CEB

COUNCIL OF EUROPE DEVELOPMENT BANK
BANQUE DE DEVELOPPEMENT DU CONSEIL DE L'EUROPE

Risk Management Disclosure

Report 2021

Council of Europe Development Bank

Risk Management Disclosure Report 2021

Disclaimer

The information presented in this report has not been subject to external audit.

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EXECUTIVE SUMMARY

In performing its activities, the Council of Europe Development Bank ("the CEB" or "the Bank") follows a prudent risk management framework. The CEB regularly adapts its risk management policies and practices to market conditions and best industry practice. The CEB publishes its Risk Management Disclosure Report in order to provide further information on the approach it takes towards managing risk and assessing its capital adequacy.

Being a multilateral development bank, the CEB does not fall within the scope of application of the EU legislation on credit institutions. However, it considers and aims to comply with the relevant EU bank directives, and the best practices and recommendations set by the Basel Committee on Banking Supervision.

In pursuing its business strategy, the Bank takes credit, liquidity and market risks to a level compatible with its risk appetite and public mission. The CEB's financial strength, as reflected by its high credit rating assessments, is key to the Bank's business model as it enables favourable access to the capital markets and low funding costs. Solid key risk measures are essential to sustaining the CEB's financial strength, and the primary purpose of risk management is to ensure the Bank's long-term financial sustainability and operational resilience while enabling it to fulfil its social mandate.

In the context of the COVID-19 pandemic, the CEB has increased its lending activity while retaining a sound risk profile and an adequate capital buffer. The credit quality of the CEB's loan portfolio remains sound. It relies on a risk management strategy based on adequate security, guarantees and standard protective contractual clauses. Thus far, no counterparty in the portfolio presents signs of distress and all counterparties are up to date in their payment obligations towards the Bank. Nevertheless, a deterioration in the risk profile could materialise as a consequence of the pandemic unfolding or of new events such as the war in Ukraine adversely impacting economic growth and the financial markets, even though current stress test results show that the CEB is in an adequate position to cope with such events. The CEB continues to monitor the situation of its borrowers closely.

Owing to its prudent liquidity management approach, the CEB maintains a strong liquidity position and sufficient flexibility to access the necessary liquidity resources. In terms of market risk, the Bank has no trading activities and only uses derivatives to hedge against interest and exchange risks arising on its issuance, loans and securities operations. The CEB also possesses the required operational resilience as proven by its strong capacity to face challenging financial environments.

This report is structured as follows: Chapter 1 provides an overview of the Bank's risk management framework. It includes the main features of the CEB's risk management principles and objectives, governance and organisation, risk appetite framework and risk management policies. Chapter 2 presents the high-level components of the CEB's prudential framework which are analysed in more detail in the subsequent chapters of the report. Chapter 3 outlines the Bank's capital structure, stress testing and capital management according to its statutory requirements, development plan strategy, risk position, and macroeconomic environment. The following two chapters provide information about the credit risks the CEB is exposed to, and the principles of how these risks are managed and measured and how the respective risk-weighted asset amounts are calculated. Chapter 6 contains information on counterparty risk due to the default of a counterparty on its obligations to pay the Bank the full present value of the derivative contract flows relating to a transaction or a portfolio for which the Bank is a net receiver. Chapter 7 provides information on the CEB's provisioning in accordance with IFRS 9. Chapters 8 and 9 outline the CEB's approach to managing foreign exchange risk and interest rate risk while the last two chapters of the report deal with liquidity risk and operational risk.

1. RISK MANAGEMENT FRAMEWORK

1.1. Risk Management Objective and Principles

The primary purpose of risk management is to ensure the CEB's long-term financial sustainability and operational resilience while enabling it to fulfil its social mandate. The Bank implements international best banking practices and promotes a sound and prudent risk culture across its business lines.

The CEB's risk policies observe the following principles:

- **Prudent risk approach:** As a multilateral development bank (MDB), the CEB sets its financial risk tolerance at a prudent level as defined by approved limits, and applies a conservative financial framework. Therefore, the Bank aims to mitigate all material financial risks and does not engage in any speculative exposure to financial risks.
- **Robust financial position:** The CEB gears its financial policies to ensure a robust financial position to support its core lending activity. In particular, this translates into the preservation of the Bank's capital objective.
- **Adherence to best practice methods:** The Bank applies best practices for risk analysis and management to obtain the strongest protection for its assets, its financial result and, consequently, its capital. As an MDB, the CEB is not subject to prudential regulation. It nevertheless considers the relevant EU bank directives and the Basel Committee on Banking Supervision ("BCBS") recommendations, adapting them when necessary to its MDB status.
- **Segregation of duties:** Following the "four eyes" principle of internal controls, the Bank adopts a system of checks and balances whereby the risk control function exercises independent surveillance of the operational departments' activities.
- **Control framework:** The Bank's risk management framework includes policies, procedures, limits and controls that provide for adequate identification, measurement and mitigation of the risks arising from the Bank's activities and allow for their appropriate monitoring and reporting.

1.2. Risk Culture

The CEB develops and fosters a sound risk culture across the whole organisation.

- The CEB is consistent in building appropriate risk awareness and in promoting behaviours and judgements about risk-taking.
- The CEB develops effective risk management, promotes sound risk-taking and ensures that risks are identified, assessed, monitored, reported and managed.
- The risk management function is independent of the business and support functions. It constitutes the point of reference in spreading a high-quality risk culture throughout the organisation.

1.3. Risk Appetite

The CEB establishes its risk appetite framework as a strategic decision tool for monitoring its risk profile.

- Risk appetite is the aggregate level and types of risk that the CEB is willing to assume to achieve its mandate, strategic objectives and development plan.
- The CEB establishes its risk appetite to maximise the fulfilment of its mandate, taking into account the Bank's capital endowment and risk capacity. The CEB finances projects with a high social impact while preserving a financial profile that enables it to raise funds in the capital markets to finance projects at advantageous conditions for the final beneficiaries.
- The risk appetite cascades down through the organisation and is translated into operational limits that are adhered to at origination and monitored throughout the life cycle of operations.

- Risk appetite is an essential pillar in the CEB's development plan, aligning business objectives with risk objectives and feeding into the capital planning process.
- The definition of risk appetite covers, *inter alia*, the following items:
  - *Capital,* which aims to absorb unexpected losses in line with best banking practices. The higher the available capital, the stronger the Bank's financial standing, as assessed by the different stakeholders, including the rating agencies.
  - *Liquidity risk* is managed prudently to ensure the regular functioning of the institution's core activities.
  - *Leverage and gearing* allow the Bank to achieve an adequate balance-sheet size that is commensurate with its development plan objectives.
- The CEB's large exposures, as defined by EU regulation and the recommendations of the BCBS, are monitored according to core activity (loans) and treasury activity guidelines.

