,241**	**2,241**
Tier 1 capital = CET1 + AT1	**19,795**	**19,795**	**21,045**	**21,045**
Tier 2 capital (T2)				
Capital instruments and subordinated loans eligible as T2	3,222	3,222	3,065	3,065
Instruments issued by subsidiaries recognised in T2	209	209	173	173
Transitional adjustments due to grandfathered T2 instruments and subordinated loans	0	0	50	0
IRB excess of provisions over expected losses eligible	467	467	522	522
Tier 2 capital (T2) before regulatory adjustments	**3,899**	**3,899**	**3,811**	**3,760**
Own T2 instruments	-50	-50	-47	-47
Standardised approach general credit risk adjustments	0	0	0	0
Tier 2 capital (T2)	**3,848**	**3,848**	**3,763**	**3,713**
Total own funds	**23,643**	**23,643**	**24,808**	**24,758**
Capital requirement	**9,440**	**9,612**	**10,196**	**10,372**
CET1 capital ratio	**14.5%**	**14.2%**	**14.8%**	**14.5%**
Tier 1 capital ratio	**16.8%**	**16.5%**	**16.5%**	**16.2%**
Total capital ratio	**20.0%**	**19.7%**	**19.5%**	**19.1%**

In accordance with Art. 26 (2) CRR the item 'retained earnings' and 'minority interest recognised in CET1' includes the profit of EUR 1,366 million approved by the ECB decision as of 9 February 2022. This profit is split into 'retained earnings' EUR 1,132 million (2020: EUR 451 million) and 'minority interest recognised in CET1' in an amount of EUR 234 million (2020: EUR 115 million).

The position CET1 elements or deduction – others includes the development of unaudited risk provisions during the year (EU No 183/2014) and insufficient coverage for non-performing exposures (NPE Backstop) covering the requirements from both Art. 36 para 1 (m) CRR in connection with Art. 47(c) CRR and the Addendum to the ECB Guidance to banks on non-performing loans: supervisory expectations for prudential provisioning of non-performing exposures.

The capital structure table above is based on the Commission Implementing Regulation (EU) No 2021/637 laying down implementing technical standards with regard to disclosure of own funds requirements. Positions, which are not relevant for Erste Group are not disclosed. Figures shown under full implementation (final) of Basel 3 consider the current CRR.

The consolidated financial statements have not been reviewed and noticed by the supervisory board and the financial statements of Erste Group Bank AG have not been reviewed by the supervisory board yet.

Likewise financial statements of single entities within the group have not been noticed by the supervisory board yet. In addition, no resolution on the appropriation of the profit has yet been made by the general meeting of the single entity.

In 2021 the implementation of the CRR2 resulted in the following effects on the credit RWA:

- The preferential treatment for retail loans with a permanent contract against the unconditional transfer of part of the borrower's pension or salary was the first time applied in Erste Group in the first quarter 2021. This regulation is valid since the second quarter of 2020 as part of the CRR quick fix. The implementation had a neglible impact on the credit RWA (decrease of EUR 2 million).

- With the second quarter 2021 two other regulatory provisions of the CRR2 came into force: the new exposure calculation (SA-CCR) for derivative exposures and a new treatment for collective investment undertakings (CIU). Both provisions had a negative effect on the credit RWA.The new exposure calculation for derivatives increased the respective credit RWA of the underlying derivative portfolio by EUR 0.36 billion. For CIUs the risk weight changed for instruments where a look through or the mandate-based approach could not be applied. The new fallback risk weight of 1250% leads to a RWA increase of EUR 0.17 billion.
- Starting with the third quarter 2021 Erste Group makes use of the prudential treatment of software assets according to EU Regulation No. 2020/2176. This has a positive effect on the regulatory capital as the difference between the cumulated prudential and the accounting amortization determines the deduction in CET1 capital. The difference to its accounting carrying amount is subject to a risk weight of 100%. This results in a lower capital deduction from CET1 of EUR 0.4 billion and increases Erste Group's RWA by the same amount as of 31 December 2021.

Erste Group reports since the end of the second quarter of 2017 on consolidated level an RWA-add-on in view of the calculation of risk-weighted assets for credit risk in Banca Comercială Română (BCR). Since the ECB decision in respect of the change in the IRB roll-out plan from 25 May 2020 the RWA add on amounts to EUR 2.1 billion. This RWA increase front-loads the expected difference in BCR between the treatments of exposures under the Standardised Approach compared to the treatment under IRB and is limited in time until the authorization of the IRB-approach in BCR.

Furthermore Erste Group reports on consolidated level since the third quarter 2017 – due to a decision of the European Central Bank in the context of its supervisory assessments in view of deficiencies in credit risk models for specialized lending – a RWA-Add-On of currently around EUR 1.3 billion until these deficiencies will be addressed in the course of an update of these models.

In February 2021, Erste Group received the approval from ECB to implement a material model change to its rating model used for its Financial Institutions portfolio, which led to a decrease in RWA in the first quarter 2021 of approx. EUR 0.3 billion.

Following the application from February 2019, Erste Group received on 26 May 2021 the ECB's final decision on the material model change related to the LGD model. The final decision requires the implementation of specific RWA add-ons with the go-live of the new model, which was considered starting with the second quarter of 2021. The implementation of the new model resulted thus in an increase of over EUR 2 billion in RWA on consolidated level.

The approval of the new group-wide PD estimation methodology was approved by the ECB in December 2019 with a limitation related to an application of a RWA add-on in the volume of EUR 0.6 billion as of December 2019. With the approval of the updated group wide default definition an additional add-on was imposed in the amount of EUR 0.1 billion as of December 2019.

The risk item other exposure amounts to EUR 2.7 billion as of 31 December 2021 and encompasses the BCR add-on (EUR 2.1 billion) and the new group-wide PD estimation methodology (EUR 0.6 billion). All other credit risk related add-ons are directly reflected in the RWA calculation for credit risk.

In order to mitigate the ramifications of the Covid-19 pandemic further, certain adjustments to the CRR and CRR 2 became effective on 27 June 2020 through EU Regulation No. 2020/873.The temporary treatment of a 0% risk weight on public debt issued in the EEA currency of another EU member state lead to an additional RWA relief in the amount of EUR -0.9 billion for the exposure in standardized approach and EUR -1.3 billion under the IRB treatment, respectively. The temporary treatment of 0% risk weight is valid until 31 December 2022. The temporary relief can be seen in the table 'Risk structure' below as the difference between the sub-tables 'phased- in' and 'final'.

On 15 March 2021 the ECB granted permission to revert to the use of the Standardised Approach for the exposures of Erste Group Bank AG classified as Specialised Lending Object Finance. The implementation of this change was performed in the second quarter of 2021 and resulted in an insignificant RWA reduction of approx. EUR 0.02 billion.

Following the finalization of the horizontal analysis of the ECB, a new decision complementing the initial TRIM (Targeted Review of Internal Models) Market risk decision from October 2018 was issued in February 2021. This follow-up decision required the implementation of multiplicator factors, which led to an immaterial increase of the RWAs for market risk of approx. EUR 0.2 billion per 31 March 2021.

The AMA-model related add-on, which was implemented in the fourth quarter of 2018, has been removed after the respective confirmation from the regulator. This led to a RWA reduction of approximately EUR 0.7billion on Erste Group's consolidated level in the first quarter 2021.

On 21 June 2021 the ECB granted permission to implement a material model change to the model used for the housing associations portfolio of Česká spořitelna, a.s. and Stavební spořitelna České spořitelny, a.s. Although the ECB decision contains two limitations, which impose an add-on to be added to the PD estimates of the model, the implementation of this model change led to a slight decrease in RWA of approx. EUR 0.17 billion.

Based on two applications submitted in 2019, the ECB granted permission to Slovenská sporiteľňa, a.s. for the step-back to Standardised Approach for the housing associations portfolio and approved to implement a material model change to the model used for small and medium enterprises. Both changes were implemented with a RWA increase of approx. EUR 0.23 billion in the fourth quarter 2021 .

Based on the application submitted in September 2021 an approval was granted by the ECB on 7 December 2021 regarding the exclusion of Structural Foreign Exchange (FX) positions from the calculation of the net open currency positions (Art. 352 (2) CRR). The implementation will be done in the first quarter of 2022 and is expected to lead to a net effect with a significant RWA increase.

Risk structure

	Dec 20		Dec 21	
in EUR million	Total risk (phased-in)	Capital requirement (phased-in)	Total risk (phased-in)	Capital requirement (phased-in)
Total Risk Exposure Amount	118,005	9,440	127,448	10,196
Risk weighted assets (credit risk)	95,923	7,674	105,869	8,470
Standardised approach	18,056	1,444	18,869	1,510
IRB approach	77,852	6,228	86,994	6,959
Contribution to the default fund of a CCP	15	1	7	1
Settlement Risk	1	0	0	0
Trading book, foreign FX risk and commodity risk	3,630	290	3,671	294
Operational Risk	14,813	1,185	14,786	1,183
Exposure for CVA	397	32	390	31
Other exposure amounts (incl. Basel 1 floor)	3,241	259	2,730	218

	Dec 20		Dec 21	
in EUR million	Total risk (final)	Capital requirement (final)	Total risk (final)	Capital requirement (final)
Total Risk Exposure Amount	120,151	9,612	129,647	10,372
Risk weighted assets (credit risk)	98,069	7,846	108,068	8,645
Standardised approach	18,065	1,445	19,809	1,585
IRB approach	79,988	6,399	88,252	7,060
Contribution to the default fund of a CCP	15	1	7	1
Settlement Risk	1	0	0	0
Trading book, foreign FX risk and commodity risk	3,630	290	3,671	294
Operational Risk	14,813	1,185	14,786	1,183
Exposure for CVA	397	32	390	31
Other exposure amounts (incl. Basel 1 floor)	3,241	259	2,730	218

34. Credit risk

Credit risk arises in Erste Group's traditional lending and investment businesses. It involves both credit losses incurred as a result of borrowers' default (Stage 3) and credit losses expected if default occurs either within 1 year (Stage 1) or at any time until maturity (Stage 2).

Stage 1 credit losses apply to non-defaulted credit risk exposures without significant increase in credit risk (SICR) since inception, whilst Stage 2 credit losses apply to non-defaulted credit risk exposures for which SICR is observed at the reporting date. It also involves credit losses due to counterparty risk from trading in instruments and derivatives bearing market risk. Country risk and related macro-economic forward-looking information is also considered in the calculation of credit risk.

Operative credit decisions are made by the credit risk management units in each of the banking subsidiaries locally and by Corporate Risk Management at group level.

In contrast to large corporates, banks and governments, managing credit risk in retail and SME involves dealing with a large number of relatively small exposures extended to private individuals, free professionals, entrepreneurs, or micro and small companies. Credit risk related to retail and SME loan portfolios is managed at group and at local entity level with a common interest in order to ensure regulatory compliant risk management practices and to provide customers with manageable loan facilities that are within their financial capacities and supported by underlying profitability.

The central database used for credit risk management is the Business Intelligence data warehouse (BI-DWH). All data relevant to credit risk management, performance management, and determination of risk-weighted assets and regulatory capital requirements is regularly loaded into this database. Relevant subsidiaries not yet integrated into the Group data pool regularly deliver reporting packages.

The Group Risk Reporting, Planning and Risk Cost Management department uses the BI-DWH in particular for centralised credit risk reporting. This ensures centralised analysis and application of ratios according to unified methods and segmentation across Erste Group as a whole. Credit risk reporting comprises regular reports on Erste Group's credit portfolio for external and internal recipients and permits continuous monitoring of credit risk developments, thus enabling management to take control measures. In-house recipients of these reports include, above all, the supervisory and management boards of Erste Group Bank AG as well as the risk managers, business unit directors and internal audit staff.

Internal rating system

Erste Group has business and risk strategies in place that govern policies for lending and credit approval processes. These policies are reviewed at a minimum on an annual basis and adjusted if necessary. They cover the entire lending business, considering the nature, scope and risk level of the transactions and the counterparties involved. Credit approval considers individual information on the creditworthiness of the customer, the type of credit, collateral, covenant package and other risk mitigation factors involved.

The assessment of credit default risk within Erste Group is based on the customer's probability of default (PD). For each credit exposure and lending decision, Erste Group assigns an internal rating, which is a unique measure of the credit default risk. The internal rating of each customer is updated event-specific, however, at least once a year (annual rating review). Ratings of workout customers are reviewed with a higher frequency.

The main purpose of the internal ratings is to support the decision-making for lending and for the terms of credit facilities. Internal ratings also determine the level of credit approval authority within Erste Group and the monitoring procedures for existing exposures. At a quantitative level, internal ratings influence the level of required risk pricing, loss allowances and, where applicable, risk-weighted assets under Pillar 1 and 2.

For entities of Erste Group that use the internal ratings-based (IRB) approach, internal ratings are key input for the risk-weighted assets calculation. They are also used in the group's assessment of the economic capital requirements according to Pillar 2. For these purposes, a distinct PD value is assigned to each rating grade for its IRB portfolios within a calibration process that is performed individually for each rating method and each regional portfolio. PD values reflect a 12-month probability of default based on long-term average default rates per rating grade. The bank assigns margins of conservatism to the calculated PDs.

Internal ratings take into account all available significant information for the assessment of credit default risk. For non-retail borrowers, internal ratings take into account the financial strength of the counterparty, the possibility of external support, flexibility in corporate financing, general company information and external credit history information, where available. For retail clients, internal ratings are based mainly on payment behaviour versus the bank and, where applicable, credit bureau information, supplemented with information provided by the respective client and general demographic information. Rating ceiling rules on credit quality are applied based on membership in a group of economically related entities and the country of main economic activity (applicable to cross-border financing facilities).

Internal specialist teams develop and continuously improve internal rating models and risk parameters in cooperation with risk managers. All Pillar 1 and 2, as well as IFRS9 models are subject of an annual review of their estimates, considering the inclusion of most recent data in the estimation of risk parameters, as well as a regular cycle of full model review. Model development follows an internal group-wide methodological standard and utilises relevant data covering the respective market. In this way, Erste Group ensures the availability of rating models with the best possible prediction and discriminatory ability across its core regions.

The central Model Validation department is responsible for defining the validation methodologies and standards to be applied to all credit risk models within Erste Group as well as for conducting the validation activities across the whole Erste Group. All Pillar 1, material Pillar 2 and IFRS9 models are subject to an annual validation, while for non-material ones a regular validation cycle is implemented. Model Validation employs qualitative as well as quantitative validation methods to challenge conceptual soundness, performance and model use aspects. The validation outcomes are approved by the respective model committees and, in case of IRB models, shared with the regulatory bodies. In addition to the validation process, the group applies a regular monitoring process on the performance of IRB models, reflecting developments in new defaults and early delinquencies.

Approvals of all new models, model changes, changes to risk parameters within the group, changes in group-wide methodological standards and other model-related aspects are following a dual approval process within the Group – corresponding Holding and local model committee structures reflect joint responsibilities for decisions on Pillar 1 IRB and Pillar 2 credit risk models as well as on methodologies related to IFRS9 parameters. Responsibilities are assigned depending on model perimeter (group-wide or locally developed model). In this context, the following committees are established: Strategic Risk Executive Committee and Strategic Risk Management Committee (for more details see 'Group coordination of risk management activities' chapter).

Ultimate responsibility for all models used within the Group (at consolidated level) lies with the Group CRO. All model governance, development, validation, data management and monitoring activities are coordinated by the Credit Risk Methods division.

Credit risk classification

For the disclosure of asset quality Erste Group assigns each customer to one of the following four risk categories:

Low risk. Typically, regional customers with well-established and rather long-standing relationships with Erste Group or large internationally recognised customers. Very good to satisfactory financial position and low likelihood of financial difficulties relative to the respective market in which the customers operate. Retail clients having long relationships with the bank, or clients with a wide product pool use. No relevant late payments currently or in the most recent 12 months. New business is generally done with clients in this risk category.

Management attention. Vulnerable non-retail clients, who may have overdue payments or defaults in their credit history or may encounter debt repayment difficulties in the medium term. Retail clients with possible payment problems in the past triggering early collection reminders. These clients typically have a good recent payment history.

Substandard. The borrower is vulnerable to short-term negative financial and economic developments and shows an elevated probability of failure. In some cases, restructuring measures are possible or already in place. As a rule, such loans are managed in specialised risk management departments.

Non-performing. One or more of the default criteria under Article 178 of the CRR are met, which include 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, or initiation of bankruptcy proceedings. Erste Group applies the customer view for all customer segments, including retail clients; if an obligor defaults on one deal then the customer's performing transactions are classified as non-performing as well. All non-performing exposures are also defaulted.

Based on the calibration of internal PDs (probabilities of default) for regulatory purposes to the default rates published by rating agencies, the equivalent external customer rating is used for the assignment to risk categories. For the agency ratings, average one-year default rates resulting from long-term time series are applied.

Credit risk review and monitoring

Retail Risk Management as well as Credit Risk Portfolio in cooperation with Corporate Risk Management conduct periodical reviews of the loan portfolio for each local entity to ensure an adequate portfolio quality and to monitor the compliance of local portfolios with the principles and parameters as stipulated by Erste Group's credit risk policies.

All credit limits and the transactions booked within the limits are reviewed at least once a year. Counterparty credit risk limits are monitored daily in an internal limit management system with remedial actions taken in case limits are exceeded.

A group-wide standardised early warning monitoring process is implemented to proactively identify negative developments. The early warning monitoring process for corporate clients is managed at group level by Credit Risk Portfolio and, at subsidiary level, by the local units responsible for corporate risk management, retail risk management and collections, for respective segments. When early warning signals are identified and validated, the overall client exposure and creditworthiness is reviewed, and adequate risk mitigating actions are taken if deemed necessary. Watch list review meetings are held on a regular basis to monitor customers with a poor credit standing and to discuss pre-emptive measures. For smaller enterprises (micro) and retail customers, the monitoring and credit review are based on an automated early warning system. In retail risk management, the early warning signals for adverse portfolio developments include, for instance, quality deterioration in new business or a decreasing collections effectiveness and require appropriate countermeasures. Additionally, the monitoring is performed for clients where early warning signals have been identified, even if they are still fulfilling their contractual repayment obligations.

Adverse portfolio developments regarding the non-performing and substandard loans portfolio of Erste Group are monitored, discussed and reported. In case of further negative developments clients are handled in specialized workout units aiming to minimize potential losses.

Credit risk exposure

Credit risk exposure relates to the sum of the following balance sheet items:

- cash and cash balances - demand deposits to credit institutions;
- debt instruments held for trading;
- non-trading debt instruments at fair value through profit or loss (FVPL);
- debt instruments at fair value through other comprehensive income (FVOCI);
- debt instruments at amortised cost (AC), other than trade and other receivables;
- trade and other receivables (for disclosure purposes in the tabular summaries below, any contract assets are also included in this category);
- finance lease receivables;
- debt instruments held for sale in disposal groups;
- positive fair value of hedge accounting derivatives;
- off-balance sheet exposures (primarily financial guarantees and undrawn loan commitments).

The credit risk exposure equates the gross carrying amount (or nominal value in the case of off-balance sheet positions) excluding:

- credit loss allowances for financial assets;
- credit loss allowances for loan commitments and financial guarantees;
- provisions for other commitments;
- any collateral held (including risk transfer to guarantors);

_ netting effects;
_ other credit enhancements;
_ credit risk mitigating transactions.

Between the 31 December 2020 and 31 December 2021, the credit risk exposure increased from EUR 286,699 million to EUR 312,439 million. This is an increase of 9.0% or EUR 25,740 million.