1.4. Risk Policies and Reports

The decision-making processes are supported by a set of policies defining the governance framework, business activities and risk management to comply with all the applicable best banking practices.

The Bank's risk management architecture is set out in:

i) The *Risk Management Charter,* which codifies the core risk management principles and defines the CEB's risk management framework, thus ensuring appropriate consistency with international best banking practices and prudential requirements. The Charter enshrines the prudent approach that has always characterised the CEB and ensures that its shareholders' resources are safeguarded while the Bank fulfils its social mandate, managing risks effectively and consistently at all times and in all its products and activities. The Charter is approved by the CEB's Administrative Council.

ii) The *Financial and Risk Policy* (FRP)*,* which sets out the general principles guiding the CEB's financial and risk policies within the context of the Bank's mission, taking into account its capacity to manage the risks inherent in its operations. The FRP is approved by the Administrative Council.

iii) The *Financial and Risk Policy Guidelines* (FRPG), whose primary goal is to articulate the Bank's policies relating to the identification, measurement, and monitoring of its financial risks. The FRPG are presented to the Administrative Council for information.

iv) The *Financial and Risk Policy Handbook* (FRPH), which ensures that the Bank's operations comply with the FRP. The FRPH is a living document translating the FRP into operational details and is regularly presented to the Credit Risk Committee for approval.

The CEB's Financial and Risk Policy reflects first and foremost its mission and its core operational activity of providing long-term lending for social projects in its member states. It ensures the Bank's stable financial standing, allowing it to pursue and achieve its social mandate. While introducing suitable elements of flexibility in the CEB's financial management, the financial policy is guided by a prudent approach that has always characterised the Bank's business model and management strategy.

The risk management framework is regularly re-assessed to align with the Bank's development plan.

A quarterly Risk Management Report (QRR) is submitted to the Administrative Council and the Governing Board providing information to shareholders about any changes in the CEB's exposure to the main types of risks, i.e. credit, market, liquidity and operational risks, and compliance with the prudential framework as internally defined. The QRR is produced by the Financial Risks Division within the Risk & Control Directorate.

Finally, the CEB's annual Financial Report approved by the Governor presents the risk management processes and practices, thus contributing to external risk reporting.

1.5. Risk Processes

The CEB identifies, understands and assesses all material risks inherent to its activities, products, funding sources and transactions on an ongoing basis.

- The CEB establishes policies supported by appropriate control procedures and processes.
- The processes and procedures ensure that the Bank's risk identification, aggregation, mitigation and monitoring capabilities are commensurate with its size, complexity and risk profile.
- Risk guidelines for the main types of risks (i.e. credit, market, liquidity and operational risk) are developed in line with the principles set out in the Risk Management Charter.
- Internal risk models correctly identify, assess and report the risks incurred by the CEB.
- The risk profile is assessed according to the relevant governance framework, enabling the organisation's smooth functioning under a range of adverse conditions.

Figure 1: Risk processes at the CEB

<table>
<tr><th></th><th>Risk Identification, Assessment and Measurement</th><th>Risk Monitoring</th><th>Risk Controls</th></tr>
<tr><td>Capital Adequacy and Stress Testing</td><td>Capital adequacy assessment
ICAAP
Economic capital model
Stress testing model</td><td>Quarterly Risk Report
Capital Adequacy Review Report
Report on Economic Capital and Stress Testing</td><td rowspan="7">Financial and Risk Policy (FRP)
Prudential Framework (RAF)
FRP Guidelines
FRP Handbook</td></tr>
<tr><td>Loss Provisioning</td><td>ECL model (IFRS 9)</td><td>Report on Impairment Provisions</td></tr>
<tr><td>Credit Risk</td><td>Sovereign rating model
Local and regional government rating model
Financial institution rating model
Corporates rating model
GRE rating
Transaction credit rating</td><td rowspan="2">Annual counterparty reviews
Quarterly Risk Report
Credit Risk Limits
Collateral Management Report
Clauses and Covenants Report
Large Exposures and Concentration Report
Credit Valuation Adjustment Report</td></tr>
<tr><td>Counterparty Credit Risk</td><td>Counterparty credit risk
Exposure at default model
Credit valuation adjustment model</td></tr>
<tr><td>Market Risk</td><td>EVE and NII
Value at risk model
Valuation model (derivatives)</td><td rowspan="2">ALCO reports
ALM Risk Report
Report on Fair Valuation Impacts
Report on Collateral Requirements on Derivatives
Prudential Ratios Report</td></tr>
<tr><td>Liquidity Risk</td><td>Liquidity risk assessment
Self sufficiency, survival horizon, short term liquidity ratios
ILAAP
Liquidity risk modelling (collateral requirements on derivatives)</td></tr>
<tr><td>Operational Risk</td><td>Permanent controls
Incident reporting</td><td>Report on Permanent Controls and Incidents</td></tr>
</table>

1.6. Risk Organisation and Governance

The risk management function is independent of the business and other support functions.

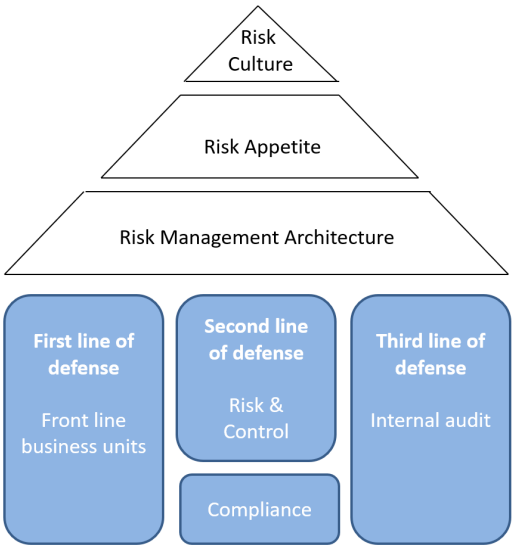
Risk governance within the CEB is established on the 'Three Lines of Defence' concept, setting out lines of responsibility and the appropriate segregation of powers and duties:

i) The business or activity functions assuming or generating risk exposures constitute the first line of defence. Risk arising from operations must align with the pre-defined risk appetite limits.

ii) The second line of defence consists of the risk supervision and control function. This function ensures that risks are controlled effectively and are managed in line with the risk appetite.

iii) As the third line of defence and the last layer of control, Internal Audit regularly assesses the adequacy of policies, methods and procedures and examines their effective implementation.

Figure 2: The three lines of defence



The Risk & Control Directorate (R&C) is responsible for implementing the risk management framework. It makes proposals for risk policies and methodologies, supervises their implementation and undertakes risk reporting. It is independent of other operational and business directorates and reports directly to the Governor. The different R&C divisions address specific risk areas such as credit risk, market risk (including asset and liability management from a risk perspective) and operational risk.

Credit risk assessment is conducted by the Credit Risk Unit (CRU) (Financial Risks Division/R&C) independently of lending or treasury officers with the aim of providing (i) appropriate checks and balances to ensure that credit is extended in accordance with risk principles and, (ii) an independent judgment, uninfluenced by relationships with the borrower or intermediaries. Credit exposure is measured, monitored and controlled on a daily basis. Breach of limit, if any, is reported to senior management.

ALM and market risk assessment is conducted by the Treasury ALM Division and the Financial Risks Division. The Treasury ALM Division carries out the day-to-day management of market risks (identification, assessment, monitoring, and reporting). The Financial Risks Division has the overall responsibility for identifying, measuring, assessing, monitoring, and providing independent oversight of all significant market risks for the Administrative Council.

The following decision-making committees chaired by the Governor are in charge of defining and overseeing risk management policies:

- The Credit Risk Committee (CRC) meets weekly to approve credit risk decisions concerning lending and treasury exposure, based on internal credit risk assessments and recommendations.
- The Asset & Liability Committee (ALCO) meets monthly - or more frequently when necessary - to formulate strategic orientations and address, on a forward-looking basis, interest rate, foreign exchange and liquidity risk.
- The Committee for Operational Risks & Organisation (CORO) discusses operational risk issues on a semi-annual basis. It ensures that adequate measures are taken to mitigate, monitor and control these risks.
- The IT Steering Committee reviews information system issues and takes action to ensure operational resilience and business continuity. An IT Project Committee enables the anticipation of business requirements and a shared vision on IT issues.

Controlling Bodies

- Internal Audit is a permanent, autonomous body within the CEB's internal control system. It provides independent and objective assurance of effective and controlled businesses, operational activities and performance in compliance with existing policies, procedures and best practices. It also proposes recommendations for potential improvements in the Bank's operations.
- The Office of the Chief Compliance Officer (OCCO) addresses money laundering/financing of terrorism and tax evasion risks and integrity, corruption and fraud issues. OCCO safeguards the CEB's integrity in its financial and loan operations, prevents reputational risks and promotes ethical business standards.
- The Chief Information Security Officer (CISO) defines the Bank's security policy by designing the security framework and developing processes across the CEB to reduce information technology (IT) risks.
- The Auditing Board certifies that the Bank is managed according to sound financial management principles, examines the Bank's accounts, and checks their accuracy. The Governing Board appoints three representatives from the member states on a rotating basis for a three-year term (outgoing members act as advisors for an additional year). The Auditing Board's report, an excerpt of which is appended to the financial statements, is presented to the CEB's governing bodies when the annual financial statements are submitted for approval.
- The External Audit is responsible for auditing the Bank's financial statements according to International Standards on Auditing (ISAs) issued by the International Auditing and Assurance Standards Board (IAASB), and for reviewing its internal control and risk management processes. The External Audit drafts various reports, including the Opinion Report. The External Audit is appointed by the Governing Board for a four-year term - renewable once for three years following a tender procedure - based on the Auditing Board's opinion and recommendations by the Administrative Council.

2. PRUDENTIAL FRAMEWORK PURPOSES AND INDICATORS

As an MDB, the CEB is not subject to its Member States' regulatory frameworks, the Basel Committee recommendations or EU directives. However, as mentioned above, it is the Bank's policy to follow best banking practices, taking into account the Bank's MDB status by making all necessary adjustments. To this end, the Bank has established a set of prudential ratios to assess and monitor the risks arising from its activities. The ratios and indicators are organised around six main areas: interest rate risk, foreign exchange risk, liquidity risk, market credit risk, capital and leverage:

Figure 3: Prudential ratios framework

Purposes	Indicators / Ratios
Interest Rate Risk	Economic Value Sensitivity
Foreign Exchange Risk	Spot Net Open Position
Liquidity Risk	Short-term Liquidity Ratios
	Self-Sufficiency Period
Market Credit Risk	Minimum Internal Rating
Capital	Capital Adequacy Ratio (CAR)
	Gearing Ratio (GR)
Leverage	Indebtedness Ratio (IR)
	Treasury Assets Ratio (TAR)

Capital

The Capital Adequacy Ratio (CAR), under the Standardised Approach, measures the Bank's prudential equity (EP) versus total risk-weighted assets (RWA). The Bank defines and monitors this ratio to ensure that it holds sufficient capital to absorb unexpected losses embedded in its operations arising from credit, market, and operational risks.

Although the actual floor for this ratio is set at 10.5%, the Bank aims to maintain a ratio above 20% to ensure first rank financial fundamentals. Additionally, the Bank targets a sufficient buffer and considers a comfort zone at a level above 25%.

This ratio is calculated as follows:

Figure 4: Capital Adequacy Ratio (CAR) formula

$$\text{Capital Adequacy Ratio} = \frac{\text{Prudential Equity}}{\text{Risk-Weighted Assets}}$$

- Prudential Equity: paid-in capital, reserves and net profit
- Risk-Weighted Assets: Σ [Exposure at Default x risk-weighted factor]

The Gearing Ratio (GR) is the ratio of loans outstanding after swaps and guarantees to own funds and establishes a volume ceiling (instead of a risk ceiling) on the Bank's loan activity. This ratio is primarily intended to provide a benchmark for other MDBs' loan volumes. The limit is fixed at 2.5 times own funds.

Figure 5: Gearing Ratio formula

$$\text{Gearing Ratio} = \frac{\text{Loans Outstanding } \textit{after swaps and guarantees}}{\text{Own Funds}}$$

- Own funds: subscribed capital, reserves and net profit

Leverage

The Indebtedness Ratio (IR) compares total debt outstanding (after swaps) to prudential equity (Ep). Total debt outstanding includes debt evidenced by a security, European Commercial Papers (ECPs), bank advances and term deposit accounts, excluding collaterals. The limit is established at 10 times Ep.

The Treasury Asset Ratio (TAR) compares total financial assets (after swaps) to prudential equity. Total financial assets comprise the outstanding amounts in the securities portfolios (long-term, mid-term and short-term) after swaps, bank deposits, repos and nostro accounts, excluding collaterals. The limit is fixed at 5 times the CEB's prudential equity.

Liquidity

Short-term liquidity ratios measure the Bank's capacity to handle its net liquidity requirements over an extended market disruption or economic downturn at different time periods. The analysis of potential "liquidity gaps" between sources[1] (liquid assets) and uses[2] (liquidity requirements) of cash is done on a forward-looking basis over different time periods: one, three, six and twelve months, and thereafter stressed for adverse market and economic conditions by applying risk haircuts depending on asset class, rating and maturity. The minimum level of liquid assets is set at 100% of net liquidity requirements for each timeframe.