Reconciliation between the gross carrying amount and the carrying amount of the credit risk exposure components

in EUR million	Credit risk exposure	Credit loss allowances	Adjustments	Net carrying amount
Dec 21				
Cash and cash balances - demand deposits to credit institutions	1,033	-1	0	1,033
Debt instruments held for trading	6,389	0	0	6,389
Non-trading debt instruments at FVPL	2,793	0	0	2,793
Debt securities	1,975	0	0	1,975
Loans and advances to banks	10	0	0	10
Loans and advances to customers	808	0	0	808
Debt instruments at FVOCI	8,655	-23	94	8,749
Debt securities	8,655	-23	94	8,749
Loans and advances to banks	0	0	0	0
Loans and advances to customers	0	0	0	0
Debt instruments at AC	233,402	-3,761	0	229,641
Debt securities	35,565	-15	0	35,551
Loans and advances to banks	20,998	-6	0	20,991
Loans and advances to customers	176,839	-3,740	0	173,099
Trade and other receivables	2,239	-87	0	2,152
Finance lease receivables	4,319	-111	0	4,209
Debt instruments held for sale in disposal groups	0	0	0	0
Positive fair value of hedge accounting derivatives	79	0	0	79
Off-balance sheet exposures	53,529	-544	0	-
Total	**312,439**	**-4,527**	**94**	**255,044**
Dec 20				
Cash and cash balances - demand deposits to credit institutions	1,140	-1	0	1,139
Debt instruments held for trading	6,322	0	0	6,322
Non-trading debt instruments at FVPL	2,736	0	0	2,736
Debt securities	2,048	0	0	2,048
Loans and advances to banks	0	0	0	0
Loans and advances to customers	687	0	0	687
Debt instruments at FVOCI	8,109	-25	280	8,389
Debt securities	8,109	-25	280	8,389
Loans and advances to banks	0	0	0	0
Loans and advances to customers	0	0	0	0
Debt instruments at AC	214,790	-3,850	0	210,940
Debt securities	29,594	-15	0	29,579
Loans and advances to banks	21,469	-3	0	21,466
Loans and advances to customers	163,727	-3,831	0	159,895
Trade and other receivables	1,405	-64	0	1,341
Finance lease receivables	4,235	-108	0	4,127
Debt instruments held for sale in disposal groups	0	0	0	0
Positive fair value of hedge accounting derivatives	205	0	0	205
Off-balance sheet exposures	47,758	-474	0	-
Total	**286,699**	**-4,522**	**280**	**235,199**

Credit loss allowances comprise impairments for financial assets measured at amortised cost (including finance lease and trade and other receivables) and at fair value through other comprehensive income (FVOCI), as well as credit loss allowances and provisions for off-balance sheet exposures. Adjustments refer to the fair value changes of the carrying amount for financial assets at FVOCI.

Breakdown of credit risk exposure

On the following pages the credit risk exposure is presented according to different segmentation criteria.

Credit risk exposure by counterparty sector and financial instrument

					At amortised cost								
in EUR million	Cash and cash balances - demand deposits to credit institutions	Debt instruments held for trading	Non-trading debt instruments at FVPL	Debt instruments at FVOCI	Debt securities	Loans and advances to banks	Loans and advances to customers	Trade and other receivables	Finance lease receivables	Debt instruments held for sale in disposal groups	Positive fair value of hedge accounting derivatives	Off-balance sheet exposures	Total
Dec 21													
Central banks	0	39	0	6	37	16,429	0	1	0	0	0	0	16,511
General governments	0	3,287	198	6,585	29,867	0	7,091	107	285	0	0	2,661	50,081
Credit institutions	1,033	2,500	561	867	4,707	4,569	0	25	3	0	78	942	15,286
Other financial corporations	0	207	1,076	256	176	0	4,209	31	84	0	1	2,800	8,841
Non-financial corporations	0	350	221	941	778	0	76,950	1,949	3,088	0	0	33,278	117,556
Households	0	6	737	0	0	0	88,589	126	859	0	0	13,848	104,165
Total	**1,033**	**6,389**	**2,793**	**8,655**	**35,565**	**20,998**	**176,839**	**2,239**	**4,319**	**0**	**79**	**53,529**	**312,439**
Dec 20													
Central banks	0	38	0	42	35	16,763	0	1	0	0	0	0	16,878
General governments	0	2,806	278	5,961	25,206	0	6,791	55	374	0	0	3,154	44,625
Credit institutions	1,140	2,914	625	944	3,510	4,707	0	29	4	0	204	852	14,928
Other financial corporations	0	146	999	205	146	0	3,727	28	73	0	1	2,235	7,560
Non-financial corporations	0	418	254	957	698	0	71,324	1,162	2,974	0	0	29,595	107,381
Households	0	1	579	0	0	0	81,885	130	810	0	0	11,922	95,327
Total	**1,140**	**6,322**	**2,736**	**8,109**	**29,594**	**21,469**	**163,727**	**1,405**	**4,235**	**0**	**205**	**47,758**	**286,699**

Contingent liabilities / Off-balance sheet exposures by product

in EUR million	Dec 20	Dec 21
Financial guarantees	6,426	6,796
Loan commitments	35,650	40,593
Other commitments	5,682	6,141
Total	**47,758**	**53,529**

Credit risk exposure by industry and risk category

in EUR million	Low risk	Management attention	Substandard	Non-performing	Total
Dec 21					
Agriculture and forestry	2,317	944	221	134	3,616
Mining	644	75	10	21	750
Manufacturing	17,211	2,763	644	687	21,306
Energy and water supply	4,525	850	96	48	5,519
Construction	10,455	2,780	316	306	13,856
Development of building projects	5,356	1,218	60	79	6,713
Trade	12,550	2,628	479	456	16,112
Transport and communication	6,880	1,473	299	182	8,834
Hotels and restaurants	3,341	1,673	404	332	5,750
Financial and insurance services	39,654	1,406	168	87	41,316
Holding companies	3,911	433	66	42	4,452
Real estate and housing	29,170	5,277	880	347	35,674
Services	13,962	1,904	362	418	16,646
Public administration	47,115	621	173	1	47,909
Education, health and art	3,108	629	105	61	3,903
Households	82,492	4,725	1,974	1,546	90,736
Other	410	34	67	0	511
Total	**273,833**	**27,781**	**6,199**	**4,626**	**312,439**
Dec 20					
Agriculture and forestry	2,080	830	253	125	3,289
Mining	742	63	4	23	832
Manufacturing	15,950	2,966	676	634	20,226
Energy and water supply	3,940	655	233	64	4,893
Construction	9,594	2,284	435	331	12,645
Development of building projects	4,909	976	94	69	6,048
Trade	10,754	2,702	575	513	14,544
Transport and communication	6,555	1,368	189	202	8,313
Hotels and restaurants	3,618	1,442	294	343	5,697
Financial and insurance services	37,653	1,557	364	37	39,611
Holding companies	2,415	693	73	16	3,197
Real estate and housing	26,262	4,982	1,344	377	32,965
Services	12,086	1,719	375	495	14,675
Public administration	41,937	387	46	1	42,370
Education, health and art	2,877	620	77	103	3,677
Households	74,640	4,507	1,662	1,593	82,403
Other	352	3	203	0	558
Total	**249,041**	**26,086**	**6,731**	**4,841**	**286,699**

With 87.6%, the low risk exposure has the highest share in total credit risk exposure, while management attention represents 8.9%. The substandard exposure contributes 2.0% and the non-performing category 1.5%.

From industry and financial instrument point of view, the highest exposure is represented by households in loans and advances to customers with EUR 77,446 million (2020: EUR 71,093 million), representing 24.8% (2020: 24.8%) from total exposure, followed by real estate and housing in loans and advances to customers with an exposure of EUR 30,447 million (2020: EUR 28,338 million) representing 9.7% (2020: 9.9%) from total and public administration in debt securities with an exposure of EUR 29,641 million (2020: EUR 25,013 million) representing 9.5% (2020: 8.7%) from total.

Credit risk exposure by region and risk category

The geographic analysis of credit risk exposure is based on the country of risk of borrowers and counterparties. It also includes obligors domiciled in other countries if the economic risk exists in the respective country of risk. Accordingly, the distribution by regions differs from the composition of the credit risk exposure by geographical operating segments of Erste Group.

in EUR million	Low risk	Management attention	Substandard	Non-performing	Total
Dec 21					
Core markets	**238,499**	**24,809**	**5,538**	**4,049**	**272,894**
Austria	112,060	11,775	1,674	1,866	127,375
Czech Republic	62,361	4,528	1,131	736	68,756
Slovakia	22,793	1,721	1,085	308	25,906
Romania	18,097	1,846	334	428	20,705
Hungary	12,972	1,272	617	204	15,065
Croatia	7,180	3,268	600	466	11,514
Serbia	3,035	400	97	41	3,574
Other EU	**22,884**	**1,444**	**305**	**329**	**24,962**
Other industrialised countries	**6,973**	**394**	**42**	**68**	**7,477**
Emerging markets	**5,477**	**1,134**	**314**	**180**	**7,105**
Southeastern Europe/CIS	3,021	806	186	139	4,152
Asia	1,999	97	30	29	2,155
Latin America	158	15	5	11	189
Middle East/Africa	299	215	93	2	609
Total	**273,833**	**27,781**	**6,199**	**4,626**	**312,439**
Dec 20					
Core markets	**216,858**	**23,219**	**5,981**	**4,163**	**250,221**
Austria	104,551	10,786	1,839	1,826	119,002
Czech Republic	52,874	6,075	1,194	642	60,784
Slovakia	20,738	1,487	1,594	409	24,229
Romania	17,217	1,837	397	455	19,905
Hungary	10,394	1,147	539	181	12,262
Croatia	8,446	1,513	305	622	10,885
Serbia	2,637	376	114	27	3,154
Other EU	**20,704**	**1,153**	**311**	**463**	**22,631**
Other industrialised countries	**6,855**	**662**	**89**	**66**	**7,671**
Emerging markets	**4,624**	**1,053**	**350**	**149**	**6,175**
Southeastern Europe/CIS	2,771	650	119	120	3,660
Asia	1,450	124	26	27	1,626
Latin America	138	12	8	1	159
Middle East/Africa	265	268	197	1	730
Total	**249,041**	**26,086**	**6,731**	**4,841**	**286,699**

Credit risk exposure by region and IFRS 9 treatment

in EUR million	Stage 1	Stage 2	Stage 3	POCI	Credit risk exposure (AC and FVOCI)	Not subject to IFRS 9 impairment	Total
Dec 21							
Core markets	**226,304**	**32,447**	**3,839**	**349**	**262,938**	**9,956**	**272,894**
Austria	103,493	18,810	1,831	42	124,176	3,199	127,375
Czech Republic	61,074	5,411	679	41	67,206	1,550	68,756
Slovakia	22,553	2,347	299	113	25,312	595	25,906
Romania	16,133	2,628	388	57	19,206	1,499	20,705
Hungary	11,202	1,283	163	66	12,714	2,351	15,065
Croatia	8,996	1,684	440	28	11,148	366	11,514
Serbia	2,853	283	38	2	3,177	397	3,574
Other EU	**18,699**	**2,879**	**290**	**11**	**21,879**	**3,083**	**24,962**
Other industrialised countries	**5,391**	**848**	**47**	**11**	**6,297**	**1,180**	**7,477**
Emerging markets	**4,890**	**855**	**178**	**1**	**5,924**	**1,181**	**7,105**
Southeastern Europe/CIS	3,020	516	137	1	3,675	477	4,152
Asia	1,273	168	29	0	1,470	685	2,155
Latin America	156	19	9	0	184	5	189
Middle East/Africa	442	152	2	0	595	14	609
Total	**255,284**	**37,029**	**4,352**	**373**	**297,038**	**15,400**	**312,439**
Dec 20							
Core markets	**203,419**	**33,645**	**3,897**	**351**	**241,312**	**8,909**	**250,221**
Austria	92,710	20,412	1,778	37	114,938	4,064	119,002
Czech Republic	54,645	4,789	614	34	60,082	702	60,784
Slovakia	20,270	3,006	319	111	23,706	523	24,229
Romania	15,069	2,711	406	69	18,254	1,652	19,905
Hungary	9,600	1,100	152	77	10,929	1,333	12,262
Croatia	8,654	1,331	604	22	10,611	274	10,885
Serbia	2,470	296	24	2	2,793	361	3,154
Other EU	**15,697**	**3,078**	**371**	**55**	**19,201**	**3,431**	**22,631**
Other industrialised countries	**4,784**	**1,112**	**66**	**12**	**5,972**	**1,698**	**7,671**
Emerging markets	**4,301**	**821**	**146**	**1**	**5,269**	**907**	**6,175**
Southeastern Europe/CIS	2,639	578	119	1	3,336	324	3,660
Asia	932	124	27	0	1,083	544	1,626
Latin America	82	67	0	0	149	10	159
Middle East/Africa	648	52	1	0	701	29	730
Total	**228,200**	**38,655**	**4,480**	**419**	**271,754**	**14,945**	**286,699**

Stage 1 and Stage 2 comprise not impaired credit risks while Stage 3 includes impaired credit risks. POCI (purchased or originated credit impaired) consists of credit risks already impaired when purchased or originated.

The defaulted part of POCI amounted to EUR 167 million (2020: EUR 274 million), the non-defaulted part to EUR 206 million (2020: EUR 145 million).

The credit risk exposure increased by EUR 8,373 million, or 7.0% in Austria, and by EUR 14,300 million, or 10.9% in the CEE core markets. In the other EU member states (EU 27 excluding core markets), the credit risk exposure increased by EUR 2,331 million, or 10.3%, while in the emerging markets the registered increased was EUR 930 million or 15.1%. Slight decreased was recorded in other industrialised countries (EUR -194 million, or -2,5%). In total, Erste Group's core markets and the EU accounted for 95.3% (2020: 95.2%) of credit risk exposure. At 2.3% (2020: 2.2%), the share of emerging markets remained of minor importance.

Credit risk exposure by reporting segment and risk category

The reporting of operating segments of Erste Group conforms to the internal management and control structure and is based on geographical segments in order to provide more comprehensive information the segmental reporting also comprises business segments.

Credit risk exposure by geographical operating segment and risk category

in EUR million	Low risk	Management attention	Substandard	Non-performing	Total
Dec 21					
Austria	**145,492**	**14,367**	**2,142**	**2,426**	**164,428**
EBOe & Subs.	44,404	3,646	558	602	49,210
Savings Banks	63,498	9,009	1,215	1,387	75,109
Other Austria	37,589	1,712	370	438	40,109
CEE	**120,294**	**13,369**	**4,056**	**2,183**	**139,901**
Czech Republic	64,315	4,884	1,230	767	71,197
Slovakia	19,538	1,607	1,097	297	22,539
Romania	16,352	1,729	334	458	18,872
Hungary	10,287	1,139	612	200	12,238
Croatia	7,402	3,627	687	421	12,139
Serbia	2,399	382	96	40	2,917
Other	**8,048**	**45**	**0**	**17**	**8,110**
Total	**273,833**	**27,781**	**6,199**	**4,626**	**312,439**
Dec 20					
Austria	**135,415**	**13,923**	**2,200**	**2,533**	**154,072**
EBOe & Subs.	41,761	3,512	566	615	46,455
Savings Banks	60,446	8,111	1,221	1,470	71,249
Other Austria	33,208	2,299	413	448	36,368
CEE	**106,783**	**12,115**	**4,289**	**2,291**	**125,478**
Czech Republic	53,910	6,034	1,405	684	62,033
Slovakia	17,707	1,439	1,455	411	21,012
Romania	15,361	1,737	396	481	17,975
Hungary	8,834	1,007	539	160	10,539
Croatia	8,907	1,535	380	529	11,351
Serbia	2,064	364	114	26	2,568
Other	**6,842**	**48**	**242**	**17**	**7,149**
Total	**249,041**	**26,086**	**6,731**	**4,841**	**286,699**

Credit risk exposure by geographical operating segment and IFRS 9 treatment

	Credit risk exposure					Credit loss allowances				NPE coverage ratio		
in EUR million	Stage 1	Stage 2	Stage 3	POCI	Not subject to IFRS 9 impairment	Stage 1	Stage 2	Stage 3	POCI	Stage 2	Stage 3	POCI
Dec 21												
Austria	**127,109**	**24,314**	**2,360**	**55**	**10,590**	**-221**	**-663**	**-1,007**	**-1**	**2.7%**	**42.7%**	**1.7%**
EBOe & Subs.	40,962	7,070	597	6	574	-48	-157	-218	0	2.2%	36.5%	0.2%
Savings Banks	59,909	11,496	1,355	48	2,300	-135	-349	-595	-1	3.0%	43.9%	1.9%
Other Austria	26,238	5,748	408	0	7,715	-38	-157	-194	0	2.7%	47.5%	0.0%
CEE	**120,208**	**12,699**	**1,975**	**318**	**4,700**	**-327**	**-823**	**-1,288**	**-99**	**6.5%**	**65.2%**	**31.1%**
Czech Republic	63,519	5,610	697	52	1,318	-118	-288	-435	-20	5.1%	62.3%	38.0%
Slovakia	19,402	2,130	291	113	602	-49	-119	-167	-33	5.6%	57.3%	29.4%
Romania	14,675	2,337	396	57	1,407	-69	-220	-304	-14	9.4%	76.7%	23.7%
Hungary	10,069	928	159	66	1,016	-24	-65	-86	-17	7.0%	54.5%	25.9%
Croatia	10,156	1,535	395	28	24	-55	-118	-273	-15	7.7%	69.0%	52.8%
Serbia	2,387	159	37	2	332	-13	-13	-24	0	8.2%	64.7%	21.4%
Other	**7,966**	**16**	**17**	**0**	**111**	**-2**	**0**	**-16**	**0**	**0.3%**	**91.9%**	**0.0%**
Total	**255,284**	**37,029**	**4,352**	**373**	**15,400**	**-550**	**-1,486**	**-2,311**	**-100**	**4.0%**	**53.1%**	**26.7%**
Dec 20												
Austria	**114,235**	**26,033**	**2,452**	**72**	**11,278**	**-183**	**-685**	**-1,081**	**-4**	**2.6%**	**44.1%**	**5.4%**
EBOe & Subs.	37,174	7,633	603	6	1,038	-41	-152	-233	0	2.0%	38.7%	0.1%
Savings Banks	53,972	12,669	1,431	50	3,126	-119	-371	-636	-4	2.9%	44.4%	7.8%
Other Austria	23,089	5,731	418	17	7,114	-23	-162	-212	0	2.8%	50.7%	0.0%
CEE	**107,204**	**12,351**	**2,011**	**347**	**3,565**	**-280**	**-737**	**-1,333**	**-123**	**6.0%**	**66.3%**	**35.6%**
Czech Republic	56,144	4,793	642	47	408	-100	-252	-429	-22	5.2%	66.9%	46.0%
Slovakia	17,413	2,709	302	130	459	-35	-140	-175	-58	5.2%	58.1%	44.4%
Romania	13,775	2,430	403	69	1,298	-53	-183	-299	-17	7.5%	74.2%	25.3%
Hungary	8,307	919	130	77	1,106	-22	-64	-79	-16	7.0%	60.8%	21.1%
Croatia	9,468	1,317	511	22	33	-57	-86	-332	-10	6.5%	65.1%	43.6%
Serbia	2,098	183	24	2	262	-12	-13	-18	-1	7.3%	78.6%	35.5%
Other	**6,760**	**271**	**17**	**0**	**101**	**-1**	**-1**	**-16**	**0**	**0.5%**	**93.7%**	**0.0%**
Total	**228,200**	**38,655**	**4,480**	**419**	**14,945**	**-464**	**-1,424**	**-2,430**	**-127**	**3.7%**	**54.2%**	**30.4%**

Credit risk exposure by business segment and risk category

in EUR million	Low risk	Management attention	Substandard	Non-performing	Total
Dec 21					
Retail	67,049	5,674	2,458	1,507	76,689
Corporates	75,274	12,318	2,359	1,693	91,644
Group Markets	18,398	392	23	2	18,815
ALM & LCC	49,356	359	144	19	49,878
Savings Banks	63,498	9,009	1,215	1,387	75,109
GCC	258	29	0	17	304
Total	**273,833**	**27,781**	**6,199**	**4,626**	**312,439**
Dec 20					
Retail	60,580	5,596	2,143	1,514	69,833
Corporates	66,644	11,727	2,747	1,819	82,936
Group Markets	16,522	384	224	1	17,131
ALM & LCC	44,527	223	155	20	44,925
Savings Banks	60,446	8,111	1,221	1,470	71,249
GCC	320	46	242	17	625
Total	**249,041**	**26,086**	**6,731**	**4,841**	**286,699**

Credit risk exposure by business segment and IFRS 9 treatment

	Credit risk exposure					Credit loss allowances				NPE coverage ratio		
in EUR million	Stage 1	Stage 2	Stage 3	POCI	Not subject to IFRS 9 impairment	Stage 1	Stage 2	Stage 3	POCI	Stage 2	Stage 3	POCI
Dec 21												
Retail	65,736	8,584	1,458	105	806	-175	-515	-839	-28	6.0%	57.5%	27.0%
Corporates	68,263	16,615	1,501	220	5,045	-207	-613	-841	-71	3.7%	56.1%	32.1%
Group Markets	11,738	206	2	0	6,868	-17	-3	-1	0	1.6%	49.5%	0.0%
ALM & LCC	49,443	126	19	0	290	-15	-5	-19	0	4.2%	99.7%	0.0%
Savings Banks	59,909	11,496	1,355	48	2,300	-135	-349	-595	-1	3.0%	43.9%	1.9%
GCC	195	2	17	0	90	-1	0	-16	0	1.9%	91.9%	0.0%
Total	**255,284**	**37,029**	**4,352**	**373**	**15,400**	**-550**	**-1,486**	**-2,311**	**-100**	**4.0%**	**53.1%**	**26.7%**
Dec 20												
Retail	59,028	8,461	1,461	118	763	-141	-478	-859	-34	5.6%	58.8%	29.0%
Corporates	60,296	16,931	1,551	251	3,907	-182	-560	-901	-89	3.3%	58.1%	35.5%
Group Markets	10,273	116	1	0	6,741	-6	-3	0	0	2.5%	6.2%	100.0%
ALM & LCC	44,273	308	19	0	326	-16	-12	-19	0	3.8%	102.0%	0.0%
Savings Banks	53,972	12,669	1,431	50	3,126	-119	-371	-636	-4	2.9%	44.4%	7.8%
GCC	357	169	17	0	82	0	0	-16	0	0.1%	93.7%	0.0%
Total	**228,200**	**38,655**	**4,480**	**419**	**14,945**	**-464**	**-1,424**	**-2,430**	**-127**	**3.7%**	**54.2%**	**30.4%**

Non-performing credit risk exposure and credit loss allowances

For the definition of credit risk exposure classified as non-performing, please refer to the description of risk categories in the subsection 'Credit risk classification'. Credit risk allowances include credit loss allowances for financial assets, credit loss allowances for loan commitments and financial guarantees (all allowances within the scope of IFRS 9) and provisions for other commitments.

Credit loss allowances (all stages combined) covered 98.4% (2020: 93.5%) of the reported non-performing on-balance and off-balance credit risk exposure. For the portion of the non-performing credit risk exposure that is not covered by allowances, Erste Group assumes there are sufficient levels of collateral and expected other recoveries.

During 2021, the non-performing credit risk exposure decreased by EUR -215 million, or -4.4%, while the credit loss allowances for loans and advances together with credit loss allowances for loan commitments and financial guarantees remained at the same level. This development resulted in a moderate increase of 4.9 percentage points in the coverage of non-performing credit risk exposure by credit risk allowances.

The following tables show the coverage of the non-performing credit risk exposure by credit loss allowances (without taking into consideration collateral) as of 31 December 2021 and 31 December 2020. The differences in the credit allowance levels between the reporting segments result from the risk situation in the respective markets, different levels of collateralisation as well as the local legal environment and regulatory requirements.

The non-performing exposure ratio (NPE ratio) is calculated as the non-performing credit risk exposure divided by total credit risk exposure while the NPE coverage ratio is computed as total credit loss allowances (all allowances within the scope of IFRS 9) divided by non-performing credit risk exposure at AC and FVOCI. Collateral is not taken into account in the NPE coverage ratio.

Non-performing credit risk exposure by geographical operating segment and coverage by credit loss allowances and collateral

	Non-performing		Credit risk exposure		Credit loss allowances	Collateral for NPE		NPE ratio		NPE coverage ratio	NPE collateralisation ratio	
in EUR million	Total	AC and FVOCI	Total	AC and FVOCI	AC and FVOCI	Total	AC and FVOCI	Total	AC and FVOCI	AC and FVOCI	Total	AC and FVOCI
Dec 21												
Austria	**2,426**	**2,391**	**164,428**	**153,838**	**-1,891**	**1,259**	**1,258**	**1.5%**	**1.6%**	**79.1%**	**51.9%**	**52.6%**
EBOe & Subs.	602	600	49,210	48,635	-422	349	349	1.2%	1.2%	70.4%	58.1%	58.2%
Savings Banks	1,387	1,383	75,109	72,809	-1,080	747	746	1.8%	1.9%	78.1%	53.8%	54.0%
Other Austria	438	408	40,109	32,394	-389	163	162	1.1%	1.3%	95.3%	37.2%	39.7%
CEE	**2,183**	**2,112**	**139,901**	**135,201**	**-2,538**	**818**	**812**	**1.6%**	**1.6%**	**120.2%**	**37.5%**	**38.5%**
Czech Republic	767	745	71,197	69,878	-860	220	220	1.1%	1.1%	115.5%	28.6%	29.5%
Slovakia	297	297	22,539	21,936	-368	152	152	1.3%	1.4%	124.1%	51.2%	51.2%
Romania	458	419	18,872	17,465	-606	141	141	2.4%	2.4%	144.8%	30.8%	33.7%
Hungary	200	191	12,238	11,222	-192	110	104	1.6%	1.7%	100.4%	55.0%	54.4%
Croatia	421	421	12,139	12,114	-461	186	186	3.5%	3.5%	109.3%	44.2%	44.2%
Serbia	40	39	2,917	2,586	-50	9	9	1.4%	1.5%	128.6%	23.0%	23.3%
Other	**17**	**14**	**8,110**	**7,999**	**-18**	**8**	**6**	**0.2%**	**0.2%**	**122.7%**	**48.4%**	**38.6%**
Total	**4,626**	**4,517**	**312,439**	**297,038**	**-4,446**	**2,085**	**2,075**	**1.5%**	**1.5%**	**98.4%**	**45.1%**	**45.9%**
Dec 20												
Austria	**2,533**	**2,500**	**154,072**	**142,793**	**-1,953**	**1,209**	**1,207**	**1.6%**	**1.8%**	**78.1%**	**47.7%**	**48.3%**
EBOe & Subs.	615	606	46,455	45,417	-426	326	326	1.3%	1.3%	70.3%	53.1%	53.8%
Savings Banks	1,470	1,459	71,249	68,122	-1,130	751	748	2.1%	2.1%	77.4%	51.1%	51.3%
Other Austria	448	434	36,368	29,254	-397	132	132	1.2%	1.5%	91.4%	29.6%	30.4%
CEE	**2,291**	**2,238**	**125,478**	**121,913**	**-2,474**	**802**	**801**	**1.8%**	**1.8%**	**110.5%**	**35.0%**	**35.8%**
Czech Republic	684	682	62,033	61,625	-803	181	181	1.1%	1.1%	117.6%	26.5%	26.6%
Slovakia	411	411	21,012	20,553	-408	145	145	2.0%	2.0%	99.3%	35.3%	35.3%
Romania	481	436	17,975	16,677	-552	162	162	2.7%	2.6%	126.7%	33.8%	37.2%
Hungary	160	156	10,539	9,433	-182	93	93	1.5%	1.7%	116.6%	58.4%	59.4%
Croatia	529	528	11,351	11,318	-485	216	216	4.7%	4.7%	91.8%	40.9%	40.9%
Serbia	26	25	2,568	2,307	-44	4	4	1.0%	1.1%	174.0%	14.0%	14.2%
Other	**17**	**15**	**7,149**	**7,048**	**-18**	**8**	**6**	**0.2%**	**0.2%**	**126.6%**	**47.3%**	**39.4%**
Total	**4,841**	**4,753**	**286,699**	**271,754**	**-4,446**	**2,019**	**2,013**	**1.7%**	**1.7%**	**93.5%**	**41.7%**	**42.4%**

Non-performing credit risk exposure by business segment and coverage by credit loss allowances and collateral

	Non-performing		Credit risk exposure		Credit loss allowances	Collateral for NPE		NPE ratio		NPE coverage ratio	NPE collateralisation ratio	
in EUR million	Total	AC and FVOCI	Total	AC and FVOCI	AC and FVOCI	Total	AC and FVOCI	Total	AC and FVOCI	AC and FVOCI	Total	AC and FVOCI
Dec 21												
Retail	1,507	1,501	76,689	75,882	-1,557	616	610	2.0%	2.0%	103.7%	40.9%	40.6%
Corporates	1,693	1,598	91,644	86,598	-1,732	712	711	1.8%	1.8%	108.4%	42.1%	44.5%
Group Markets	2	2	18,815	11,947	-22	2	2	0.0%	0.0%	>500.0%	88.2%	88.4%
ALM & LCC	19	19	49,878	49,588	-40	0	0	0.0%	0.0%	207.5%	0.0%	0.0%
Savings Banks	1,387	1,383	75,109	72,809	-1,080	747	746	1.8%	1.9%	78.1%	53.8%	54.0%
GCC	17	14	304	214	-17	8	6	5.6%	6.7%	116.9%	48.4%	38.6%
Total	**4,626**	**4,517**	**312,439**	**297,038**	**-4,446**	**2,085**	**2,075**	**1.5%**	**1.5%**	**98.4%**	**45.1%**	**45.9%**
Dec 20												
Retail	1,514	1,513	69,833	69,070	-1,512	602	602	2.2%	2.2%	99.9%	39.8%	39.8%
Corporates	1,819	1,746	82,936	79,030	-1,731	658	657	2.2%	2.2%	99.2%	36.2%	37.7%
Group Markets	1	1	17,131	10,390	-9	0	0	0.0%	0.0%	>500.0%	0.0%	0.0%
ALM & LCC	20	19	44,925	44,599	-47	0	0	0.0%	0.0%	249.7%	0.4%	0.4%
Savings Banks	1,470	1,459	71,249	68,122	-1,130	751	748	2.1%	2.1%	77.4%	51.1%	51.3%
GCC	17	15	625	543	-16	8	6	2.7%	2.7%	111.4%	47.3%	39.4%
Total	**4,841**	**4,753**	**286,699**	**271,754**	**-4,446**	**2,019**	**2,013**	**1.7%**	**1.7%**	**93.5%**	**41.7%**	**42.4%**

Expected credit loss measurement

The general principles and standards for credit loss allowances are governed by internal policies in Erste Group. According to IFRS 9, credit loss allowances are calculated for all components of credit risk exposures which are measured at amortised cost (AC) or at fair value through other comprehensive income. They include debt securities, loans and advances, demand deposits on nostro accounts with commercial banks as well as finance lease and trade receivables. In addition, credit loss allowances are calculated for loan commitments and financial guarantees if they meet the applicable IFRS 9 definitions.

Classification into stages and definition of credit-impaired financial instruments

There are three main stages outlined for expected credit loss (ECL) determination. The stages approach applies to financial instruments within the scope of the impairment requirements of IFRS 9 and those that are not categorised as purchased or originated credit impaired financial assets (POCI), which form a category of their own. Depending on the impairment status and the assessment of the development of credit risk, these financial instruments are assigned to one of the three stages.

Stage 1 includes not credit-impaired financial instruments at initial recognition and not credit-impaired financial instruments without a significant increase in credit risk (SICR) since initial recognition, irrespective of their credit quality, or subject to the 'low risk exemption' allowed by IFRS 9. Financial instruments in Stage 1 have their ECL measured at an amount equal to the portion of lifetime expected credit losses that result from default events possible within the next 12 months.

Stage 2 includes not credit-impaired financial instruments with a significant increase in credit risk since initial recognition and not subject to the 'low credit risk exemption' allowed by IFRS 9, and not credit-impaired financial instruments if a PD curve valid at initial recognition was missing at the time of the implementation of IFRS 9 according to IFRS 9.7.2.20. Also, Stage 2 includes trade receivables without significant financing component to which the 'simplified approach' is applied mandatorily based on IFRS 9 requirements. In stage 2, the credit loss allowances are calculated as lifetime ECL. In the case of drawings by non-defaulted customers on previously committed credit lines, the whole exposure (on-balance and off-balance) is categorised as either Stage 1 or Stage 2, depending on the development of credit risk between the commitment date and the drawing date.

Stage 3 includes financial instruments that are credit-impaired at the reporting date but were not credit-impaired at initial recognition. In principle, a financial instrument becomes credit-impaired when the customer defaults. The default definition applied in Erste Group has been developed in accordance with EBA/GL/2016/07 'Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No 575/2013' and 'Commission Delegated Regulation (EU) 2018/171 of 19 October 2017 on supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards for the materiality threshold for credit obligations past due'. The definition specifies the rules for default contagion across groups of connected clients and clarifies the concept of technical default. Erste Group generally applies a customer view in applying the default definition, which leads to an impairment of all claims even if the customer defaults only on one of several transactions ('pulling effect'). On the other hand, an upgrade to a non-defaulted rating grade implies that the total exposure ceases to be impaired. In stage 3, credit loss allowances are calculated as lifetime ECLs.

POCI includes financial instruments that were credit-impaired at initial recognition, irrespective of whether they are still credit-impaired at the reporting date. Expected credit losses against POCI exposures are always calculated on a lifetime basis (cumulative changes in lifetime ECL since initial recognition) and are reflected in the credit-adjusted effective interest rate at initial recognition. As a result, no loss allowance is recognised at inception. Subsequently, only adverse changes in lifetime expected credit losses after the initial recognition are recognised as loss allowance, whilst favourable changes are recognised as impairment gains increasing the gross carrying amount of the POCI financial assets.

Significant increase in credit risk determination

Assessment of significant increase in credit risk (SICR) of financial instruments as at the reporting date since initial recognition is one of the key drivers affecting the amount of the ECL recognised based on IFRS 9 requirements. In this respect, across portfolios and product types, quantitative and qualitative indicators are defined for assessing SICR, including the indicator of 30 days-past-due (DPD).

Erste Group methodology allows introduction of the cure periods for migrations back to stage 1 from stage 2 in addition to those already established in general credit risk practices (forbearance, watch lists, default). They are rarely applied, only in specific countries for specific criteria without significant effect on the overall expected credit loss or stage 2.

Quantitative criteria. Quantitative SICR indicators include adverse changes in lifetime probability of default with significance being assessed by comparison to the thresholds. The bank has established thresholds for significant increases in credit risk based on both a percentage (relative) and absolute change in PD compared to initial recognition. SICR occurs for a particular financial instrument, when both the relative and the absolute thresholds are breached.

The relative measure is calculated as a ratio between current annualised LT PD and annualised LT PD value on initial recognition, considering remaining maturity of the instrument. Cumulative LT PD comparison can be used for simplification according to Erste Group methodology; however, such approach is rarely used. The breach means that such ratio has reached or is higher than the established threshold. These relative thresholds for SICR assessment are established at PD segment level or client rating level for each consolidated entity, as necessary, and are subject to initial and on-going validation.

Relative thresholds for SICR assessment by geographical operating segment

	Threshold interval (x times)	
	Min	Max
Dec 21		
Austria	**1.13**	**2.37**
EBOe & Subs.	1.13	2.37
Savings Banks	1.13	2.37
Other Austria	1.13	2.37
CEE	**1.03**	**4.08**
Czech Republic	1.13	3.59
Slovakia	1.13	4.08
Romania	1.13	3.37
Hungary	1.13	3.21
Croatia	1.13	3.13
Serbia	1.03	3.47
Total	**1.03**	**4.08**
Dec 20		
Austria	**1.13**	**2.37**
EBOe & Subs.	1.13	2.37
Savings Banks	1.13	2.37
Other Austria	1.13	2.37
CEE	**1.03**	**4.08**
Czech Republic	1.13	3.59
Slovakia	1.13	4.08
Romania	1.13	3.37
Hungary	1.13	3.21
Croatia	1.13	3.13
Serbia	1.03	3.47
Total	**1.03**	**4.08**

Thresholds might seem to show high dispersion, but they are driven mainly by regional and rating diversity. Regions with higher credit quality portfolios have lower thresholds than those with lower credit quality portfolios. The minimal threshold in almost all regions of 1.13 refers to sovereign rating classes that are centrally established. The average threshold of the Group is between 2 and 3.

There are certain portfolios where SICR quantitative criteria are assessed based on the ratings rather than PDs. Predefined rating notches' downgrade leads to SICR recognition. These rules are applied primarily to leasing and factoring business receivables.

Erste Group has not significantly recalibrated relative thresholds since IFRS9 implementation. They are kept stable as one of the most significant estimates in ECL measurement. Validation finding or significant change of PD models would lead to thresholds' recalibration. There were re-estimations only for individual entities and portfolios.

The absolute threshold refers to difference of LT PD on initial recognition and current LT PD (annualized or cumulative values). It is set to a maximum of 50 bps and serves as a backstop for migrations between the best ratings (LT PDs considered for remaining maturity). In such cases, relative thresholds may be breached, however overall LT PD is very low, and therefore SICR is not triggered.

Qualitative criteria. Qualitative SICR indicators include forbearance-type flags (identification of regulatory forbearance), work-out transfer flags (when the account starts being monitored by the work-out department), information from the early-warning system (if it is not sufficiently considered in the rating) and fraud indicators. The assignment of some of the qualitative indicators inherently relies on experienced credit risk judgment being exercised adequately and in a timely manner. The related group-wide and entity-level credit risk controlling policies and procedures (adapted as necessary in the light of transition to IFRS 9) ensure the necessary governance framework. These indicators are used internally for identification of insolvency or increased probability that a borrower will enter bankruptcy and there is increased risk of default in the foreseeable future.

Besides the qualitative indicators defined on a client level, the assessment of a significant increase in credit risk is performed on a portfolio level if the increase in credit risk on individual instruments or at a client level is available only with a certain time lag or is observable exclusively on a portfolio level. Erste Group has introduced additional portfolio level SICR assessment criteria due to Covid-19 pandemic and related economic impacts. Please see Covid-19 disclosures in the next chapter.

Examples are stage 2 overrides for parts of Swiss franc retail portfolio or in case of high LTV loans resulting from a specific law in Romania (clients are allowed to give up on real estate collateral against waiver of principal).

Backstop. A backstop is applied, and the financial instruments are considered to have experienced a SICR if the borrower is more than 30 days past due on contractual payments. As observed during validation, this does not represent a major trigger for Stage 2 classification.

Low credit risk exemption. The ‘low credit risk exemption’ allowed by IFRS 9 for ‘investment grade’ assets or other assets deemed ‘low risk’ (and resulting in 12 months expected credit losses being calculated irrespective of SICR quantitative measures) has been implemented with limitations in Erste Group. Thus, the potential activation of this exemption is limited to particular types of debt instruments and counterparty categories, and only if supported by sufficient ‘low risk’ evidence. On this basis, the ‘low risk exemption’ is applied in special cases to debt security exposures and only exceptionally to loans.

As of 31 December 2021, low credit risk exemption is applied only to debt securities in the Czech subsidiary (Česká spořitelna) and sovereign exposures in the Romanian subsidiary (Banca Comercială Română). In Česká spořitelna, the corresponding exposure amounted to EUR 14.2 billion (2020: EUR 10.5 billion) with PDs interval of 0.01%-0.3%. In Banca Comercială Română, the respective exposure amounted to EUR 5.1 billion (2020: EUR 4.5 billion) with PD 0.1%.

Measuring ECL – explanation of inputs and measurement

Credit loss allowances are calculated individually or collectively.