The self-sufficiency period measures the time period during which the Bank is able to fulfil its stressed expected net cash outflows without access to the market for new funding or without the sale-repoing of assets. The floor is set at > 6 months.

Market Credit Risk

The minimum internal rating defines the minimum rating at purchase date under which the Bank may enter into transactions with issuers, obligors and counterparties. The Bank's minimum internal rating for short-term investments is $\geq$ 7.0 (A-) and for long-term investments is > 8.0 (A+)[3].

Interest Rate Risk

The economic value sensitivity measures the change in the economic value of the Bank, including own funds[4] due to an interest rate shock of +/- 10 basis points. Its absolute value is fixed at < 0.5% of own funds.

Foreign Exchange Risk

The spot net open position measures the total asset amount minus total liability amount in a foreign currency, including both on-and off-balance sheet positions. Its absolute value is fixed at < € 1 million per currency.

For monitoring purposes, and not as part of the CEB's prudential framework, the CEB also calculates the following ratios:

The leverage ratio is calculated as prudential equity divided by the exposure value of all assets and off-balance sheet items. The exposure value of derivatives is calculated in accordance with the method used in the capital ratio standardised approach. The conversion factor for medium risk related off-balance sheet items (financing commitments) is 50%.

The survival horizon (SH) is the period during which the Bank is able to fulfil its payment obligations stemming from ongoing business operations under a severe stress scenario without any access to new funding by using its available liquid assets. The survival horizon limit (floor) is 12 months.

The Liquidity Coverage Ratio (LCR) aims to ensure the Bank holds sufficient high-quality liquid assets (HQLA) to survive a period of significant liquidity stress lasting 30 calendar days. The limit is set at 100%.

The Net Stable Funding Ratio (NSFR) compares the Bank's available stable funding (ASF) to required stable funding (RSF). In line with supervisory assumptions, different factors reflect the liquidity characteristics of each instrument. The limit is set at 100%.

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1 Sources of cash: drawdown of unrestricted cash and short-term inter-bank placements, repayment or sale of unencumbered high quality liquid securities and repayment of loans.

2 Uses of cash: issue repayments, financing commitments, disbursements and requirements to give back cash received as collateral on derivatives (collateral amounts).

3 See 4.5.6.3

4 Own funds: paid-in capital, reserves, net profit, amount on the Social Dividend Account and provisions for post-employment benefits.

3. CAPITAL MANAGEMENT AND CAPITAL ADEQUACY

Although not subject to international banking supervision and prudential regulations, nor required to comply with regulatory capital adequacy requirements, the Bank considers observance of prevailing capital adequacy standards to be essential in order to maintain the confidence of external stakeholders, such as investors and rating agencies.

3.1. Capital Adequacy

The CEB calculates a Capital Adequacy Ratio (CAR) to ensure that it holds sufficient capital to absorb unexpected losses embedded in its operations arising from credit, market and operational risks.

Calculated under the standardised approach, the CAR measures prudential equity (E_p) versus total risk-weighted assets (RWA). The prudential equity comprises the paid-in portion of the capital subscribed by member countries and the reserves accumulated through internal profit generation.

The Bank aims to maintain a CAR above 20% so as to ensure first-rank financial fundamentals, although the existing floor (for this ratio) is set at 10.5%. Additionally, the Bank targets a sufficient buffer and sets a comfort zone at a level above 25%.

Figure 6: Capital Adequacy Ratio formula

This ratio is calculated as follows:

$$\text{Capital Adequacy Ratio} = \frac{\text{Prudential Equity}}{\text{Risk-Weighted Assets}}$$

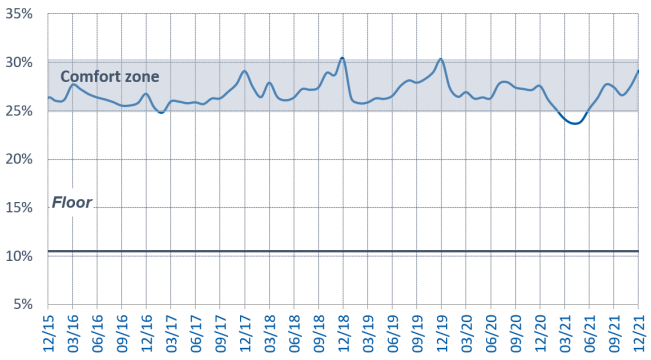
- *Prudential Equity: paid-in capital, reserves and net profit*
- *Risk-Weighted Assets: ∑ [Exposure at Default x risk-weighted factor]*

The CAR reached 29.1% at the end of December 2021, increasing from 27.4% at year-end 2020 as a result of the smaller volume of RWA corresponding to the decreased RWA in Loans and increased RWA in Finance owing to longer maturities and revised sector allocation. Figure 7 provides a breakdown of the capital adequacy ratio calculation.

Figure 7: Capital Adequacy Ratio (CAR) details

Figures in € Million

Capital Adequacy Ratio - CAR (A/B)	**29.1%**
Floor	***10.5%***
Paid-in Capital	613
Reserves	2 628
Unrealised or deferred gains or losses	-102
Profit to be allocated	0
Net profit	95
Equity p (A)	**3 233**
Credit Risk Weighted Loans	8 588
Credit Risk Weighted Treasury	2 013
Other RWA	511
Global Risk Weighted Assets (B)	**11 113**



3.2. Gearing Ratio

The Gearing Ratio is the ratio of loans outstanding after swaps and guarantees to own funds[5] and establishes a volume ceiling (instead of a risk ceiling) on the Bank's loan activity. This ratio is primarily intended to provide a benchmark to other MDBs' loan volumes.

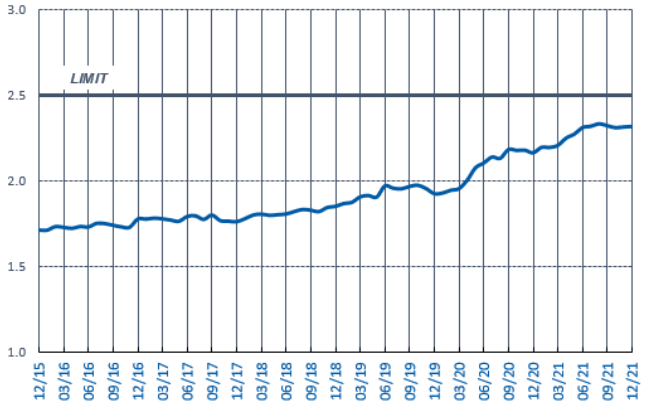
[5] The CEB's own funds: subscribed capital, reserves and net profit.