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

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

For exposures to non-defaulted customers (i.e. in Stage 1 and Stage 2), collective allowances are calculated according to a rule-based approach irrespective of the significance of the customer. The calculation of collective allowances requires grouping the related exposures into homogenous clusters on the basis of shared risk characteristics. The grouping criteria may differ based on the customer segment (retail, corporate) and include product type, collateral type, repayment type, loan to value band, and credit rating band.

The calculation of credit loss allowances is done on a monthly basis on a single exposure level and in the contractual currency of the exposure. To compute the collective credit loss allowance, Erste Group applies an expected credit loss (ECL) model based on a three-stage approach that leads to either a 12-month ECL or to a lifetime ECL. ECL is the discounted product of exposure at default (EAD) that also includes a credit conversion factor in the case of off-balance sheet exposures, probability of default (PD) and loss given default (LGD), defined as follows:

- PD represents the likelihood of a borrower defaulting on its financial obligation (per definition of default below), either over next 12 months (1Y PD) for Stage 1 exposures or over the remaining lifetime (LT PD) for Stage 2 and 3 and POCI exposures.

- EAD is based on the amounts Erste Group expects to be owed at the time of default, over next 12 months (1Y EAD) for Stage 1 exposures, or over the remaining lifetime (LT EAD) for Stage 2 and 3 and POCI exposures. The estimation includes current balance, expected repayments and expected drawings up to the current contractual limit by the time of default.
- LGD represents the Erste Group's expectation of the extent of loss on a defaulted exposure. LGD varies by type of counterparty, type and seniority of claim and availability of collateral or other credit support. LGD is expressed as a percentage loss per unit exposure at the time of default (EAD).

Life-time parameters

The LT PD is developed through observation of historical defaults from initial recognition through the lifetime of the loans. It is assumed to be the same across all assets in the same portfolio and rating band.

The 1Y and LT EADs are determined based on the expected payment profiles, which vary by product type. The LT EAD calculation utilises repayment schedule or repayment type (annuity, linear, bullet). In the case of undrawn commitments, credit conversion factor is estimated for reflecting the expected credit exposure in the EAD.

The LGD is estimated as a lifetime curve for any point in time, based on historical loss observations.

The risk parameters used in the ECL calculation take into account available information at the reporting date about past events, current conditions and forecasts on future economic trends. Generally, the risk parameters applied in the calculation of collective allowances differ from the risk parameters compliant with capital requirement regulations, calculated on a through-the-cycle basis, if the characteristics of the respective portfolio in combination with IFRS standards necessitate this.

Incorporation of forward-looking information

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

Thus, the unbiased probability weighted ECL considering FLI is derived using the weights representing the probability of occurrence of each macroeconomic scenario. Typical macroeconomic variables may include real gross domestic product, unemployment rate, inflation rate, production index as well as market interest rates. The selection of variables also depends on the availability of reliable forecasts for the given local market. Nevertheless, the main indication of estimated economic development is the GDP development. The bank is disclosing sensitivity of the staging and ECL on macro scenarios in the Covid-19 section below.

Following factors, materializing at the end of 2021 led us to assign 40% probability of occurrence to baseline forecast that could not fully reflect them:

- new variant (omicron),
- increasing inflation through-the region with potential effect on the increasing interest rates and
- unstable development of the geo-political situation – conflict Ukraine/Russia – that can as well effect energy prices.

The specific situation of the Covid-19 pandemic and extensive supporting measures led to delayed observation of the defaults. Erste Group addressed it with the lagging of the macroeconomic variables in credit risk parameters. Therefore, variables of 2020 and 2021 were included as additional predictors for future values of credit risk parameters.

Baseline, upside and downside scenarios of GDP growth by geographic region

	Scenario	Probability weights 2021-2023	GDP growth in % 2020	2021	2022	2023
Dec 21						
Austria	Upside	1%	-6.2	5.9	6.1	3.8
	Baseline	40%	-6.2	4.4	4.6	2.3
	Downside	59%	-6.2	-1.7	2.0	0.1
Czech Republic	Upside	11%	-5.8	4.1	5.7	6.4
	Baseline	40%	-5.8	2.4	4.0	4.7
	Downside	49%	-5.8	-2.3	0.5	1.8
Slovakia	Upside	17%	-4.8	4.9	6.1	5.6
	Baseline	40%	-4.8	3.0	4.2	3.7
	Downside	43%	-4.8	-2.5	-0.0	0.8
Romania	Upside	14%	-3.7	9.0	6.6	7.6
	Baseline	40%	-3.7	6.4	4.0	5.0
	Downside	46%	-3.7	-1.7	-0.5	2.0
Hungary	Upside	6%	-5.0	7.8	5.8	5.6
	Baseline	40%	-5.0	6.7	4.7	4.5
	Downside	54%	-5.0	0.1	1.3	2.3
Croatia	Upside	4%	-8.0	12.4	10.8	9.9
	Baseline	40%	-8.0	8.7	4.8	4.5
	Downside	56%	-8.0	-1.0	-1.2	1.0
Serbia	Upside	9%	-1.0	8.6	6.1	6.1
	Baseline	40%	-1.0	7.0	4.5	4.5
	Downside	51%	-1.0	0.4	1.1	2.5

Dec 20		2021-2023	2020	2021	2022	2023
Austria	Upside	1%	-7.6	5.0	3.9	3.3
	Baseline	40%	-7.6	3.4	2.3	1.7
	Downside	59%	-7.6	-2.1	1.0	-0.1
Czech Republic	Upside	4%	-7.7	5.5	7.3	6.4
	Baseline	40%	-7.7	3.9	5.7	4.8
	Downside	56%	-7.7	-1.7	1.2	1.7
Slovakia	Upside	25%	-7.1	8.2	6.7	6.4
	Baseline	35%	-7.1	6.0	4.5	4.2
	Downside	40%	-7.1	-1.2	-0.0	0.9
Romania	Upside	18%	-5.9	5.3	7.1	7.3
	Baseline	40%	-5.9	2.7	4.5	4.7
	Downside	42%	-5.9	-3.6	-0.2	1.9
Hungary	Upside	6%	-6.4	5.1	6.6	5.2
	Baseline	40%	-6.4	3.9	5.4	4.0
	Downside	54%	-6.4	-1.3	1.6	2.0
Croatia	Upside	8%	-9.9	8.2	9.0	9.1
	Baseline	40%	-9.9	5.2	3.6	4.0
	Downside	52%	-9.9	-2.5	-1.4	0.9
Serbia	Upside	15%	-1.3	6.3	5.3	5.8
	Baseline	40%	-1.3	5.0	4.0	4.5
	Downside	45%	-1.3	-0.5	0.9	2.6

Variables of crisis year 2020 have the same values across all three scenarios. Values of 2021 will be updated during next year in line with statistical office publication, similarly as 2020 values got updated during 2021.

In order to reflect on the higher volatility of macro-economic variables estimates and significantly higher downward risk of macro-economic recovery due to current developments of the Covid-19 pandemics and other risk factors the probability of occurrence of a conservative downside scenario was given a relatively high weight.

Erste Group recognizes additional challenges caused by the ESG (environmental, social and governance) risks. The bank is in the process of analyses how these risks can be incorporated into ECL measurement. In the Risk Materiality Assessment, climate and environment-related risks are overall assessed as medium and therefore classified as material, but they are expected to generate more impact on credit risk in the medium to long run. Therefore, in the short-term Erste Group did not include additional overlays for ESG risks for year-end 2021 in our calculations of ECL.

Covid-19

The Covid-19 pandemic has been causing high uncertainty in the global economy and on the global markets. Social distancing rules and lockdown restrictions imposed by governments led to economic slow-down and a significant drop of revenues across industries. Unprecedented state aid packages (e.g. state guarantees, bridge financing, the state temporarily paying workers' salaries to avoid redundancies, hardship funds for one-person and micro businesses) and moratoria programs were introduced in all of Erste Group's core markets to support citizens and companies. Especially in light of the vaccination progress, restricting measures were step by step reduced and economic development gained again momentum. The medium and long-term effect on the asset quality of the banking sector has still to be seen.

Effect on customers

Immediately upon the crisis showing severe economic impacts in our region (governmental decisions on lockdowns in countries of Erste Group perimeter), initiatives were started aiming to, on the one hand support Erste Group´s clients to the utmost extent, and on the other hand, manage the respective risks and bearing the responsibility of Erste Group towards all stakeholders in mind.

The measures differed from country to country as they had to be based on the legislative steps taken by the respective governments. Nevertheless, Erste Group gave a guidance to the entities in respect of underwriting, reporting and classification processes. Whereas overall valid state-moratoria were applied only in some countries, as e.g. in Hungary and Serbia, other measures like short-term deferrals or financial support schemes with public or state guarantees were offered in all countries. In addition to programmes with standard parameters that were defined at a very early stage of the crisis and should support an efficient processing, also individual solutions were agreed with clients that did not meet all predefined requirements. In the meantime, significant majority of the (governmental) support measures expired without resulting in a severe negative effect on the portfolio quality.

Credit risk exposure of non-financial corporations by industry – measures applied in response to the Covid-19 crisis

in EUR million	Loans and advances subject to EBA-compliant moratoria	Other loans and advances subject to Covid-19-related forbearance measures	Newly originated loans and advances subject to public guarantee schemes in the context of the Covid-19 crisis
Dec 21			
Agriculture and forestry	-	5	72
Mining	-	-	8
Manufacturing	0	13	798
Energy and water supply	-	0	25
Construction	0	4	159
Trade	0	5	637
Transport and communication	4	17	353
Hotels and restaurants	0	82	188
Financial and insurance services	-	-	0
Real estate and housing	2	61	20
Services	1	10	200
Public administration	0	0	0
Education, health and art	0	2	43
Total	**8**	**199**	**2,502**
Dec 20			
Agriculture and forestry	54	1	31
Mining	0	-	5
Manufacturing	274	15	514
Energy and water supply	9	-	19
Construction	45	12	125
Trade	116	22	416
Transport and communication	96	4	235
Hotels and restaurants	497	17	164
Financial and insurance services	17	-	0
Real estate and housing	369	63	14
Services	90	1	181
Public administration	0	-	-
Education, health and art	17	18	35
Total	**1,583**	**155**	**1,739**

Loans and advances of non-financial corporations to which the measures applied in the response to Covid-19 were granted and are currently valid (have not been expired), amounted to EUR 2.7 billion. Manufacturing, trade, followed by transport and communication and services accounted for the highest volumes. 92% of this amount referred to newly originated loans and advances subject to public guarantee schemes, with a usual maturity between two and five years. Government support programs in the form of state and institutional guarantees were at the beginning strongly used in Austria. in 2021 also the CEE-countries used such programmes to a significantly higher extent, which led to a significant increase of the outstanding amount as of 31 December 2021.

Loans and advances of households to which the measures applied in the response to Covid-19 were granted and are currently valid (have not been expired), amounted to EUR 388 million.

Besides measures disclosed in the table above, as a direct response to Covid-19 crisis additional measures that do not meet the forbearance criteria were approved amounting to EUR 3.2 billion.

Effect on business

In March 2020, risk management and business divisions started a joint initiative aiming to quickly provide a harmonised guidance for a focused industry approach within Erste Group, reflecting the changed economic environment. Industries and sub-industries were categorised into critical, high, medium or low risk according to the expected impacts from Covid-19 based on a combination of research material, feedback collected from client meetings and single name analyses, both centrally as well as in the entities.

Main driver for assigning an industry classification was the assessment of impacts of the crisis on the specific (sub)industry. The classifications are regularly reviewed on a 12-month rolling forecast basis to take current developments into account. In 2021, the economic development and the ability of many industries to adapt to new conditions resulted in some upgrades into lower risk categories. However, Erste Group keeps cautious view on the several, mostly affected industries (mainly hotels and leisure, air transportation). In light of this, the respective business and risk strategies for the (sub)industries were also adapted accordingly. This approach was aligned with all affected entities and business lines and approved by the respective governance bodies of Erste Group.

In the course of the year 2021, challenges on top of Covid-19-impacts had to be addressed by corporate clients: a rally in energy prices on the one hand and disruptions in supply chains on the other hand. The first ones had implications on various industries, mainly those with energy intensive production processes, but also impacting segments with high fuel cost shares. Issues with supply chains are managed by affected clients with diverse measures aiming to safeguard the business activity and liquidity (amongst others: active working capital management, targeted stocking-up, output adaptation, renegotiations with off takers etc.), in some cases also by ensuring backup/liquidity financing. Developments as mentioned above are reflected in the regular updates of the industry heatmap and the industry strategies.

Exposures in particular industries that belong to critical or high-risk sub-industries are referred to as significant risk in the following tables.

Credit risk exposure and credit loss allowances by industry and IFRS9 treatment – industry heatmap

in EUR million	Stage 1	Stage 2	Stage 3	POCI	Credit risk exposure (AC and FVOCI)	Not subject to IFRS 9 impairment	Total	Credit loss allowances
Dec 21								
Agriculture and forestry	2,936	532	130	6	3,603	13	3,616	-113
of which significant risk	8	3	0	-	11	0	11	-
Mining	465	43	14	3	525	226	750	-20
of which significant risk	0	-	-	-	0	-	0	-
Manufacturing	15,771	3,426	641	39	19,877	1,428	21,306	-575
of which significant risk	516	478	66	3	1,064	39	1,103	-43
Energy and water supply	4,570	691	44	3	5,309	210	5,519	-97
of which significant risk	0	1	0	-	1	0	1	-
Construction	10,278	1,629	254	9	12,171	1,685	13,856	-300
of which significant risk	4	12	1	-	17	0	17	-1
Trade	11,983	2,518	436	26	14,962	1,151	16,112	-416
of which significant risk	702	517	100	6	1,325	41	1,366	-66
Transport and communication	6,372	1,976	168	15	8,531	303	8,834	-200
of which significant risk	126	782	14	8	929	15	944	-37
Hotels and restaurants	1,157	4,236	315	32	5,741	8	5,750	-302
of which significant risk	1,082	4,178	303	32	5,595	8	5,603	-291
Financial and insurance services	35,048	1,219	65	11	36,343	4,973	41,316	-115
Real estate and housing	29,444	5,588	328	109	35,469	205	35,674	-411
of which significant risk	121	390	22	2	535	1	537	-20
Services	10,564	4,774	401	13	15,752	893	16,646	-373
of which significant risk	1,086	3,373	178	5	4,642	73	4,715	-169
Public administration	43,211	1,228	1	2	44,443	3,467	47,909	-52
Education, health and art	2,845	973	57	0	3,875	28	3,903	-67
of which significant risk	332	551	21	0	904	23	927	-31
Private households	80,203	8,188	1,499	103	89,993	743	90,736	-1,484
Other	437	6	0	0	444	67	511	-2
Total	**255,284**	**37,029**	**4,352**	**373**	**297,038**	**15,400**	**312,439**	**-4,527**
Dec 20								
Agriculture and forestry	2,550	593	122	5	3,270	19	3,289	-101
of which significant risk	6	8	0	-	14	0	14	-0
Mining	544	64	16	2	626	207	832	-20
of which significant risk	382	10	8	2	401	199	601	-13
Manufacturing	13,658	4,914	585	46	19,202	1,023	20,226	-587
of which significant risk	3,838	3,264	268	22	7,392	434	7,826	-278
Energy and water supply	4,054	577	56	8	4,695	198	4,893	-97
of which significant risk	0	3	-	-	3	0	3	-0
Construction	9,330	1,789	279	16	11,414	1,231	12,645	-320
of which significant risk	23	13	4	0	40	2	43	-3
Trade	9,251	3,758	472	44	13,525	1,019	14,544	-441
of which significant risk	2,169	2,244	193	10	4,617	213	4,830	-172
Transport and communication	5,759	1,993	196	4	7,952	361	8,313	-182
of which significant risk	977	1,192	29	1	2,199	60	2,259	-48
Hotels and restaurants	1,281	3,977	331	29	5,618	79	5,697	-271
of which significant risk	1,225	3,933	312	29	5,500	73	5,573	-255
Financial and insurance services	32,797	1,714	30	12	34,551	5,060	39,611	-110
Real estate and housing	25,893	5,824	262	129	32,108	857	32,965	-390
of which significant risk	242	340	17	0	599	4	603	-21
Services	9,461	3,976	488	5	13,930	745	14,675	-426
of which significant risk	2,395	2,688	341	5	5,430	173	5,603	-263
Public administration	38,571	560	1	3	39,135	3,235	42,370	-25
Education, health and art	2,604	932	102	1	3,638	38	3,677	-99
of which significant risk	280	465	60	0	806	8	814	-58
Private households	71,994	7,967	1,541	116	81,619	784	82,403	-1,452
Other	452	19	0	0	471	88	558	-1
Total	**228,200**	**38,655**	**4,480**	**419**	**271,754**	**14,945**	**286,699**	**-4,522**

Effect on Expected Credit Loss

As described above, an increase of the ECL might result from a re-assessment of the credit risk parameters and a migration to worse stages either via significant increase in credit risk (SICR) or a default.

Erste Group has reassessed credit risk parameters based on the latest macro-scenarios within FLI in December 2021. Specifics of the Covid pandemics (support measures) led us to lag the macroeconomic variables, due to delayed increase in default rates. Late materialization of the baseline forecast risks in the end of 2021 led us to keep probability of occurrence of baseline scenario on 40%. GDP scenarios and weights are shown in the table displayed within Incorporation of forward-looking information section above. The effect of the FLI in the ECL calculation as of 31 December 2021 amounted to EUR 550 million, similarly as at the end of 2020 (EUR 527 million). The increase of EUR 433 million in comparison with EUR 117 million as of 31 December 2019 can be directly attributed to the Covid-19 situation.

Erste Group has additionally addressed expected SICR by introducing Covid-19 portfolio overlays. The portfolio was divided in private individuals (PIs) and non-private individuals (non-PIs) and assessed the customers by considering any Covid-19 related relief measure granted (even if expired) as well as the internal industry heat-map and corresponding customer-specific one-year IFRS PD levels. Based on this assessment and individual reviews, customers were migrated to stage 2, i.e. lifetime ECL measure. The industry heat map and the portfolio overlays are subject to regular reviews. The effect of Covid-19 portfolio overlays in the ECL calculation as of 31 December 2021 amounted to EUR 184 million (2020: EUR 245 million). Majority of the overlays for PIs were released at the end of 2021. They were mainly driven by moratoria that expired at the beginning of 2021. Erste Group concluded that sufficient time has passed to capture potential negative developments via regular behavioural scoring. Regions with active moratoria kept PI overlay (mainly Hungary). Decrease of the overlay can be additionally attributed to the moderate upgrades of the heatmap.

Erste Group expects a moderate increase in defaults and portfolio deterioration in 2022, especially after state support measures are lifted.

The analysis tables below present effects of the portfolio overlays and FLI macro overlays both on exposure migration to stage 2 and resulting increase of ECL. Additional sensitivities to the baseline, upside and downside scenarios are simulated. Effects on industry segments, high risk industry sub-segments and geographical segments are disclosed.

Scenario simulation presents sensitivity analyses taking into consideration only changes due to the different values of PDs, if baseline, upside or downside FLI scenarios had 100% weight. Sensitivities of these particular scenarios are calculated in comparison to current production - weighted scenarios FLI shifted - PDs (weights and scenarios are disclosed in the 'Incorporation of forward-looking information' section above). Both staging and resulting ECL were simulated with the scenario PDs.

FLI macro shift resulting from the Covid-19 induced macro situation is comparable in both exposure and ECL as of 31 December 2021 (EUR 5,203 million exposure, EUR 550 million ECL) and 31 December 2020 (EUR 5,884 million exposure and EUR 527 million ECL). Incorporation of 100% baseline scenario instead of probability weighted, would lead to a decrease of Stage 2 exposure by EUR 4,239 million (2020: EUR 1,867 million), resulting in an ECL drop by EUR 334 million (2020: EUR 97 million). The downside scenario would lead to additional EUR 4,612 million of exposure migration to Stage 2 (2020: EUR 1,590 million), resulting in ECL increase of EUR 315 million (2020: EUR 100.3 million). Erste Group kept three scenario approach for 2021 variables. The downside scenario of 2021 leads to a higher spread in 2021 in comparison with 2020.