Figure 8: Development of the Gearing Ratio

Figures in Million

Gearing ratio (A/B)	**2.31**
Ceiling	*2.5*
Loan portfolio*	18 961
Guarantees	0
Total Loans (A)	**18 961**
Subscribed capital	5 477
Reserves	2 628
Net profit	95
Profit to be allocated	0
Own Funds (B)	**8 200**
Max Loans	*20 500*
Headroom	*1 538*

*Without fwd and after swap



For a ceiling of two and a half times own-funds, the CEB could lend up to € 20.5 billion, stable compared to year-end 2020 (€ 20.3 billion). The ratio stood at 2.3 at the end of December 2021, slightly higher than at year-end 2020 (2.16) due to an increase in the loan portfolio.

3.3. Capital Management and Planning

Sound capital management is critical to ensuring the adequate level of capital needed to fulfil the Bank's mandate. The Bank manages its capital in line with its statutory requirements, its development plan strategy, its risk position, and the macroeconomic environment.

Capital management focuses on:

- monitoring the capital requirement forecasts;
- identifying the main assumptions impacting these forecasts and validating their accuracy;
- identifying the evolution of these assumptions, and quantifying the impact, including stress testing.

3.1.1. Internal capital adequacy assessment process

To ensure that it holds sufficient capital to address potential risks under adverse macroeconomic conditions, the Bank has implemented an internal capital adequacy assessment process (ICAAP). The assessment process covers all material risks and the quantitative parameters that support this process. The scope and risk coverage of the assessment process is regularly reviewed. The capital adequacy assessment is performed on a risk-by-risk basis, using internal models.

3.1.2. Stress testing of the Capital Adequacy Ratio

The CEB uses stress testing as a forward-looking risk management tool to assess its capital adequacy resilience under different adverse economic scenarios and to ensure that it holds sufficient capital to fulfil its mandate, even in severe macroeconomic scenarios.

Stress scenarios are specified on the basis of the Bank's development plan, its risk profile, and the expected future macroeconomic conditions.

Figure 9 shows the impact on the CAR of a one-notch downgrade across all counterparties. The CAR would decline by 5.2%, down to 23.9%, under a one-notch downgrade scenario.

Figure 9: Capital Adequacy Ratio stress testing

31.12.2021	Capital Adequacy Ratio
Current	29.1%
One-notch downgrade	23.9%

3.1.3. Projection of the Capital Adequacy Ratio

The CEB regularly calculates its CAR forecast under different scenarios to ensure that it has the means to achieve the development plan goals.

This calculation is made under the standardised approach, where RWA are calculated by multiplying the exposure at default (EAD) by the risk-weighted factors, which depend on counterparty type and external rating bucket.

The scenarios are specified, taking into account the Bank's development plan and the macroeconomic environment. They are defined in terms of projections of the volume, credit quality, and maturity of new loan disbursements.

3.4. Economic Capital

The CEB calculates economic capital, which is the amount of capital needed to stay solvent, based on in-house developed models, tailor-made to the Bank's specific characteristics.

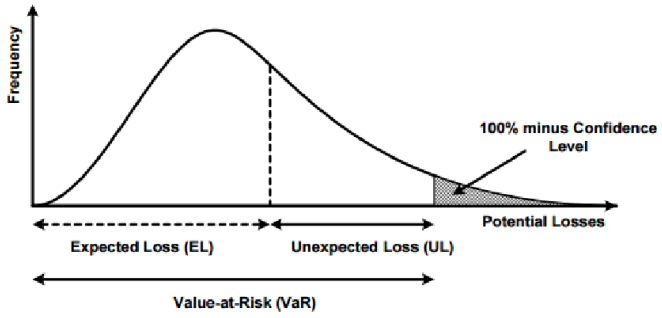
3.4.1. Economic capital for credit default risk

The CEB estimates economic capital for credit default risk, which is the amount of capital needed to stay solvent in the case of counterparty default.

The CEB uses an internal model which projects the rating of counterparties involved in the banking book assets, taking into account explicit and implicit guarantees. This model is based on credit transition matrices that associate a rating level with the probability of moving to other ratings or default at a given horizon. Credit ratings are projected on the assumption that changes in third-party ratings follow a Gaussian process.

The model calculates an unexpected loss[6], which is the amount of capital buffer that would protect against peak losses that exceed expected levels so as to ensure that the CEB will not incur losses higher than a defined amount (a percentage of the Bank's equity) at a given confidence level.

Figure 10: Value at risk



3.4.2. Economic capital for non-trading market risk

The CEB estimates economic capital for non-trading market risk, which is the amount of capital needed to remain solvent should the CEB incur valuation losses on financial instruments recorded at fair value. The scope and risk coverage of non-trading market risk include the following most material risks:

- credit spread risk on the short-term and medium-term securities portfolio;
- currency basis spread risk on derivatives recorded at fair value[7];
- pension risk on the pension benefit obligations that are recorded at fair value through equity, in line with movements of interest rate, credit spread, and inflation.

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[6] Expected loss (EL): average level of credit losses the CEB can reasonably expect to experience in a given period, e.g. one year. EL depends on default probabilities, exposures at default, and losses given default.
Unexpected loss (UL): losses above expected levels. Estimating economic capital aims to provide an amount of capital buffer that would protect debt holders against peak losses that exceed expected levels. Peak losses do not occur every year, but when they do occur, they can be substantial.

[7] Although the CEB applies hedge accounting rules under IFRS9 to limit volatility in the income statement and equity, hedge ineffectiveness can still materialise as a result of currency basis fluctuations.

4. CREDIT RISK

4.1. Overview of the Assessment Process

Credit risk is defined as the potential loss arising from a bank borrower or counterparty failing to meet their obligations in accordance with agreed terms. The Bank is exposed to credit risk in both its lending and treasury activities, as borrowers and treasury counterparties could default on their contractual obligations, or the value of the Bank's investments could become impaired. Credit risk may also materialise in the form of a rating downgrade that may negatively affect the Bank's capital or provisioning against credit losses. Credit risk also covers settlement and pre-settlement risk. Similarly, the collateral risk is considered as part of credit risk (collateral is essentially a credit risk mitigation technique). Overall, credit risk is a function of the amount of credit exposure and the credit quality of the borrower or transaction.

4.2. Credit Risk Identification and Assessment

The credit risk management identifies all potential sources of credit risk inherent in all products and activities arising from the Bank's lending and treasury activities across its balance sheet and off-balance sheet operations. The Bank ensures that the risks of new products and activities are subject to adequate risk management procedures and controls before being introduced or undertaken. Credit risk may materialise in the form of rating downgrades, (cross-) default on payment obligations or during the transaction settlement process.

4.3. Internal Ratings

Internal credit ratings are the result of the Bank's independent internal credit risk assessment. Internal credit ratings are an opinion on the ability and willingness of a borrower to pay its obligations in full and in a timely manner. They are generally based on a qualitative and quantitative assessment of risk factors and potential scenarios that may ultimately lead to a default situation.