Analysis additionally shows that out of a EUR 37,029 million (2020: EUR38,655 million) exposure in Stage 2, EUR 10,726 million (2020: EUR 14,420 million) were migrated due to Covid-19 stage overlay, resulting in an increase of ECL of EUR 183.5 million (2020: EUR 245.1 million).

For the ECL change a positive sign (+) equals a release while a negative sign (-) equals an allocation. Values presented sensitivities are results of internal simulations.

Forward looking information (FLI) and stage overlays due to the Covid-19 pandemic

Impact on credit risk exposure by geographical operating segment

in EUR million	Current status - parameters (FLI shifted)					Simulations - difference to FLI shifts effect		
	Stage 1	Stage 2	Total	Stage 2 affected by		Upside scenario	Baseline scenario	Downside scenario
				Stage overlays due to Covid-19	FLI shifts			
Dec 21								
Austria	**127,109**	**24,314**	**151,423**	**+8,179**	**+3,291**	**-4,734**	**-3,486**	**+3,382**
EBOe & Subs.	40,962	7,070	48,032	+2,405	+654	-1,076	-712	+826
Savings Banks	59,909	11,496	71,405	+4,197	+1,333	-2,086	-1,467	+1,694
Other Austria	26,238	5,748	31,986	+1,577	+1,304	-1,572	-1,306	+862
CEE	**120,208**	**12,699**	**132,908**	**+2,548**	**+1,912**	**-1,226**	**-753**	**+1,230**
Czech Republic	63,519	5,610	69,129	+716	+872	-416	-323	+354
Slovakia	19,402	2,130	21,532	+823	+57	-277	-151	+414
Romania	14,675	2,337	17,012	+241	+851	-442	-214	+364
Hungary	10,069	928	10,997	+245	+76	-30	-16	+19
Croatia	10,156	1,535	11,691	+439	+29	-41	-33	+63
Serbia	2,387	159	2,546	+82	+26	-20	-16	+16
Other	**7,966**	**16**	**7,982**	**+0**	**+0**	**+0**	**+0**	**+0**
Total	**255,284**	**37,029**	**292,313**	**+10,726**	**+5,203**	**-5,960**	**-4,239**	**+4,612**
Dec 20								
Austria	**114,235**	**26,033**	**140,269**	**+9,497**	**+4,520**	**-2,188**	**-1,537**	**+1,132**
EBOe & Subs.	37,174	7,633	44,807	+2,635	+1,305	-731	-569	+269
Savings Banks	53,972	12,669	66,642	+5,007	+2,043	-912	-598	+509
Other Austria	23,089	5,731	28,820	+1,854	+1,172	-545	-370	+353
CEE	**107,204**	**12,351**	**119,555**	**+4,923**	**+1,364**	**-688**	**-330**	**+458**
Czech Republic	56,144	4,793	60,937	+1,576	+534	-305	-164	+164
Slovakia	17,413	2,709	20,122	+1,536	+103	-9	-5	+5
Romania	13,775	2,430	16,205	+793	+480	-315	-129	+248
Hungary	8,307	919	9,226	+468	+162	-21	-9	+8
Croatia	9,468	1,317	10,785	+456	+67	-31	-16	+15
Serbia	2,098	183	2,281	+94	+17	-8	-7	+18
Other	**6,760**	**271**	**7,031**	**+0**	**+0**	**+0**	**+0**	**+0**
Total	**228,200**	**38,655**	**266,855**	**+14,420**	**+5,884**	**-2,876**	**-1,867**	**+1,590**

Impact on credit loss allowances by geographical operating segment

in EUR million	Current status - parameters (FLI shifted)					Simulations - difference to FLI shifts effect		
	Stage 1	Stage 2	Total	out of which:		Upside scenario	Baseline scenario	Downside scenario
				Effect of stage overlays due to Covid-19	Effect of FLI shifts			
Dec 21								
Austria	**-221**	**-663**	**-883**	**-97.1**	**-233.4**	**+361.2**	**+234.1**	**-189.0**
EBOe & Subs.	-48	-157	-204	-29.7	-45.2	+76.3	+48.1	-39.0
Savings Banks	-135	-349	-484	-57.9	-112.2	+177.6	+114.0	-95.6
Other Austria	-38	-157	-195	-9.6	-75.9	+107.3	+71.9	-54.4
CEE	**-327**	**-823**	**-1,151**	**-86.4**	**-316.7**	**+158.4**	**+99.4**	**-126.3**
Czech Republic	-118	-288	-406	-18.0	-108.4	+22.3	+15.9	-19.3
Slovakia	-49	-119	-168	-16.2	-20.3	+35.5	+21.5	-30.3
Romania	-69	-220	-289	-11.1	-127.5	+55.7	+26.9	-47.7
Hungary	-24	-65	-88	-5.7	-30.1	+9.3	+4.9	-4.6
Croatia	-55	-118	-173	-31.8	-24.2	+31.3	+27.7	-21.7
Serbia	-13	-13	-26	-3.7	-6.1	+4.3	+2.5	-2.7
Other	**-2**	**0**	**-2**	**+0.0**	**+0.0**	**+0.0**	**+0.0**	**+0.0**
Total	**-550**	**-1,486**	**-2,036**	**-183.5**	**-550.1**	**+519.6**	**+333.5**	**-315.3**
Dec 20								
Austria	**-183**	**-685**	**-868**	**-114.8**	**-270.9**	**+89.0**	**+58.7**	**-46.4**
EBOe & Subs.	-41	-152	-193	-29.6	-56.9	+17.8	+12.2	-8.4
Savings Banks	-119	-371	-491	-66.5	-137.1	+37.4	+23.3	-21.1
Other Austria	-23	-162	-185	-18.6	-76.8	+33.8	+23.2	-17.0
CEE	**-280**	**-737**	**-1,017**	**-130.3**	**-256.8**	**+67.2**	**+38.2**	**-53.9**
Czech Republic	-100	-252	-352	-29.8	-97.2	+27.0	+18.4	-16.5
Slovakia	-35	-140	-175	-37.7	-15.8	+4.6	+2.6	-4.9
Romania	-53	-183	-235	-26.8	-68.3	+27.4	+12.7	-27.5
Hungary	-22	-64	-87	-12.6	-39.9	+1.9	+0.9	-0.8
Croatia	-57	-86	-143	-20.3	-29.8	+2.9	+1.6	-1.5
Serbia	-12	-13	-25	-3.1	-5.7	+3.3	+1.9	-2.8
Other	**-1**	**-1**	**-3**	**+0.0**	**+0.0**	**+0.0**	**+0.0**	**+0.0**
Total	**-464**	**-1,424**	**-1,888**	**-245.1**	**-527.6**	**+156.2**	**+97.0**	**-100.3**

Impact on credit risk exposure by industry

in EUR million	Current status - parameters (FLI shifted)					Simulations - difference to FLI shifts effect		
	Stage 1	Stage 2	Total	Stage 2 affected by		Upside scenario	Baseline scenario	Downside scenario
				Stage overlays due to Covid-19	FLI shifts			
Dec 21								
Agriculture and forestry	2,936	532	3,468	+109	+87	-49	-34	+39
of which significant risk	8	3	11	+2	+0	-0	-0	+3
Mining	465	43	508	+7	+12	-12	-11	+41
of which significant risk	0	-	0	+0	+0	+0	+0	+0
Manufacturing	15,771	3,426	19,197	+660	+797	-923	-625	+625
of which significant risk	516	478	994	+258	+16	-8	-3	+27
Energy and water supply	4,570	691	5,261	+10	+109	-112	-89	+90
of which significant risk	0	1	1	+0	+0	+0	+0	+0
Construction	10,278	1,629	11,907	+212	+626	-725	-562	+519
of which significant risk	4	12	16	+10	+0	-0	-0	+8
Trade	11,983	2,518	14,501	+688	+361	-390	-271	+342
of which significant risk	702	517	1,219	+450	+15	-26	-13	+40
Transport and communication	6,372	1,976	8,348	+566	+300	-356	-245	+148
of which significant risk	126	782	908	+496	+14	-17	-14	+28
Hotels and restaurants	1,157	4,236	5,394	+3,170	+25	-37	-23	+172
of which significant risk	1,082	4,178	5,259	+3,170	+25	-37	-23	+172
Financial and insurance services	35,048	1,219	36,267	+4	+307	-358	-329	+173
Real estate and housing	29,444	5,588	35,032	+1,748	+1,203	-1,570	-1,195	+1,458
of which significant risk	121	390	511	+277	+9	-112	-55	+297
Services	10,564	4,774	15,338	+2,739	+189	-215	-136	+178
of which significant risk	1,086	3,373	4,459	+2,707	+42	-17	-16	+105
Public administration	43,211	1,228	44,439	+8	+13	-10	-7	+14
Education, health and art	2,845	973	3,819	+602	+178	-203	-168	+168
of which significant risk	332	551	883	+347	+126	-147	-125	+146
Households	80,203	8,188	88,391	+204	+994	-1,001	-545	+644
Other	437	6	444	+0	+0	+0	+0	+0
Total	**255,284**	**37,029**	**292,313**	**+10,726**	**+5,203**	**-5,960**	**-4,239**	**+4,612**
Dec 20								
Agriculture and forestry	2,550	593	3,143	+146	+88	-21	-14	+13
of which significant risk	6	8	14	+0	+0	-0	-0	+0
Mining	544	64	608	+16	+9	-7	-4	+37
of which significant risk	382	10	392	+6	+0	+0	+0	+27
Manufacturing	13,658	4,914	18,572	+3,199	+1,020	-367	-265	+281
of which significant risk	3,838	3,264	7,102	+2,737	+236	-147	-116	+165
Energy and water supply	4,054	577	4,631	+7	+85	-51	-43	+16
of which significant risk	0	3	3	+0	+0	+0	+0	+0
Construction	9,330	1,789	11,119	+186	+849	-321	-228	+104
of which significant risk	23	13	36	+104	+0	+0	+0	+0
Trade	9,251	3,758	13,009	+1,861	+386	-110	-60	+126
of which significant risk	2,169	2,244	4,413	+1,601	+72	-17	-10	+66
Transport and communication	5,759	1,993	7,752	+1,179	+201	-127	-111	+75
of which significant risk	977	1,192	2,168	+989	+11	-6	-5	+18
Hotels and restaurants	1,281	3,977	5,258	+2,935	+101	-80	-29	+79
of which significant risk	1,225	3,933	5,158	+2,898	+101	-80	-29	+79
Financial and insurance services	32,797	1,714	34,510	+13	+137	-64	-56	+25
Real estate and housing	25,893	5,824	31,717	+1,416	+1,715	-960	-624	+425
of which significant risk	242	340	582	+240	+6	-0	-0	+7
Services	9,461	3,976	13,437	+1,916	+173	-34	-11	+43
of which significant risk	2,395	2,688	5,083	+1,891	+93	-14	-2	+36
Public administration	38,571	560	39,131	+1	+254	-173	-172	+3
Education, health and art	2,604	932	3,536	+573	+118	-110	-58	+66
of which significant risk	280	465	746	+336	+8	-6	-6	+5
Households	71,994	7,967	79,961	+971	+746	-450	-192	+290
Other	452	19	471	+0	+1	-1	-0	+8
Total	**228,200**	**38,655**	**266,855**	**+14,420**	**+5,884**	**-2,876**	**-1,867**	**+1,590**

Impact on credit loss allowances by industry

in EUR million	Current status - parameters (FLI shifted) All stages	out of which: Effect of stage overlays due to Covid-19	out of which: Effect of FLI shifts	Simulations - compared to effect of FLI Upside scenario	Baseline scenario	Downside scenario
Dec 21						
Agriculture and forestry	-113	-4.0	-14.6	+7.4	+4.5	-4.7
of which significant risk	-	-0.1	-0.1	+0.1	+0.0	-0.3
Mining	-20	-0.1	-0.9	+0.8	+0.5	-1.2
of which significant risk	-	+0.0	+0.0	-0.0	-0.0	-0.0
Manufacturing	-575	-12.8	-84.8	+90.3	+56.6	-52.8
of which significant risk	-43	-4.7	-5.8	+5.4	+3.3	-2.8
Energy and water supply	-97	-0.4	-15.4	+18.0	+12.2	-12.9
of which significant risk	-	+0.0	+0.0	+0.0	+0.0	+0.0
Construction	-300	-2.3	-41.6	+44.1	+29.0	-27.3
of which significant risk	-1	-0.1	-0.8	+1.1	+0.7	-0.5
Trade	-416	-10.8	-45.8	+43.9	+28.3	-24.9
of which significant risk	-66	-5.7	-5.4	+5.7	+3.5	-3.1
Transport and communication	-200	-13.0	-34.6	+37.3	+23.4	-17.3
of which significant risk	-37	-11.3	-7.2	+9.0	+5.6	-4.4
Hotels and restaurants	-302	-68.6	-24.6	+31.7	+20.7	-19.4
of which significant risk	-291	-68.6	-24.6	+31.7	+20.7	-19.4
Financial and insurance services	-115	-0.1	-22.2	+28.3	+21.6	-12.9
Real estate and housing	-411	-28.1	-57.8	+78.4	+51.2	-52.0
of which significant risk	-20	-4.5	-6.1	+14.1	+8.9	-11.2
Services	-373	-25.5	-22.1	+26.3	+16.1	-12.9
of which significant risk	-169	-24.9	-10.1	+13.3	+8.5	-7.0
Public administration	-52	-0.3	-2.7	+2.1	+1.6	-1.1
Education, health and art	-67	-8.0	-13.6	+15.1	+10.9	-9.4
of which significant risk	-31	-4.6	-7.6	+8.5	+6.4	-5.8
Households	-1,484	-9.4	-169.2	+95.8	+56.8	-66.4
Other	-2	+0.0	-0.2	+0.2	+0.2	-0.1
Total	**-4,527**	**-183.5**	**-550.1**	**+519.6**	**+333.5**	**-315.3**
Dec 20						
Agriculture and forestry	-101	-3.0	-20.3	+4.3	+2.7	-2.2
of which significant risk	0	-0.0	-0.1	+0.1	+0.1	-0.1
Mining	-20	-0.2	-0.7	+0.2	+0.1	-0.8
of which significant risk	-13	-0.0	-0.2	+0.0	+0.0	-0.6
Manufacturing	-587	-38.6	-86.1	+27.3	+18.5	-15.9
of which significant risk	-278	-30.7	-34.0	+10.8	+7.9	-6.9
Energy and water supply	-97	-0.2	-13.6	+4.0	+2.9	-2.1
of which significant risk	0	+0.0	+0.0	+0.0	+0.0	+0.0
Construction	-320	-2.8	-42.0	+10.2	+6.7	-4.9
of which significant risk	-3	-0.4	-0.6	+0.0	+0.0	-0.0
Trade	-441	-21.1	-46.0	+10.4	+6.5	-6.4
of which significant risk	-172	-15.7	-16.6	+3.9	+2.5	-3.1
Transport and communication	-182	-20.0	-24.1	+9.0	+6.8	-4.9
of which significant risk	-48	-15.5	-6.2	+2.0	+1.3	-1.3
Hotels and restaurants	-271	-53.4	-25.5	+7.2	+4.3	-5.4
of which significant risk	-255	-52.7	-25.4	+7.2	+4.3	-5.4
Financial and insurance services	-110	-0.3	-14.3	+4.6	+3.2	-2.2
Real estate and housing	-390	-33.7	-70.1	+20.7	+14.5	-10.3
of which significant risk	-21	-5.7	-0.2	+0.2	+0.1	-0.3
Services	-426	-23.3	-22.3	+4.9	+2.9	-3.0
of which significant risk	-263	-22.9	-12.3	+3.0	+1.7	-1.9
Public administration	-25	-0.0	-3.0	+0.3	+0.2	-0.1
Education, health and art	-99	-11.3	-41.1	+13.3	+8.6	-7.3
of which significant risk	-58	-4.2	-4.6	+1.3	+1.0	-0.6
Households	-1,452	-37.2	-117.5	+39.4	+19.0	-34.5
Other	-1	-0.0	-1.1	+0.3	+0.1	-0.4
Total	**-4,522**	**-245.1**	**-527.6**	**+156.2**	**+97.0**	**-100.3**

Composition of credit loss allowances

in EUR million	Dec 20	Dec 21
Credit loss allowances	-4,047	-3,983
Credit loss allowances for loan commitments and financial guarantees	-399	-464
Provisions for other commitments	-76	-80
Total	**-4,522**	**-4,527**

Credit loss allowances are computed based on IFRS 9 requirements, while provisions for other commitments are subject to IAS 37.

Restructuring, renegotiation and forbearance

Restructuring means contractual modification of any of the customer's loan repayment conditions including tenor, interest rate, fees, principal amount due or a combination thereof. Restructuring can be business restructuring (in the retail segment), commercial renegotiation (in the corporate segment), or forbearance (e.g. concession due to financial difficulties) in line with EBA requirements in both segments.

Restructuring and renegotiation

Restructuring as business restructuring in the retail segment or as commercial renegotiation in the corporate segment is a potentially effective customer retention tool involving, for example, re-pricing or the offering of an additional loan or both in order to maintain the business relationship.

Forbearance

The definition of 'forbearance' is included in Regulation (EU) 2015/227. A restructuring is considered 'forbearance' if it entails a concession towards a customer facing or about to face financial difficulties in meeting their contractual financial commitments. A borrower is in financial difficulties if any of the following conditions are met:

- the customer was more than 30 days past due in the past 3 months;
- the customer would be 30 days past due or more without receiving forbearance;
- the customer is in default;
- the customer would default without receiving forbearance.

Additional criteria for non-retail segment:

- early warning signals for this customer identified;
- customer has deteriorated financial figures, which led to decline of the rating grade;
- customer has increased probability of default.

Forborne exposure is assessed at loan contract level and means only the exposure to which forbearance measures have been extended and excludes any other exposure the customer may have, as long as no forbearance was extended to these.

Concession means that any of the following conditions are met:

- modification/refinancing of the contract would not have been granted, had the customer not been in financial difficulty;
- there is a difference in favour of the customer between the modified/refinanced terms of the contract and the previous terms of the contract;
- the modified/refinanced contract includes more favourable terms than other customers with a similar risk profile would have obtained from the same institution;
- the contract modification involves total or partial cancellation of the debt by (partial) write-off;
- activation of embedded forbearance clause of the contract;
- any waiver of a material financial or non-financial covenant.

Forbearance can be initiated by the bank or by the customer (on account of loss of employment, illness etc.). Components of forbearance can be instalment reduction, tenor extension, interest reduction or forgiveness, principal reduction or forgiveness, revolving exposure change to instalment and/or others.

Forbearance measures are divided and reported as:

- performing forbearance (incl. performing forbearance under probation that was upgraded from non-performing forbearance);
- non-performing forbearance (incl. defaulted forbearance; since 10/2019 the definition of non-performing status is aligned with default).

Forborne exposures are considered performing when:

- the exposure did not have non-performing status at the time the extension of or application for forbearance was approved;
- granting the forbearance has not led to classifying the exposure as non-performing/default.

Performing forborne exposures become non-performing when one of the following forbearance classifications is fulfilled during the monitoring period of a minimum two years:
_ an additional forbearance measure is extended;
_ the customer becomes more than 30 days past due on forborne exposure and in the past the customer was in the non-performing forbearance category;
_ the customer meets any of the default event criteria defined in the default definition;
_ for corporate customers, when a final restructuring agreement cannot be concluded within 18 months after the first forbearance measure.