Internal credit ratings are assigned to all counterparties at the Finance Directorate (FIN) and at the Loans & Social Development Directorate (L&D). The Bank may use external ratings for specific transactions, products or counterparties while ensuring a sound understanding of the underlying risk incurred. The defined limits for monitoring credit risk arising from lending and treasury operations are regularly reviewed. The internal rating methodologies are regularly reviewed and calibrated. Internal ratings are mapped to the rating scale of international rating agencies, and each internal rating thus corresponds to a rating on the scale, as described in Figure 11:

Figure 11: Internal rating classification

	CEB Internal Rating	Long-Term Rating		Short-Term Rating	
		Moody's	S&P Fitch	Moody's	S&P Fitch
Investment Grade	10	Aaa	AAA	P-1	A-1+
	9.5	Aa1	AA+	P-1	A-1+
	9	Aa2	AA	P-1	A-1+
	8.5	Aa3	AA-	P-1	A-1+
	8	A1	A+	P-1	A-1
	7.5	A2	A	P-1	A-1
	7	A3	A-	P-1/P-2	A-2
	6.5	Baa1	BBB+	P-2	A-2
	6	Baa2	BBB	P-2/P-3	A-3
	5.5	Baa3	BBB-	P-3	A-3
Below Investment Grade	5	Ba1	BB+	N-P	B
	4.5	Ba2	BB	N-P	B
	4	Ba3	BB-	N-P	B
	3.5	B1	B+	N-P	B
	3	B2	B	N-P	B
	2.5	B3	B-	N-P	B
	2	Caa1	CCC+	N-P	C
	1.5	Caa2	CCC	N-P	C
	1	Caa3	CCC-	N-P	C
	0.5	Ca	CC	N-P	C
	0.25	C	C	N-P	C
	0	D	D	D	D

The Bank uses the standardised method to calculate its RWA. The Bank also calculates RWA using the "internal ratings- based" (IRB) foundation approach for internal benchmarking purposes. The IRB foundation approach allows internal ratings be used for assigning the risk weight, whereas the standardised method imposes external ratings for risk weights.

To ensure consistency and quality of ratings, internal ratings are scored with a rating model adapted to the type of borrowers (sovereigns, banks, local and regional governments and others) and subject to a specific governance framework. The rating methodologies follow the generally accepted principles for through-the-cycle ratings whereby the rating is a function of both a qualitative and a quantitative assessment.

The risk model is based on a qualitative and quantitative risk assessment of risk factors typically considered as driving the creditworthiness of the counterparty. The risk assessment is the result of analysis of the counterparty's financial and economic information, governance and management structure.

Currently, the CEB uses internal rating models for the following instrument/counterparty categories:

- Sovereigns
- Local and regional governments
- Financial institutions
- Corporates
- Government-related entities (GREs)
- Covered bonds

All internal rating models at the CEB follow an expert system approach, meaning the ratings are primarily based on scorecards, which rely on quantitative factors and an analyst's opinion for qualitative factors, but also allow adjustments to the rating based on judgmental factors to an explicitly limited degree.

The internal rating model for **sovereign counterparties** evaluates the economic, institutional and fiscal strength as well as the external position of the sovereign in order to assess the risk profile of each of the four risk components. The risk profiles of the four risk components are then used by the model to perform three intermediate horizontal calculations in order to arrive at a final score and assign a sovereign credit rating. The resulting score for each calculation step falls within a bucket (three-notch range) and the actual score is subject to the expert judgement of the model user.

The rating methodology for **local and regional governments (LRGs)** evaluates 11 intrinsic risk factors that are deemed relevant for assessing the intrinsic creditworthiness of the LRG. The relevant risk factors included in the model are scored on either a quantitative or a qualitative basis and relate to the economic fundamentals, institutional framework, governance and management, budgetary performance and indebtedness of a given local or regional government. The resulting rating is scaled to the sovereign rating and, finally, extraordinary support from the central government, if any, is factored in, and any necessary analyst overrides are applied.

The internal rating model for **corporate counterparties** assesses business risk and financial risk factors (including industry risks, company specifics, corporate governance, capital structure and debt service capacity) on a quantitative and qualitative basis by taking into account sector and country specific factors to determine an initial rating. Expert adjustments are made by considering each legal entity's shareholder or government support.

Most **financial institution counterparties** are rated by external credit rating agencies. Nevertheless, an internal rating will be derived for all such counterparties. The internal rating process is very similar to that for corporates, although the rating criteria used differ and, on the one hand, measure qualitative criteria such as management experience and the effectiveness of internal controls, the robustness of information systems, the quality of bank supervision, the bank's franchise and diversification, systemic importance, and potential shareholder or state support while, on the other hand, financial criteria are assessed to evaluate the institution's financial soundness (asset quality, profitability, capitalisation and liquidity and funding based on nine financial ratios). The final rating allows for judgemental overrides.

A **government-related entity ('GRE')** is an entity with full or partial government ownership or control, a special charter, or a public policy mandate from the national, regional or local government. There are two approaches for rating GREs, the bottom-up approach and the top-down approach. Under the bottom-up approach, the borrower's 'standalone' rating is first computed, and then a rating uplift is added to account for the probability of extraordinary government support. Under the top-down approach, the borrower's rating is derived directly from the supporting government rating, by notching down to account for different factors indicating the strength of the linkages between the two entities.

The **covered bond** rating model uses a notching-up approach. The starting point is the internal rating of the issuer, which can be notched up based on several steps and assessments. The overall possible uplift is a maximum 6 notches. It considers factors such as each jurisdiction's resolution framework, probability of government support in the jurisdiction, legal aspects of over-collateralisation, presence of a secondary market for the assets of the cover pool.

4.4. Credit Risk Mitigation

The CEB actively uses credit risk mitigation (CRM) techniques to monitor and mitigate credit risk during the life of its transactions. Credit risk mitigation techniques can take the form of a guarantee, collateral, or contractual safeguards (contractual covenants).

Credit risk mitigation techniques for new transactions are proposed by the CRU and are subject to the approval of the CRC. Credit risk mitigation techniques for existing transactions are presented to the CRC at the annual counterparty review.

The credit risk of a new project is assessed during the appraisal process and requires approval from the relevant internal committees. All projects are submitted to the Administrative Council for approval. An overall framework for financial operations is established by the Administrative Council through the Bank's Financial and Risk Policy. Within this framework, treasury transactions are assessed by the CRU and submitted to the CRC for approval.

Finally, large exposure and concentration limits are also defined and reported to the CRC.

4.5. Credit Risk Exposure

4.5.1. Exposure break-down by product, counterparty type and country

Throughout the report, data sorted by rating category is presented using the second best rating or, when an entity is not rated by international rating agencies, using the internal rating. Exposure after CRM is presented unless specified otherwise.