The performing forbearance classification can be discontinued, and the account can become a non-forborne account when all the following conditions are met:
_ a minimum of two years has passed from the date of classifying the exposure as performing forbearance (probation period);
_ under the forborne payment plan, at least 50% of the original (pre-forbearance) instalment has been regularly repaid (significant repayment) at least during half of the probation period (in the case of retail customers);
_ regular repayments in a significant amount during at least half of the probation period have been made (in the case of non-retail customers);
_ significant repayment includes amount previously past-due (if any) or written-off (if no-past due amounts) for both segments retail and non-retail;
_ none of the exposure of the customer is more than 30 days past due at the end of the probation period.

The non-performing forbearance classification can be discontinued and reclassified as performing under probation when all the following conditions are met:
_ one year has passed from the date of classifying the exposure as non-performing forbearance or from the latest of the following events:
  _ the moment of extending the restructuring measure;
  _ the end of the grace period included in the restructuring agreement;
  _ the moment when the exposure has been classified as defaulted.
_ the forbearance has not led the exposure to be classified as non-performing;
_ the customer is not classified as defaulted according to the definition of default;
_ retail customers: the customer has demonstrated the ability to comply with the post-forbearance conditions by either of the following:
  _ the customer has never been more than 30 days past due during the 12 months prior to the reclassification and there is no delinquent amount;
  _ the customer has repaid the full past due amount or the written-off amount (if there was any).
_ corporate customers: significant amount has been paid in regular repayments, analysis of financial development that leaves no concern about future compliance with post-forbearance terms and conditions. Furthermore, the customer has never been more than 30 days past due during the 12 months prior to the reclassification and there is no delinquent amount.

The largest part of the forbearance measures is set and monitored within the responsibility of the local workout units according to the internal regulations and standards for the workout involvement. Forbearance measures are defined as qualitative trigger events in the SICR concept according to the internal regulations of Erste Group.

Default definition
Since October 2019 Erste Group has implemented the new definition of default, based on regulatory joint decision, in all entities to comply with the EBA 'Guidelines on the application of the definition of default under Art.178 of Regulation (EU) No 575/2013' and 'Commission Delegated Regulation (EU) 2018/171 of 19 October 2017 on supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards for the materiality threshold for credit obligations past due'. The impact of the modified default definition is immaterial.

Deviations to the group requirements are allowed only if are triggered by local regulatory requirements.

The definitions of non-performing and default are aligned within Erste Group.

The materiality of 90 days past due credit obligation is applied for on-balance exposure at client level and assessed daily against the group-wide defined materiality threshold (except the local regulator has defined different thresholds) for the:
_ retail exposure: as an absolute limit on client level of 100 EUR and relative 1% on client level;
_ non-retail exposure: as an absolute limit on client level of 500 EUR and relative 1% on client level.

Changes in the treatment of forbearance and default due to the Covid-19 pandemic are described in the previous chapter 'Covid-19'.

Credit risk exposure, forbearance exposure and credit loss allowances

in EUR million	Loans and advances	Debt securities	Other positions	Loan commitments	Total
Dec 21					
Gross exposure	**205,213**	**46,195**	**20,437**	**40,593**	**312,439**
thereof gross forborne exposure	3,786	0	0	119	3,904
Performing exposure	200,843	46,195	20,311	40,464	307,813
thereof performing forborne exposure	2,141	0	0	79	2,220
Credit loss allowances for performing exposure	-1,677	-38	-172	-214	-2,101
thereof credit loss allowances for performing forborne exposure	-100	0	0	-3	-103
Non-performing exposure	4,371	0	126	129	4,626
thereof non-performing forborne exposure	1,644	0	0	40	1,684
Credit loss allowances for non-performing exposure	-2,267	0	-89	-69	-2,426
thereof credit loss allowances for non-performing forborne exposure	-763	0	0	-28	-791
Dec 20					
Gross exposure	**191,523**	**39,751**	**19,774**	**35,650**	**286,699**
thereof gross forborne exposure	3,572	3	0	151	3,726
Performing exposure	186,989	39,747	19,608	35,514	281,858
thereof performing forborne exposure	2,324	0	0	83	2,407
Credit loss allowances for performing exposure	-1,554	-39	-158	-173	-1,923
thereof credit loss allowances for performing forborne exposure	-90	0	0	-3	-93
Non-performing exposure	4,534	4	166	137	4,841
thereof non-performing forborne exposure	1,248	3	0	68	1,319
Credit loss allowances for non-performing exposure	-2,452	-2	-97	-48	-2,598
thereof credit loss allowances for non-performing forborne exposure	-617	-1	0	-10	-629

Types of forbearance exposure

in EUR million	Gross forborne exposure	Modification in terms and conditions	Refinancing
Dec 21			
Loans and advances	3,786	3,519	267
Debt securities	0	0	0
Loan commitments	119	102	17
Total	**3,904**	**3,620**	**284**
Dec 20			
Loans and advances	3,572	3,335	237
Debt securities	3	3	0
Loan commitments	151	126	25
Total	**3,726**	**3,464**	**262**

Loans and advances also include lease, trade and other receivables.

Collateral

Recognition of credit collateral

Collateral Management is integrated in Underwriting Processes department of Credit Risk Portfolio division. The Group Collateral Management Policy Part 1 Credit Collateral defines, among other things, uniform valuation standards for credit collateral across the entire group. It ensures that the credit risk decision processes are standardised with respect to accepted collateral values.

All collateral types acceptable within the group are contained in the Group Collateral Catalogue. Locally permitted collateral is defined by the respective bank in accordance with applicable national legal provisions. The valuation and revaluation of collateral is done according to the principles defined in the Group Collateral Catalogue broken down by collateral type and based on the internal work instructions in accordance with the individual supervisory requirements. Whether a type of collateral or a specific collateral asset is accepted for credit risk mitigation is decided by Enterprise-wide Risk Management after determining if the applicable regulatory requirements are met. Credit underwriting monitors adherence to the standard work processes stipulated for assigning the acceptable collateral assets to the categories available.

Main types of credit collateral

The following types of credit collateral are accepted:
- real estate: residential and commercial real estate;
- financial collateral: securities, cash deposits and life insurance policies;
- guarantees: given by sovereigns, public sector entities, financial institutes, companies and private individuals. All guarantors must have a minimum credit rating, which is reviewed annually;
- movables: equipment, investment goods, machinery and motor vehicles;
- claims and rights: trade account receivables, leasehold rights and shares in a company's capital.

Collateral valuation and management

Collateral valuation is based on current market prices while taking into account an amount that can be recovered within a reasonable period. The valuation processes are defined, and their IT-supported technical application is performed by Collateral Management at group level and by authorised staff in each country with the assistance of software applications. The allocated collateral values are capped by the amount of the secured transaction.

Real estate valuation may only be performed by qualified valuators who are independent of the credit decision process. The valuation is to be made according to national, European or national standards and has to follow valuation methods defined by the bank. Internal guidelines define criteria of qualification and requirements of independence for the selection of valuators. A valuator may only perform two sequential valuations of the same asset, any further valuation has to result in the rotation of the valuator. For quality assurance purposes, real estate valuators and real estate valuations are supervised on an ongoing basis.

Impact of the energy efficiency, environmental impact of the object as well as significant physical risks (i.e. flood, windstorms, landslides) are to be assessed in the real estate collateral valuations. Information on energy efficiency and CO_2 emissions of the collateral assets are systematically collected and stored in the relevant systems.

The methods and discounts used for valuations are based on empirical data representing past experience of the workout departments and on the collected data on recoveries from realising collateral. The valuation discounts are adjusted regularly – at least once a year – to reflect the recoveries under consideration of foreseeable developments (like expected real estate price changes).

The revaluation of collateral is done periodically and is automated as far as possible. In the case of external data sources, the appropriate interfaces are used. The maximum periods for the revaluation of individual collateral assets are predefined and compliance is monitored by risk management using software applications. Apart from periodic revaluations, collateral is assessed when information becomes available that indicates a decrease in the value of the collateral for exceptional reasons. Particularly real estate collateral assets in development, showing problems like significant cost or time overrun, as well as assets, collateralizing loans with lower credit quality, are monitored or revalued with higher frequencies.

Concentration risks resulting from credit risk mitigation techniques may affect a single customer, but also a portfolio defined by region, industry, or type of collateral. Erste Group is a retail bank, and, due to its customer structure and the markets in which it operates, it does not have any concentrations with respect to collateral from customers. All guarantee liabilities and loans of a corporate guarantee provider are taken into consideration in the credit application process in order to prevent possible concentrations. Guarantees provided by sovereigns, a public sector entity or financial institutions have to lie within the approved limit of the guarantor. Concerning other areas of a potentially detrimental correlation of risks, the collateral portfolios are analysed using statistical evaluations for, among other things, regional or industry-specific concentrations within the scope of portfolio monitoring. The response to those risks identified includes, above all, the adjustment of volume targets, setting of corresponding limits and modification of the staff's discretionary limits for lending.

Collateral obtained in foreclosure proceedings is made available for sale in an orderly fashion, with the proceeds used to reduce or repay the outstanding claim. Generally, Erste Group does not occupy repossessed properties for its own business use. The main part of assets taken onto its own books is commercial land and buildings. In addition, residential real estate properties and transport vehicles are taken into Erste Group's possession. As of 31 December 2021, the carrying value of these assets obtained during the reporting period amounted to EUR 4 million (2020: EUR 15 million).

Treasury collateral

The department Trading Book Risk Management is responsible for treasury collateral. The Group Collateral Management Policy Part 2 defines, among other things, uniform valuation standards for treasury collateral across the entire group.

Under the framework of treasury collateral, netting 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) as well as collateral agreements (e.g. ISDA Credit Support Annex) are used for reducing the credit risk from derivatives.

Netting agreements make it 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. 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. The policy restrictions on collateral types ensure that collateral received predominantly consists of cash or securities of investment grade quality. In the case of securities used as collateral, an additional valuation discount (haircut) depending on credit quality and residual maturity is applied.

The following table compares the credit risk exposure broken down by financial instrument to the allocated collateral which corresponds to the accepted value after internal haircuts capped by the exposure amount.

Credit risk exposure by financial instrument and collateral

in EUR million	Total credit risk exposure	Collateral total	Collateralised by: Guarantees	Collateralised by: Real estate	Collateralised by: Other	Credit risk exposure net of collateral	IFRS 9 impairment relevant: Neither past due nor credit impaired	IFRS 9 impairment relevant: Past due but not credit impaired	IFRS 9 impairment relevant: Credit impaired
Dec 21									
Cash and cash balances - demand deposits to credit institutions	1,033	106	0	0	106	928	1,015	18	0
Debt instruments held for trading	6,389	97	96	1	0	6,292	0	0	0
Non-trading debt instruments at FVPL	2,793	796	614	174	8	1,996	0	0	0
Debt instruments at FVOCI	8,655	666	666	0	0	7,989	8,657	0	0
Debt instruments at AC	233,402	121,873	10,865	88,142	22,866	111,529	227,157	2,144	4,101
Debt securities	35,565	1,596	1,596	0	0	33,969	35,566	0	0
Loans and advances to banks	20,998	17,670	1,379	0	16,291	3,328	20,997	0	0
Loans and advances to customers	176,839	102,607	7,891	88,142	6,574	74,233	170,594	2,144	4,101
Trade and other receivables	2,239	75	61	1	13	2,165	1,532	622	82
Finance lease receivables	4,319	2,467	57	227	2,182	1,852	4,034	134	151
Debt instruments held for sale in disposal groups	0	0	0	0	0	0	0	0	0
Positive fair value of hedge accounting derivatives	79	0	0	0	0	79	0	0	0
Off-balance sheet exposures	53,529	6,567	191	3,518	2,857	46,963	47,178	27	185
thereof other commitments	6,141	976	2	139	834	5,165	0	0	0
Total	**312,439**	**132,646**	**12,551**	**92,064**	**28,031**	**179,793**	**289,573**	**2,946**	**4,519**
Dec 20									
Cash and cash balances - demand deposits to credit institutions	1,140	49	0	0	49	1,091	1,114	25	0
Debt instruments held for trading	6,322	1,203	205	1	997	5,119	0	0	0
Non-trading debt instruments at FVPL	2,736	630	448	174	8	2,106	0	0	0
Debt instruments at FVOCI	8,109	781	781	0	0	7,328	8,109	0	0
Debt instruments at AC	214,790	116,305	10,154	81,555	24,596	98,486	208,472	2,058	4,260
Debt securities	29,594	1,167	1,165	0	3	28,427	29,591	0	3
Loans and advances to banks	21,469	18,964	1,258	0	17,706	2,505	21,469	0	0
Loans and advances to customers	163,727	96,173	7,731	81,554	6,888	67,553	157,411	2,058	4,257
Trade and other receivables	1,405	20	2	1	16	1,385	881	463	61
Finance lease receivables	4,235	2,355	56	251	2,047	1,880	3,878	155	201
Debt instruments held for sale in disposal groups	0	0	0	0	0	0	0	0	0
Positive fair value of hedge accounting derivatives	205	59	0	0	59	146	0	0	0
Off-balance sheet exposures	47,758	6,061	1,700	2,991	1,370	41,697	41,808	36	232
thereof other commitments	5,682	843	304	103	436	4,839	0	0	0
Total	**286,699**	**127,461**	**13,346**	**84,973**	**29,142**	**159,238**	**264,262**	**2,738**	**4,754**

The collateral attributable to exposures that are credit-impaired at 31 December 2021 amounts to EUR 2,075 million (2020: EUR 2,013 million).

Loans and advances to customers

The tables on the following pages present the structure of the customer loan book, excluding loans to central banks and credit institutions broken down by different categories. Loans and advances to customers comprise:

_ loans and advances to customers at FVPL;
_ loans and advances to customers at AC;
_ finance lease receivables;
_ trade and other receivables.

The presentation is by gross carrying amount excluding loan loss allowances and collateral.

Loans and advances to customers by geographical operating segment and risk category

in EUR million	Low risk	Management attention	Substandard	Non-performing	Total
Dec 21					
Austria	**92,988**	**11,371**	**1,826**	**2,286**	**108,472**
EBOe & Subs.	33,266	3,074	501	568	37,409
Savings Banks	44,147	7,290	1,070	1,309	53,816
Other Austria	15,575	1,008	255	409	17,246
CEE	**59,613**	**10,456**	**3,487**	**2,065**	**75,621**
Czech Republic	28,806	3,854	1,078	722	34,459
Slovakia	13,647	1,353	941	295	16,236
Romania	8,340	1,172	292	400	10,204
Hungary	3,572	917	529	194	5,211
Croatia	3,830	2,816	553	415	7,614
Serbia	1,418	345	94	39	1,897
Other	**43**	**23**	**0**	**17**	**84**
Total	**152,645**	**21,851**	**5,313**	**4,368**	**184,177**
Dec 20					
Austria	**86,658**	**10,610**	**1,708**	**2,401**	**101,376**
EBOe & Subs.	31,623	2,928	504	578	35,634
Savings Banks	41,535	6,449	1,016	1,394	50,393
Other Austria	13,500	1,233	188	428	15,349
CEE	**52,956**	**9,645**	**3,687**	**2,116**	**68,404**
Czech Republic	22,899	4,771	1,275	651	29,597
Slovakia	12,481	1,227	1,216	364	15,289
Romania	7,317	1,231	349	419	9,316
Hungary	3,512	851	433	151	4,947
Croatia	5,465	1,237	303	506	7,511
Serbia	1,281	327	110	25	1,744
Other	**46**	**20**	**158**	**17**	**240**
Total	**139,660**	**20,275**	**5,552**	**4,534**	**170,020**

Loans and advances to customers by business segment and risk category

in EUR million	Low risk	Management attention	Substandard	Non-performing	Total
Dec 21					
Retail	57,845	5,036	2,285	1,489	66,655
Corporates	49,866	9,466	1,859	1,549	62,740
Group Markets	698	8	3	0	709
ALM & LCC	60	41	96	4	201
Savings Banks	44,147	7,290	1,070	1,309	53,816
GCC	28	10	0	17	55
Total	**152,645**	**21,851**	**5,313**	**4,368**	**184,177**
Dec 20					
Retail	52,511	5,013	2,007	1,495	61,025
Corporates	44,961	8,735	2,247	1,624	57,567
Group Markets	565	10	1	1	577
ALM & LCC	65	50	124	4	243
Savings Banks	41,535	6,449	1,016	1,394	50,393
GCC	23	17	158	17	215
Total	**139,660**	**20,275**	**5,552**	**4,534**	**170,020**

In the following tables, the non-performing loans and advances to customers divided by segments are contrasted with allowances for customer loans (all allowances for loans and advances to customers within the scope of IFRS 9) and the collateral for non-performing loans (NPL). The NPL ratio, the NPL coverage ratio (excluding collateral), and the NPL collateralisation ratio are also included.

Non-performing loans and advances to customers by geographical operating segment and coverage by loan loss allowances and collateral

in EUR million	Non-performing Total	Non-performing AC	Customer loans Total	Customer loans AC	Loan loss allowances AC	Collateral for NPL Total	Collateral for NPL AC	NPL ratio Total	NPL ratio AC	NPL coverage ratio AC	NPL collateralisation ratio Total	NPL collateralisation ratio AC
Dec 21												
Austria	**2,286**	**2,256**	**108,472**	**108,400**	**-1,568**	**1,233**	**1,232**	**2.1%**	**2.1%**	**69.5%**	**53.9%**	**54.6%**
EBOe & Subs.	568	568	37,409	37,400	-353	344	344	1.5%	1.5%	62.0%	60.5%	60.5%
Savings Banks	1,309	1,309	53,816	53,809	-918	726	726	2.4%	2.4%	70.2%	55.5%	55.5%
Other Austria	409	379	17,246	17,191	-297	163	162	2.4%	2.2%	78.2%	39.8%	42.7%
CEE	**2,065**	**2,059**	**75,621**	**74,888**	**-2,352**	**802**	**796**	**2.7%**	**2.7%**	**114.2%**	**38.8%**	**38.7%**
Czech Republic	722	722	34,459	34,459	-804	213	213	2.1%	2.1%	111.3%	29.5%	29.5%
Slovakia	295	295	16,236	16,236	-342	152	152	1.8%	1.8%	115.9%	51.4%	51.4%
Romania	400	400	10,204	10,204	-553	137	137	3.9%	3.9%	138.2%	34.4%	34.4%
Hungary	194	188	5,211	4,477	-179	107	102	3.7%	4.2%	95.4%	55.4%	54.1%
Croatia	415	415	7,614	7,614	-426	184	184	5.5%	5.5%	102.5%	44.2%	44.2%
Serbia	39	39	1,897	1,897	-49	9	9	2.1%	2.1%	124.4%	23.4%	23.4%
Other	**17**	**14**	**84**	**81**	**-17**	**8**	**6**	**20.4%**	**17.6%**	**116.1%**	**48.4%**	**38.6%**
Total	**4,368**	**4,330**	**184,177**	**183,369**	**-3,936**	**2,043**	**2,034**	**2.4%**	**2.4%**	**90.9%**	**46.8%**	**47.0%**
Dec 20												
Austria	**2,401**	**2,388**	**101,376**	**101,267**	**-1,670**	**1,182**	**1,179**	**2.4%**	**2.4%**	**69.9%**	**49.2%**	**49.4%**
EBOe & Subs.	578	578	35,634	35,622	-367	318	318	1.6%	1.6%	63.4%	54.9%	54.9%
Savings Banks	1,394	1,391	50,393	50,383	-976	732	729	2.8%	2.8%	70.2%	52.5%	52.4%
Other Austria	428	419	15,349	15,262	-327	132	132	2.8%	2.7%	78.1%	30.9%	31.5%
CEE	**2,116**	**2,115**	**68,404**	**67,829**	**-2,317**	**780**	**779**	**3.1%**	**3.1%**	**109.5%**	**36.9%**	**36.8%**
Czech Republic	651	651	29,597	29,596	-750	178	178	2.2%	2.2%	115.1%	27.3%	27.3%
Slovakia	364	364	15,289	15,289	-391	145	145	2.4%	2.4%	107.4%	39.8%	39.8%
Romania	419	418	9,316	9,316	-512	154	154	4.5%	4.5%	122.5%	36.7%	36.7%
Hungary	151	150	4,947	4,374	-167	90	89	3.0%	3.4%	111.4%	59.8%	59.6%
Croatia	506	506	7,511	7,511	-454	210	210	6.7%	6.7%	89.7%	41.5%	41.5%
Serbia	25	25	1,744	1,744	-43	4	4	1.5%	1.5%	168.2%	14.1%	14.1%
Other	**17**	**15**	**240**	**237**	**-16**	**8**	**6**	**7.0%**	**6.1%**	**111.4%**	**47.3%**	**39.4%**
Total	**4,534**	**4,518**	**170,020**	**169,333**	**-4,002**	**1,970**	**1,964**	**2.7%**	**2.7%**	**88.6%**	**43.5%**	**43.5%**

Total gross customer loans, total non-performing loans, and total collateral include both AC and FVPL portfolios.