The figure below presents the Bank's credit risk exposure both at L&D, i.e loans and financing commitments, and FIN, i.e. deposits, securities and derivatives, as at 31 December 2021 and 31 December 2020. Non-IG stands for below investment grade exposure.

Figure 12: Overall exposure by product and rating category (standardised approach)

	31.12.2021				31.12.2020			
In million euros	AAA/AA	A/BBB	Non-IG	Total	AAA/AA	A/BBB	Non-IG	Total
Loans	3 760	12 535	2 621	18 916	3 109	11 995	2 323	17 427
Financing commitments	1 403	3 684	1 228	6 316	1 236	5 409	1 530	8 175
Deposits	1 737	2 409	-	4 146	891	1 738	-	2 629
Securities	3 497	1 589	-	5 085	3 625	1 954	-	5 579
Swap EAD SA-CCR	176	112	-	288	235	133	-	367
Forex EAD SA-CCR	6	-	-	6	149	-	-	149
Swap coll - NPV not covered	-	-	-	-	-	0	8	9
Total	**10 579**	**20 329**	**3 849**	**34 757**	**9 245**	**21 229**	**3 862**	**34 335**

- *Rating as recommended by the Basel Committee (second best rating) or, when not rated by international rating agencies, internal rating.*
- *Loans and financing commitments are reported after CRM.*
- *Loans, deposits and securities are reported at nominal value and excluding accrued interest.*

Figure 13 presents the Bank's credit risk exposure split by loans and securities and per counterparty type as at 31 December 2021.

Figure 13: Credit risk exposure by counterparty type

31.12.2021	*In million euros*		
	Finance	**Lending**	**Total**
Sovereign	4 412	13 112	17 524
Sub-sovereign	404	7 475	7 879
Banks	4 084	3 648	7 733
Other	624	997	1 621
Total	**9 524**	**25 232**	**34 757**

- *Takes into account forward transactions, including non-collateralised swaps add-on*

The figure below presents the Bank's overall credit risk exposure as at 31 December 2021 per counterparty type and per country.

Figure 14: Geographical distribution of credit risk exposures

31.12.2021			*In million euros*		
Country	**Sovereign**	**Sub-sovereign**	**Banks**	**Other**	**Total**
Albania	86	-	-	-	86
Andorra	12	-	-	-	12
Belgium	100	1 096	33	-	1 228
Bosnia and Herzegovina	103	-	-	-	103
Bulgaria	230	-	-	-	230
Croatia	697	-	-	-	697
Cyprus	395	-	-	-	395
Czech Republic	355	-	162	-	517
Denmark	-	-	0	-	0
Estonia	201	-	-	25	226
Finland	76	854	99	1	1 030
France	2 577	1 148	1 872	923	6 520
Georgia	14	-	-	-	14
Germany	181	1 590	456	267	2 495
Greece	270	-	-	-	270
Hungary	800	-	6	-	806
Iceland	-	9	-	65	74
Ireland	448	119	-	-	567
Italy	2 061	152	172	155	2 541
Kosovo	60	-	-	-	60
Latvia	8	-	-	27	35
Lithuania	598	139	-	29	766
Luxembourg	142	-	0	-	142
Malta	-	-	29	-	29
Moldova (Republic of)	151	-	-	-	151
Montenegro	117	-	-	-	117
Netherlands	728	-	463	-	1 191
North Macedonia	129	-	-	-	129
Norway	-	-	96	-	96
Poland	729	493	511	-	1 733
Portugal	512	30	7	-	549
Romania	789	59	-	-	849
San Marino	10	-	-	-	10
Serbia	859	-	-	-	859
Slovak Republic	880	116	156	50	1 202
Slovenia	120	-	14	-	134
Spain	922	1 402	1 198	-	3 522
Sweden	-	570	50	-	620
Switzerland	-	-	504	-	504
Türkiye	1 486	-	0	-	1 486
Sub-Total	**16 846**	**7 777**	**5 828**	**1 542**	**31 994**
Non-member countries					
Australia	0	-	195	-	195
Austria	10	-	108	78	197
Canada	-	50	243	-	293
Hong Kong	-	-	0	-	0
Japan	54	-	140	-	194
New Zealand	-	52	-	-	52
South Korea	4	-	-	-	4
United Kingdom	-	-	946	-	946
United States of America	-	-	272	-	272
Supranational	609	-	-	-	609
Sub-Total	**677**	**102**	**1 905**	**78**	**2 763**
Total	**17 524**	**7 879**	**7 733**	**1 621**	**34 757**

4.5.2. Exposure after credit risk mitigation

The figure below presents the reduction of credit risk exposure due to the use of collateral and financial guarantees as a credit risk mitigation technique as at 31 December 2021.

Figure 15: Overview of exposure after credit risk mitigation

31.12.2021	*In million euros*						
	Exposure Unsecured	%	Exposure Secured by financial collateral	%	Exposure Secured by financial guarantees	%	Total
Sovereign	14 174	81%	-	-	3 350	19%	17 524
Sub-sovereign	5 275	67%	-	-	2 604	33%	7 879
Banks	5 624	73%	128	2%	1 980	26%	7 733
Other	1 315	81%	-	-	306	19%	1 621
Total	**26 388**	**76%**	**128**	**0%**	**8 240**	**24%**	**34 757**

The figure below presents the credit risk exposure by guarantor rating class for guaranteed exposures as at 31 December 2021 and 31 December 2020.

Figure 16: Guaranteed exposure by guarantor rating class

In million euros	31.12.2021	31.12.2020
AAA	868	702
AA	1 132	1 118
A	3 005	3 329
BBB	2 918	3 167
BB	-	1
B	318	472
Total	**8 240**	**8 789**

4.5.3. Loan portfolio

4.5.3.1 Credit risk profile of loan portfolio and credit enhancement

At the end of December 2021, loans outstanding reached € 18.9 billion, increasing by 8.5% compared to year-end 2020.

Figure 17: Credit risk profile of loan portfolio after credit enhancement

In million euros	2015	2016	2017	2018	2019	2020	2021	/ End 2020
TOTAL	**13 071**	**13 715**	**13 792**	**14 625**	**15 427**	**17 427**	**18 916**	**8.5%**
Investment Grade	10 525	10 739	11 008	12 298	13 348	15 104	16 345	8.2%
AAA/AA	*1 906*	*1 936*	*1 915*	*2 612*	*2 967*	*3 109*	*3 760*	*20.9%*
A/BBB	*8 619*	*8 803*	*9 094*	*9 686*	*10 381*	*11 995*	*12 535*	*4.5%*
Non-Investment Grade	2 546	2 976	2 784	2 327	2 079	2 323	2 621	12.8%
% IG	*80.5%*	*78.3%*	*79.8%*	*84.1%*	*86.5%*	*86.7%*	*86.1%*	

The credit quality of the loan portfolio remained robust, with 86.1% of the exposure rated investment grade after CRM, just below the level observed at the end of 2020 (86.7%), thus plateauing after the positive trend registered over the past few years.