The NPL ratio of loans and advances to customers is calculated by dividing the gross carrying amount of non-performing loans and advances to customers by the total gross carrying amount of loans and advances to customers. Consequently, it differs from the NPE ratio in section 'Credit risk exposure'. Collaterals for non-performing loans mainly consist of real estates.

The NPL coverage ratio is calculated by dividing total loss allowances by the gross carrying amount of the non-performing loans and advances to customers. Collateral is not considered.

Non-performing loans and advances to customers by business segment and coverage by loan loss allowances and collateral

in EUR million	Non-performing Total	Non-performing AC	Customer loans Total	Customer loans AC	Loan loss allowances AC	Collateral for NPL Total	Collateral for NPL AC	NPL ratio Total	NPL ratio AC	NPL coverage ratio AC	NPL collateralisation ratio Total	NPL collateralisation ratio AC
Dec 21												
Retail	1,489	1,483	66,655	65,921	-1,505	612	606	2.2%	2.2%	101.5%	41.1%	40.9%
Corporates	1,549	1,520	62,740	62,675	-1,488	697	696	2.5%	2.4%	97.9%	45.0%	45.8%
Group Markets	0	0	709	709	-2	0	0	0.0%	0.0%	>500.0%	0.0%	0.0%
ALM & LCC	4	4	201	201	-6	0	0	2.2%	2.2%	129.1%	0.1%	0.1%
Savings Banks	1,309	1,309	53,816	53,809	-918	726	726	2.4%	2.4%	70.2%	55.5%	55.5%
GCC	17	14	55	53	-17	8	6	30.8%	26.9%	116.1%	48.4%	38.6%
Total	**4,368**	**4,330**	**184,177**	**183,369**	**-3,936**	**2,043**	**2,034**	**2.4%**	**2.4%**	**90.9%**	**46.8%**	**47.0%**
Dec 20												
Retail	1,495	1,494	61,025	60,452	-1,466	599	599	2.4%	2.5%	98.2%	40.1%	40.1%
Corporates	1,624	1,614	57,567	57,466	-1,530	631	630	2.8%	2.8%	94.8%	38.9%	39.1%
Group Markets	1	1	577	577	-3	0	0	0.1%	0.1%	378.4%	0.0%	0.0%
ALM & LCC	4	4	243	243	-11	0	0	1.6%	1.6%	278.6%	1.8%	1.8%
Savings Banks	1,394	1,391	50,393	50,383	-976	732	729	2.8%	2.8%	70.2%	52.5%	52.4%
GCC	17	15	215	211	-16	8	6	7.8%	6.9%	111.4%	47.3%	39.4%
Total	**4,534**	**4,518**	**170,020**	**169,333**	**-4,002**	**1,970**	**1,964**	**2.7%**	**2.7%**	**88.6%**	**43.5%**	**43.5%**

Loans and advances to customers
and coverage by loan loss allowances by geographical operating segment and IFRS 9 treatment

	Loans to customers					Loan loss allowances				Coverage ratio		
in EUR million	Stage 1	Stage 2	Stage 3	POCI	Not subject to IFRS 9 impairment	Stage 1	Stage 2	Stage 3	POCI	Stage 2	Stage 3	POCI
Dec 21												
Austria	**85,834**	**20,286**	**2,227**	**54**	**72**	**-152**	**-488**	**-927**	**-1**	**2.4%**	**41.6%**	**1.5%**
EBOe & Subs.	30,887	5,942	565	6	10	-33	-118	-201	0	2.0%	35.6%	0.0%
Savings Banks	42,784	9,696	1,282	47	7	-99	-273	-546	-1	2.8%	42.6%	1.7%
Other Austria	12,163	4,648	379	0	55	-21	-96	-180	0	2.1%	47.3%	0.0%
CEE	**62,150**	**10,541**	**1,923**	**274**	**734**	**-259**	**-750**	**-1,256**	**-87**	**7.1%**	**65.3%**	**31.8%**
Czech Republic	29,306	4,428	674	52	0	-98	-264	-422	-20	6.0%	62.6%	38.2%
Slovakia	13,924	1,951	290	72	0	-43	-111	-166	-22	5.7%	57.3%	30.6%
Romania	7,865	1,907	377	55	0	-54	-198	-288	-13	10.4%	76.4%	24.4%
Hungary	3,413	844	155	66	734	-16	-61	-85	-17	7.2%	54.9%	25.9%
Croatia	5,940	1,257	389	28	0	-37	-104	-270	-15	8.3%	69.4%	52.6%
Serbia	1,702	155	37	2	0	-11	-13	-24	0	8.4%	64.7%	21.4%
Other	**49**	**15**	**17**	**0**	**2**	**-1**	**0**	**-16**	**0**	**0.3%**	**91.9%**	**0.0%**
Total	**148,033**	**30,842**	**4,167**	**327**	**808**	**-412**	**-1,238**	**-2,198**	**-88**	**4.0%**	**52.8%**	**26.8%**
Dec 20												
Austria	**78,106**	**20,748**	**2,341**	**71**	**109**	**-139**	**-514**	**-1,014**	**-4**	**2.5%**	**43.3%**	**5.3%**
EBOe & Subs.	28,688	6,352	575	6	12	-31	-119	-217	0	1.9%	37.6%	0.1%
Savings Banks	38,616	10,355	1,363	49	10	-93	-287	-592	-4	2.8%	43.5%	7.6%
Other Austria	10,803	4,041	403	16	87	-15	-107	-205	0	2.7%	50.8%	0.0%
CEE	**55,187**	**10,410**	**1,935**	**296**	**575**	**-219**	**-679**	**-1,297**	**-122**	**6.5%**	**67.0%**	**41.1%**
Czech Republic	24,980	3,958	611	47	2	-83	-232	-413	-22	5.9%	67.6%	46.1%
Slovakia	12,514	2,390	301	84	0	-31	-128	-175	-57	5.4%	58.1%	68.5%
Romania	6,818	2,044	387	66	0	-38	-170	-287	-17	8.3%	74.3%	25.1%
Hungary	3,354	820	124	76	573	-16	-59	-76	-16	7.2%	61.5%	21.2%
Croatia	5,973	1,028	489	22	0	-41	-76	-327	-9	7.4%	66.8%	43.5%
Serbia	1,548	171	23	2	0	-10	-13	-18	-1	7.8%	78.6%	35.5%
Other	**49**	**171**	**17**	**0**	**4**	**0**	**0**	**-16**	**0**	**0.1%**	**93.7%**	**0.0%**
Total	**133,343**	**31,329**	**4,293**	**368**	**687**	**-358**	**-1,193**	**-2,326**	**-125**	**3.8%**	**54.2%**	**34.1%**

Stage 1 and Stage 2 comprise not credit impaired loans and advances while Stage 3 includes credit impaired loans and advances. POCI (purchased or originated credit impaired) consists of loans already credit impaired when purchased or originated.

The defaulted part of POCI loans amounted to EUR 165 million (2020: EUR 226 million), the non-defaulted part to EUR 162 million (2020: EUR 142 million).

Loans and advances to customers
and coverage by loan loss allowances by business segment and IFRS 9 treatment

	Loans to customers					Loan loss allowances				Coverage ratio		
in EUR million	Stage 1	Stage 2	Stage 3	POCI	Not subject to IFRS 9 impairment	Stage 1	Stage 2	Stage 3	POCI	Stage 2	Stage 3	POCI
Dec 21												
Retail	56,634	7,746	1,440	101	734	-160	-488	-830	-28	6.3%	57.6%	27.6%
Corporates	47,819	13,255	1,423	178	65	-151	-475	-802	-59	3.6%	56.4%	33.2%
Group Markets	580	129	0	0	0	-1	-1	0	0	0.9%	18.5%	0.0%
ALM & LCC	183	14	4	0	0	-1	-1	-4	0	5.5%	99.5%	0.0%
Savings Banks	42,784	9,696	1,282	47	7	-99	-273	-546	-1	2.8%	42.6%	1.7%
GCC	34	2	17	0	2	-1	0	-16	0	2.3%	91.9%	0.0%
Total	**148,033**	**30,842**	**4,167**	**327**	**808**	**-412**	**-1,238**	**-2,198**	**-88**	**4.0%**	**52.8%**	**26.9%**
Dec 20												
Retail	51,256	7,638	1,443	115	573	-129	-455	-849	-34	6.0%	58.8%	29.4%
Corporates	42,700	13,097	1,466	203	100	-135	-443	-865	-88	3.4%	59.0%	43.2%
Group Markets	532	44	1	0	0	-1	-2	0	0	4.5%	5.3%	100.0%
ALM & LCC	213	26	4	0	0	-1	-6	-4	0	21.7%	115.2%	0.0%
Savings Banks	38,616	10,355	1,363	49	10	-93	-287	-592	-4	2.8%	43.5%	7.6%
GCC	26	169	17	0	4	0	0	-16	0	0.1%	93.7%	0.0%
Total	**133,343**	**31,329**	**4,293**	**368**	**687**	**-358**	**-1,193**	**-2,326**	**-125**	**3.8%**	**54.2%**	**34.1%**

The NPL exposures above exclude any write-offs recognised in accordance with IFRS 9. Erste Group distinguishes between contractual write-offs (debt forgiveness towards the defaulted client, either unconditional or subject to conditions) and technical write-offs (claim removal from the books due to no reasonable expectation of recovery, whereby the legal claim towards the customer remains). Both types of write-offs have as a pre-condition that all reasonable workout measures and late collections tools have been applied for optimal recovery.

In case of collateralised loans, write-off prior to the realisation of the collateral is not allowed unless specific circumstances apply. Additional technical write-off triggers include enforcement, worthlessness of claim/collateral, legally binding bankruptcy/liquidation or other economic loss of the rights to claim/sale. The amount written off during 2021, which is still subject to enforcement activity, totals EUR 157 million (2020: EUR 114 million).

Loans and advances to customers by geographical operating segment and currency

in EUR million	EUR	CEE-LCY	CHF	USD	Other	Total
Dec 21						
Austria	**101,287**	**0**	**2,300**	**2,913**	**1,972**	**108,472**
EBOe & Subs.	36,283	0	999	69	58	37,409
Savings Banks	51,407	0	1,257	38	1,114	53,816
Other Austria	13,597	0	43	2,806	800	17,246
CEE	**30,885**	**44,491**	**18**	**153**	**75**	**75,621**
Czech Republic	4,377	29,978	0	58	47	34,459
Slovakia	16,204	0	0	4	27	16,236
Romania	3,011	7,123	0	71	0	10,204
Hungary	1,245	3,960	1	5	0	5,211
Croatia	4,665	2,922	16	11	0	7,614
Serbia	1,384	509	0	3	0	1,897
Other	**33**	**42**	**4**	**5**	**0**	**84**
Total	**132,205**	**44,533**	**2,322**	**3,071**	**2,047**	**184,177**
Dec 20						
Austria	**93,915**	**0**	**2,672**	**2,518**	**2,272**	**101,376**
EBOe & Subs.	34,395	0	1,124	41	73	35,634
Savings Banks	47,503	0	1,505	57	1,329	50,393
Other Austria	12,017	0	43	2,420	869	15,349
CEE	**29,657**	**38,515**	**22**	**154**	**56**	**68,404**
Czech Republic	4,069	25,446	0	41	40	29,597
Slovakia	15,269	0	0	3	16	15,289
Romania	3,108	6,130	0	78	0	9,316
Hungary	1,277	3,643	3	23	0	4,947
Croatia	4,624	2,864	19	4	0	7,511
Serbia	1,310	431	0	3	0	1,744
Other	**175**	**45**	**4**	**16**	**0**	**240**
Total	**123,747**	**38,560**	**2,698**	**2,687**	**2,327**	**170,020**

'CEE-LCY' refers to the CEE geographical segment view where the local currency is the currency of the respective country (e.g. CZK in Czech Republic, RON in Romania etc.).

Securitisations

As of 31 December 2021, Erste Group held a further reduced residual portfolio of securitisations; there were no new investments undertaken and all repayments were made as scheduled.

The carrying amount of Erste Group's securitisation portfolio totalled EUR 9.2 million. The entire exposure consists of three individual transactions, which are AAA, AA and BBB rated.

35. Market risk

Market risk is the risk of loss that may arise due to adverse changes in market prices and to the parameters derived from them. These market value changes might appear in the profit and loss account, in the statement of comprehensive income or in hidden reserves. At Erste Group, market risk is divided into interest rate risk; credit spread risk, currency risk, equity risk, commodity risk, and volatility risk. This concerns both trading and banking book positions.

Methods and instruments employed

At Erste Group, potential losses that may arise from market movements are assessed using the value at risk (VaR). The VaR describes what level of losses may be expected as a maximum at a defined probability – the confidence level – within a certain holding period of the positions under historically observed market conditions. The calculation is based on the method of historic simulation with a one-sided confidence level of 99%, a holding period of one day, and a look back period of two years. In February 2021, Erste Group received regulatory approval for implementing a material model change to its internal model for measuring market risk. The material model change pertains to enhancements in the modelling of the specifics of the CZK interest rate risk factors. The model change affects both VaR and SVaR measures and accounts for an increase in Market Risk RWAs of EUR 300 million on the day of the change (19 February 2021).

Back-testing is used to constantly monitor the validity of the internal market risk model. This process is conducted with a one-day delay to monitor if the model projections regarding losses have actually materialised. At a confidence level of 99%, the actual loss on a given day should exceed the VaR estimate statistically only two to three times a year (1% of around 250 workdays).

A known limitation of the VaR approach is that on the one hand, the confidence level is limited to 99%, and on the other hand, the model takes into account only those market scenarios observed within the look-back period of two years to calculate the VaR for the current position of the bank. To address this limitation and in order to investigate any extreme market situations not reflected in the VaR approach, stress tests are conducted at Erste Group. These stress tests are designed to cover market movements of low probability and high impact.

The stress tests are carried out according to several methods: stressed VaR (SVaR) is derived from the normal VaR calculation. But instead of simulating only over the two most recent years, an analysis of a much longer period is carried out in order to identify a one-year period that constitutes a relevant period of stress for the current portfolio mix. According to the legal framework, that one-year period is used to calculate a VaR with a 99% confidence level. This enables Erste Group on the one hand to hold sufficient own funds available for the trading book even in periods of elevated market volatility, while on the other hand also enabling it to incorporate these resulting effects into the management of trading positions.

Standard scenarios are also defined, in which selected market factors are subject to extreme movements. Such scenarios are calculated at Erste Group for interest rates, stock prices, exchange rates and volatilities. Historic scenarios are a modification of the concept of standard scenarios. In this case, risk factor movements modelled after certain crisis events such as 'Covid-19 crisis' or 'Lehman bankruptcy' form the basis of the stress calculation. In addition, hypothetical stress test scenarios are defined based on analysis of the current economic environment and projections of adverse developments of key market risk drivers. These analyses are made available to the Market Risk Committee within the scope of the regular market risk reporting.

Methods and instruments of risk mitigation

At Erste Group, market risks are controlled in the trading book by setting several layers of limits. The overall limit on the basis of risk-weighted assets (RWAs) for the trading book is allocated by the management board in the Risk Appetite Statement while taking into account the risk-bearing capacity and projected earnings. A further breakdown in VaR, SVaR, and sensitivity limits is done by the Market Risk Committee on the basis of a proposal from the Trading Book Risk Management unit.

All market risk activities of the trading book are assigned risk limits that are entirely consistent with the overall RWA limit. The RWA limit is broken down into dedicated VaR and SVaR limits and assigned in a top-down procedure to the individual trading units. Additionally, in a bottom-up procedure, sensitivity limits are assigned on trading desk level in order to control exposures to individual risk drivers and ensure sufficient diversification. These are then aggregated and applied as a second-limit layer to the VaR and SVaR limits.

Limit compliance is verified at two levels: by the appropriate local risk management unit and by the Trading Book Risk Management unit. The monitoring of sensitivity limits is performed on both intraday and end-of-day basis. On demand, limit reports can also be triggered by the trading units or risk management on an ad-hoc basis.

Trading book VaR and SVaR are calculated daily at group level and reported to all key stakeholders including the relevant board members. In case of a limit breach, the escalation procedure ensures the timely remediation of the limit breach.

The VaR for banking book positions (BB-VaR) is based on the ICAAP calculation of Erste Group where 250.000 historical scenarios are calculated with a theoretical holding period of 1 year and a confidence level of 99.92%. The same calculation is used for the BB-VaR with a 1 day holding period and a 99% confidence level, consistent with the trading book methodology. The results of both calculations, ICAAP and BB-VaR are presented in the Group ALCO to the management board.

Analysis of market risk

The following tables show the VaR amounts at the 99% confidence level using equally weighted market data and with a holding period of one day:

Value at Risk of banking book and trading book

in EUR thousand	Total	Interest	Credit spread	Currency	Shares	Commodity	Volatility
Dec 21							
Erste Group	**52,336**	**44,166**	**6,771**	**1,140**	**2,216**	**247**	**1,012**
Banking book	47,130	40,360	6,771	-	-	-	-
Trading book	5,206	3,806	-	1,140	2,216	247	1,012
Dec 20							
Erste Group	**25,700**	**21,359**	**4,251**	**1,626**	**1,388**	**499**	**544**
Banking book	22,200	17,950	4,251	-	-	-	-
Trading book	3,500	3,409	-	1,626	1,388	499	544

In 2021 the model multiplier for Erste Group was increased from 3.0 to 3.25 by the ECB based on the observation that until Q1 2021 Erste Group did not have a systematic process for capturing Risks Not In The Model (RNIME). A regulatory compliant framework was implemented starting with June 2021 and a request for reduction of the regulatory multiplier back to 3.0 was deposited with the ECB. RNIME exposures in the Erste Group model are immaterial (1% on VaR and SVaR for Q4 2021), well below internal and regulatory thresholds, and do not indicate systematic underestimation of market risk measures.

In the course of the regular review of the models in 2021, some adjustments have been made on the Banking Book VaR calculation. The main improvements are connected to stability of calibration estimates and the harmonization of yield curves for the calibration and simulation.

Interest rate risk in the banking book (IRRBB)
Interest rate risk is the risk of an adverse change in both, the earnings and economic value of financial instruments caused by a movement in market interest rates. This type of risk arises when mismatches exist between assets and liabilities, including derivatives, in respect of their maturities or of the timing of interest rate adjustments.

In order to identify interest rate risk, all financial instruments, including off-balance instruments are used to calculate the impact of certain interest rate scenarios on their economic value and their earnings. Limits and thresholds are implemented for both aspects of the IRRBB, the change in economic value as well as the change in earnings. Positions without contractually defined maturity or repricing structures, such as demand deposits or overdrafts are modelled accordingly. For positions where the customer has the right to prepay his debt prepayment models are applied.

During 2021 significant updates of models for demand deposits, overdraft and credit cards in Česká spořitelna were implemented. Furthermore, several existing models have been recalibrated across the group.

Erste Group responded to the low or even negative interest rate environment since 2015, which poses a challenge for the interest rate risk measurement and management of banks, in recent years by adjusting its methodologies for measuring the interest rate risk. For internal risk calculations and for the regulatory interest rate risk measures, the maximum downward shock is floored according to the Annex III of the EBA guidelines on the management of interest rate risk arising from non-trading activities (EBA/GL/2018/02).

Exchange rate risk
Risk from open foreign exchange positions is the risk related to exchange rates that derives from the mismatch between assets and liabilities, or from currency-related financial derivatives. In the trading book, these risks might originate from customer-related or trading operations and are monitored and managed on a daily basis. Foreign currency exposure is subject to regulatory and internal limits. The internal limits for the trading book are set by the Market Risk Committee.

Erste Group separately measures and manages other types of risks relating to the group's balance sheet and earnings structure.
The translation risk related to the valuation of the balance sheet items, earnings, dividends and participations/net investments in local currency or foreign exchange has an impact on consolidated earnings and consolidated capital. Erste Group is also reducing the negative impact related to volatility of foreign exchange rates on asset performance (for example as a result of foreign exchange lending in the CEE countries that was stopped for clients not having sufficient regular income in the respective loan currency).

In order to manage its multi-currency earnings structure, Erste Group regularly discusses hedging opportunities and takes decisions in the Group Asset Liability Committee (ALCO). Asset and Liability Management (ALM) uses as the usual source of information the current financial results and the financial budget prepared for the upcoming period to obtain as much information as possible on the future foreign currency cash flows. The proposal, which mainly includes the volume, hedging level, hedge ratio and timeline of the hedging, is submitted by ALM to ALCO. The impact of translation on consolidated capital is monitored and reported to ALCO. The ALCO decisions are then implemented by ALM and the implementation status is reported on a monthly basis to ALCO.

The following table shows the largest open foreign currency positions of Erste Group as of 31 December 2021 and the open positions of as of 31 December 2020 (excluding foreign currency positions arising from equity participation).

Open foreign currency positions

in EUR thousand	Open Position
Dec 21	
US Dollar (USD)	41,318
Croatian Kuna (HRK)	25,591
Czech Koruna (CZK)	12,442
Serbian Dinar (RSD)	11,298
Hungarian Forint (HUF)	11,123
Polish Zloty (PLN)	10,676
Romanian Leu (RON)	4,368
Japanese Yen (JPY)	3,984
Swiss Franc (CHF)	-3,687
British Pound (GBP)	2,981
Dec 20	
Czech Koruna (CZK)	-189,279
Hungarian Forint (HUF)	19,284
Swiss Franc (CHF)	6,595
Romanian Leu (RON)	-5,184
Polish Zloty (PLN)	4,990
Serbian Dinar (RSD)	3,698
Swedish Krona (SEK)	-2,133
US Dollar (USD)	1,491
Croatian Kuna (HRK)	-1,284
British Pound (GBP)	-1,069

Credit spread risk

Credit spread risk is the risk of an adverse movement in the fair value of financial instruments caused by a change in the creditworthiness of an issuer perceived by the market. Erste Group is exposed to credit spread risk with respect to its securities portfolio, both in the trading as well as in the banking book.

For the trading book, credit spread risk for government bonds is part of the general market risk covered by VaR and SVaR. Corporate bonds are allocated to benchmark spread curves depending on sector, rating, and currency as part of the general risk covered by VaR and SVaR. The issuer specific risk is covered by the standardised approach for Pillar 1 of regulatory capital requirements. For the issuer specific risk of the trading book in Pillar 2, the spread risk is broken down into a systematic and a residual part risk and reported on an aggregated level.

Quantifying the credit spread risk of the securities in the banking book is based on a historical simulation. The maximum (hypothetical) drawdown that can be attributed to credit related risk factors over a one-year horizon is calculated. It is based on credit spread sensitivities (CR01) and the risk factors used are mainly asset swap spreads for sovereigns and iTRAXX CDS indices for financials and corporates. The resulting amount is used as part of the ICAAP calculations to determine the capital consumption of the banking book portfolio.

Hedging

Banking book market risk management consists of optimising Erste Group's risk position by finding the proper trade-off between the economic value of the balance sheet and forecasted earnings. Decisions are based on balance sheet development, economic environment, competitive landscape, fair value of risk, effect on net interest income and appropriate liquidity position. The steering body responsible for interest rate risk management is ALCO. ALM submits proposals for actions to steer the interest rate risk to ALCO and implements ALCO's decisions.

In order to achieve the goals of risk management, hedging activities focus on the two main control variables: net interest income and market value of equity risk. In a broader sense, hedging refers to an economic activity that mitigates risk but does not necessarily qualify for hedge accounting under IFRS rules. IFRS hedge accounting is applied, if possible, to avoid accounting mismatches due to hedging activity. Within the scope of IFRS-compliant hedge accounting, fair value hedges and cash flow hedges are used. In addition, the fair value option is used for hedging the market risk from the economic perspective. Most of the hedging within Erste Group concerns hedging of interest rate risk. The remainder is hedging of foreign exchange rate risk.

36. Liquidity risk

Recent Developments

In 2021, Erste Group further developed and enhanced its liquidity risk calculation and reporting system in the new technical environment. With these improvements, additional metrics such as Net Stable Funding Ratio (NSFR) or reports such as essential part of the Additional Liquidity Monitoring Metrics (ALMM) are now as well established on this technical environment.

Since June 2021, the NSFR is reported to the regulator according to the Regulation (EU) 2019/876 amending the Regulation (EU) No 575/2013 (CRR 2). Furthermore, the internal liquidity stress testing methodology 'Survival Period Analysis' (SPA) was reviewed and updated and is expected to become active in first half of 2022.

Liquidity strategy

In 2021, customer deposits remained the primary source of funding for Erste Group. The growth in loan volume was lower than inflows of customer deposits, the excess liquidity was mainly placed with central banks.

With regards its own issuance, Erste Group Bank AG issued EUR 3.1 billion in bonds in 2021 (2020: EUR 5.2 billion) which in net terms was approx. EUR 0.3 billion above the original plan at the beginning of the year due to pre-funding activities. EUR 2.6 billion (2020: EUR 2.6 billion) was collected by issuing senior preferred bonds. Tier 2 subordinated debt issuance amounted to EUR 0.5 billion (2020: EUR 0.6 billion). A volume of EUR 2.2 billion (2020: EUR 2.0 billion) was printed via benchmark sized transactions and the rest via private placements or the retail network. This was offset by repurchases of EUR 37 million (2020: EUR 62 million). The average tenor of all new issues in 2021 is approximately 7.0 years (2020: 7.1 years).

Erste Group's total TLTRO participation in 2021 was increased to a nominal value of EUR 21.2 billion (2020: EUR 14.1 billion).

Liquidity Metrics and Reports

The liquidity risk in Erste Group is defined in line with the principles set out by the Basel Committee on Banking Supervision as well as the European and Austrian regulations Regulation (EU) No 575/2013 (CRR) amended by the Regulation (EU) No 2019/876 (CRR 2), Commission Delegated Regulation (EU) 2015/61 amended by Commission Delegated Regulation (EU) 2018/1620 and the 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 further divided into insolvency risk and structural liquidity risk. The former is the short-term risk that current or future payment obligations cannot be met in full and on time in an economically justified manner, while structural liquidity risk is the long-term risk of losses due to a change in the Group's own refinancing cost or spread.

The regulatory liquidity ratios LCR and NSFR are well implemented in Erste Group. Erste Group uses the above-mentioned technical environment to calculate the LCR according to the Delegated Regulation (EU) 2015/61 (LCR DA) amended by Delegated Regulation (EU) 2018/1620 as well as the NSFR according to the Regulation (EU) No 575/2013 (CRR) amended by the Regulation (EU) No 2019/876 (CRR 2).

Erste Group calculates LCR on a daily basis on a solo and group level and reports it on a monthly basis to the authorities. Furthermore, the LCR is part of the internal Risk Appetite Statement (RAS). LCR limits are defined in the RAS targeting to be well above the regulatory requirement of 100%. Legal lending limits exist in all CEE countries where Erste Group is represented. As they restrict liquidity flows between Erste Group's subsidiaries in different countries they are taken into account for the assessment of liquidity risk in the survival period model as well as in the calculation of the LCR at group level.

The NSFR is calculated on a monthly basis on solo and group level and is reported on a quarterly basis to the authorities. Same as the LCR, the NSFR is part of the internal RAS and limits are defined in the RAS targeting to be well above the regulatory requirement of 100%

Short-term insolvency risk is monitored by calculating the survival period analysis (SPA) on both entity and group levels. This analysis determines the maximum period during which the entity can survive a set of defined scenarios, including a severe combined market and idiosyncratic crisis while relying on its pool of liquid assets. The monitored worst-case scenario simulates very limited money market and capital market access and at the same time significant client deposit outflows. Furthermore, the simulation assumes increased drawdown on guarantees and loan commitments dependent on the type of customer, as well as the potential outflows from collateralised derivative transactions estimating the effect of collateral outflows in the case of adverse market movements. The SPA is covering a stress horizon of up to 12 months. It is calculated on a monthly basis at entity and group level.

Structural liquidity is monitored with the internal Structural Liquidity Ratio (STRL), depicting the going concern maturity mismatches of the subsidiaries and the group as a whole. The STRL is calculated on a monthly basis both on solo entity level and on group level.

All above mentioned reports (LCR, NSFR, SPA and STRL) are reported to the Operational Liquidity Committee (OLC) as well as to the management board during the Group Asset and Liability Committee (Group ALCO).

Additionally, concentration risks in the funding structure and 'Counterbalancing Capacity' (CBC) are regularly monitored and reported to the regulator. Erste Group's funds transfer pricing (FTP) system has also proven to be an efficient tool for structural liquidity risk management.

Methods and instruments of risk mitigation

Apart from the reporting of liquidity metrics to the OLC and the Group ALCO, another important instrument for managing the liquidity risk within Erste Group Bank AG and in relation to its subsidiaries is the FTP system. Important information for liquidity management can be obtained by the process of planning funding needs. Therefore, a detailed overview of funding needs is prepared on a quarterly basis for the planning horizon across Erste Group.

The Comprehensive Contingency Plan of the Erste Group ensures the necessary coordination of all parties involved in the liquidity management process in case of crisis and is reviewed on a regular basis. The contingency plans of the subsidiaries are coordinated as part of the plan for Erste Group Bank AG.

Analysis of liquidity risk

In Erste Group, the liquidity risk is analysed by the following methods.

Liquidity coverage ratio. Erste Group uses the regulatory LCR for internal monitoring and steering of the liquidity position. To keep the LCR according LCR DA above both limits, the regulatory limit and the internal limit, Erste Group closely monitors its short-term liquidity inflows and outflows as well as its available counterbalancing capacity (CBC).

Liquidity coverage ratio

in EUR million	Dec 20	Dec 21
Liquidity buffer	58,218	71,566
Net liquidity outflow	30,754	40,361
Liquidity coverage ratio	189.3%	177.3%

Structural liquidity gaps. The long-term liquidity position is managed using structural liquidity gaps on the basis of contractual and partially behavioural cash flows of all liquidity relevant components of the balance sheet (on-balance and off-balance). This liquidity position is calculated for each material currency.

Cash flows are broken down by contractual maturities in accordance with the amortisation schedule and arranged in maturity ranges. All customer products without contractual maturities (such as demand deposits and overdrafts) are included according to a going concern maturity profile using model based on statistically observed client behaviour.

Structural liquidity gap

	0-12 months		1-3 years		3-5 years		> 5 years	
in EUR million	Dec 20	Dec 21	Dec 20	Dec 21	Dec 20	Dec 21	Dec 20	Dec 21
Liquidity gap	30,829	37,894	-6,329	-7,021	-5,487	-10,414	-20,221	-21,690

An excess of assets over liabilities is indicated by a positive value, while an excess of liabilities over assets is indicated by a negative value. The cash inflows from liquid securities amounting to EUR 30.7 billion (2020: EUR 27.4 billion), which are accepted as collateral by the central banks to which Erste Group has access, are considered in the first time bucket rather than considering them at their contractual maturity.

Counterbalancing capacity. Erste Group regularly monitors its counterbalancing capacity, which consists of cash, excess minimum reserves at the central banks as well as unencumbered central bank eligible assets and other liquid securities, including impacts from repos, reverse repos and securities lending transactions. These assets can be mobilised in the short term to offset potential cash outflows in a crisis situation.

The figures for December 2021 in the tables below (term structure of counterbalancing capacity and financial liabilities) are extracted from the new technical environment es described in the section ‘recent developments’ whereas the figures for December 2020 are based on the old technical environment which was still in use back then. The deviations that arise due to the change of the systems are minor and are mainly driven by improved data quality in the new environment.

Term structure of counterbalancing capacity

in EUR million	< 1 week	1 week-1 month	1-3 months	3-6 months	6-12 months
Dec 21					
Cash, excess reserve	29,074	0	0	0	0
Liquid assets	37,951	-6,126	-1,134	-1,447	-2,252
Other central bank eligible assets	1,119	-43	328	-267	499
Thereof retained covered bonds	-86	0	470	0	500
Thereof credit claims	331	0	0	0	243
Counterbalancing capacity	**68,144**	**-6,170**	**-806**	**-1,714**	**-1,753**
Dec 20					
Cash, excess reserve	23,741	0	0	0	0
Liquid assets	31,000	-2,904	-2,121	-801	-2,037
Other central bank eligible assets	3,223	-88	1,534	-188	-205
Thereof retained covered bonds	601	0	1,677	0	0
Thereof credit claims	774	0	0	0	0
Counterbalancing capacity	**57,964**	**-2,992**	**-587**	**-990**	**-2,242**

The figures above show the total amount of potential liquidity available for the group in a going concern situation considering the applicable central bank haircuts. In a crisis situation, adverse market movements can decrease this amount. The initial counterbalancing capacity available at group level is reduced by additional stressed haircuts. Negative figures are maturing positions of the counterbalancing capacity. Positive figures after one week are positions not immediately available as counterbalancing capacity.

Financial liabilities. The table below shows the undiscounted principal cash flows for all financial liabilities. Data in the financial liabilities table contain interest cash flows for December 2021 whereas for December 2020 they are not included. The reason for this is the switch to the new technical infrastructure during 2021 allowing to report interest cash-flows.

Financial liabilities

in EUR million	Carrying amounts	Contractual cash flows	< 1 month	1-12 months	1-5 years	> 5 years
Dec 21						
Non-derivative liabilities	**274,539**	**278,718**	**209,599**	**11,005**	**39,401**	**18,714**
Deposits by banks	31,886	33,427	4,176	3,315	23,147	2,790
Customer deposits	210,523	213,550	204,311	3,581	4,213	1,445
Debt securities in issue	25,295	26,091	1,088	2,731	10,104	12,169
Subordinated liabilities	6,835	5,650	25	1,377	1,938	2,310
Derivative liabilities	**1,933**	**1,953**	**-32**	**729**	**1,018**	**239**
Derivatives liabilities with netted Cash Flows	0	1,406	105	282	788	231
Derivatives liabilities with gross Cash Flow (net)	0	547	-137	446	229	8
Outflows	0	44,997	27,760	10,706	5,534	995
Inflows	0	-44,449	-27,897	-10,260	-5,305	-987
Contingent liabilities	**0**	**53,529**	**53,529**	**0**	**0**	**0**
Financial guarantees	0	6,796	6,796	0	0	0
Commitments	0	46,734	46,734	0	0	0
Other financial liabilities	**2,190**	**2,190**	**2,190**	**0**	**0**	**0**
Total	**278,663**	**336,391**	**265,286**	**11,733**	**40,419**	**18,953**
Dec 20						
Non-derivative liabilities	**246,518**	**255,108**	**175,767**	**25,824**	**37,358**	**16,159**
Deposits by banks	24,771	25,141	4,671	1,486	17,408	1,576
Customer deposits	191,070	194,088	164,600	20,655	7,330	1,503
Debt securities in issue	24,587	31,016	6,470	3,324	10,129	11,092
Subordinated liabilities	6,089	4,863	25	359	2,491	1,988
Derivative liabilities	**2,226**	**1,512**	**-5**	**524**	**666**	**326**
Derivatives liabilities with netted Cash Flows	-	1,469	237	293	606	333
Derivatives liabilities with gross Cash Flow (net)	-	43	-242	231	60	-7
Outflows	-	51,265	38,785	7,464	4,032	983
Inflows	-	-51,222	-39,027	-7,234	-3,972	-990
Contingent liabilities	**-**	**47,758**	**47,758**	**0**	**0**	**0**
Financial guarantees	-	6,426	6,426	0	0	0
Commitments	-	41,332	41,332	0	0	0
Other financial liabilities	**1,286**	**1,286**	**1,286**	**0**	**0**	**0**
Total	**250,030**	**305,664**	**224,806**	**26,348**	**38,024**	**16,485**

As of year-end 2021, the currency composition of the non-derivative liabilities consisted of approximately 71% EUR, 17% CZK, 4% RON, 3% USD, and 5% in other currencies (2020: 70% EUR, 19% CZK, 3% RON, 3% USD and 5% in other currencies).

Besides the contingent liabilities from unused credit lines and guarantees, material potential cash outflow is calculated from the collateralised derivative transactions for the stress testing, following a historical lookback approach, which amounted to EUR 1.2 billion (2020: EUR 1.1 billion) in the severe combined idiosyncratic and market crisis scenario as of 31 December 2021.

As of 31 December 2021, the volume of customer deposits due on demand amounted to EUR 167.7 billion (2020: EUR 144.9 billion). According to customer segments, the customer demand deposits are composed as follows: 64% private individuals, 21% small and medium-sized enterprises, 8% large corporates, 4% public sector, and 3% non-banking financial institutions (2020: 65% private individuals, 15% large corporates, 14% small and medium-sized enterprises, 4% public sector, and 2% non-banking financial institutions).

37. Operational risk

In line with Article 4 Section 52 of regulation (EU) 575/2013 (CRR), Erste Group defines operational risk as the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events, including legal risks. Both quantitative and qualitative methods are used to identify operational risks. Consistent with international practice, the responsibility for managing operational risk rests with the line management.

Methods and instruments employed

The quantitative measurement methods are based on internal loss experience data, which are collected across Erste Group using a standard methodology and entered into a central data pool. Additionally, in order to be able to model losses that have not occurred in the past but are nonetheless possible, scenarios and external data are also used. Erste Group sources external data from a leading non-profit risk-loss data consortium.

Erste Group calculates capital requirements for operational risk based on the Advanced Measurement Approach (AMA) that is subject to regulatory approval. AMA is a sophisticated approach for measuring operational risk. Pursuant to AMA, the required capital is calculated using an internal VaR model, taking into account internal data, external data, scenario analysis, business environment and internal risk control factors. Additionally, Erste Group received the approval to use insurance contracts for mitigation within the AMA pursuant to Article 323 CRR.

Methods and instruments of risk mitigation

In addition to quantitative methods, qualitative methods are also used to determine operational risk, such as risk and control assessments through expert panels. Additional methods include setting of key risk indicators and risk assessments in connection with product approvals, outsourcing assessments and risk return decisions. The results of these assessments and processes are reported to line management along with mitigation measures and thus help to reduce operational risks. In order to ensure early detection of changes in the risk profile that may lead to losses, Erste Group monitors a number of key risk indicators such as system availability, staff turnover, and customer complaints.

Erste Group uses a group-wide insurance program that has reduced the cost of meeting Erste Group's traditional property insurance needs. Freed-up resources made it possible to buy additional insurance for previously uninsured bank-specific risks. This program uses a captive reinsurance entity as a vehicle to share losses within the group and access the external market.

The quantitative and qualitative methods used, together with the insurance strategy and the modelling approaches described above, form the operational risk framework of Erste Group. Information on operational risk is periodically communicated to the management board via various reports, most importantly the quarterly Group Risk Report, which informs on recent losses, loss trends, qualitative information derived from Risk Control Self-Assessments, NFR (Non-Financial Risk) decisions, risk indicators, key ratios and the Erste Group VaR for operational risk.