It is worth recalling that the credit quality of the loan portfolio may be subject to sudden changes in the event of counterparties with sizeable exposure being downgraded or upgraded. The Bank manages such concentrations by defining guidelines to monitor them at different levels, i.e. counterparties, group of counterparties, country/geographic distribution and portfolios of activity (i.e. loans and treasury).

As shown in the figures below, the A and BBB categories represent 66.3% of the loan portfolio. However, € 1.8 billion of the loans outstanding is rated in the lower bounds of BBB (i.e. BBB-), thereby subject to a potential cliff effect if downgraded to non-investment grade, with subsequent impact on the Capital Adequacy Ratio. Currently, there is reasonable diversification with 20 counterparties in the BBB- range.

Figure 18: Credit risk profile of the loan portfolio by broad rating class

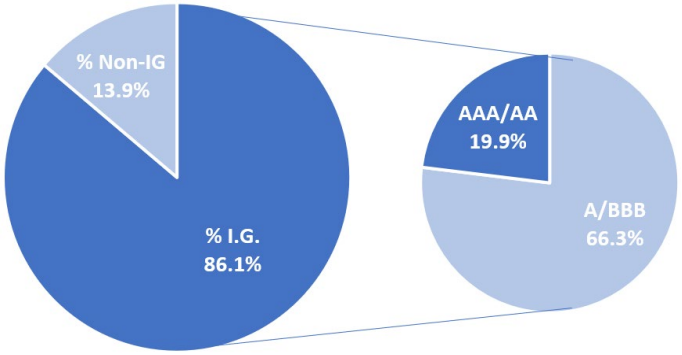
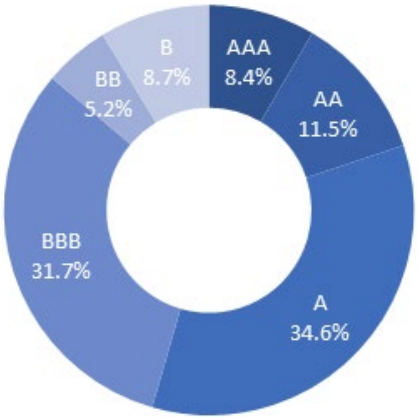


Figure 19: Breakdown of the loan portfolio by rating

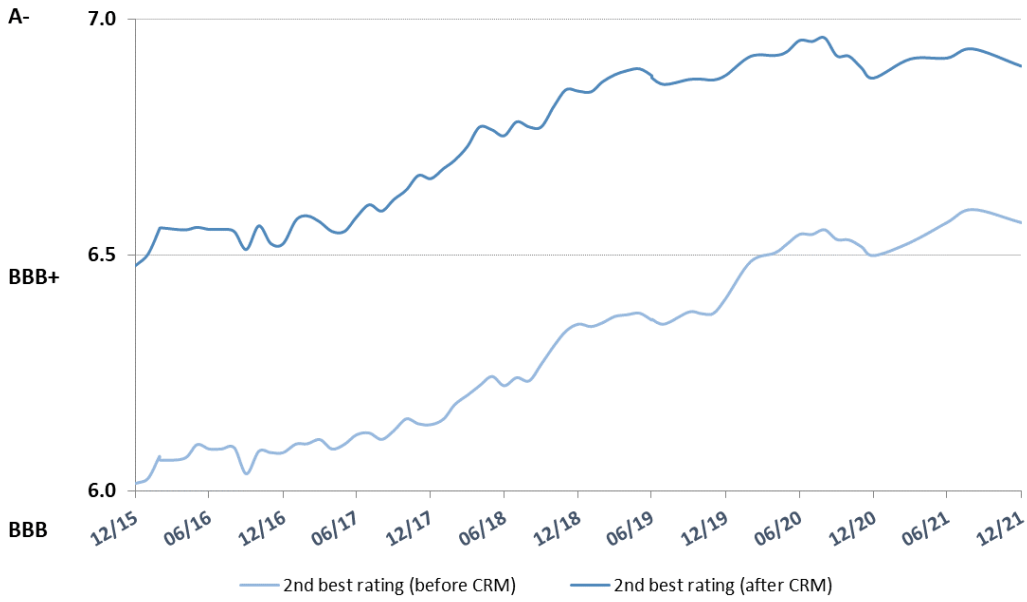


The following figure presents the evolution of the average rating of the loan portfolio since 2015, providing a non-granular view of the portfolio. At the end of December 2021, the average rating (after CRM) remained at A- or an equivalent internal rating of 6.90 (vs 6.87 at year-end 2020). Meanwhile, the average internal rating before CRM was 6.57, i.e. BBB+ (vs 6.50 at year-end 2020).

New loans disbursed during the year presented an average internal rating (after CRM) of 6.96 (or A- in the external rating scale), slightly above the average internal rating of the loan portfolio (6.90).

The average rating of the loan portfolio is computed by taking the second-best rating (out of the three major credit rating agencies or the internal rating if the counterparty is not rated by any credit rating agency) after CRM, i.e. guarantees and collateral received. For comparison purposes, the average rating before CRM is also displayed in Figure 20.

Figure 20: Average rating development of the loan portfolio (2nd best rating before and after CRM)



4.5.3.2 Loan portfolio breakdown by counterparty type and country

Figure 21: Credit risk exposure of the loan portfolio by country

31.12.2021	*In million euros*			
Country	**AAA/AA**	**A/BBB**	**Non-IG**	**Total**
Albania	-	-	83	83
Andorra	12	-	-	12
Belgium	866	231	-	1 097
Bosnia and Herzegovina	-	-	88	88
Bulgaria	230	-	-	230
Croatia	623	-	-	623
Cyprus	361	-	-	361
Czech Republic	92	300	25	417
Estonia	-	151	-	151
Finland	280	316	-	596
France	1 490	618	23	2 130
Georgia	-	-	5	5
Germany	181	1 109	-	1 290
Greece	-	-	218	218
Hungary	703	-	-	703
Iceland	74	-	-	74
Ireland	388	-	-	388
Italy	1 085	-	100	1 185
Kosovo	-	-	35	35
Latvia	26	-	-	26
Lithuania	639	-	-	639
Malta	9	-	-	9
Montenegro	-	-	94	94
Moldova (Republic of)	-	-	71	71
Netherlands	434	561	7	1 002
North Macedonia	-	-	104	104
Poland	1 204	-	21	1 225
Portugal	292	-	7	299
Romania	391	-	34	424
San Marino	-	-	10	10
Serbia	-	-	407	407
Slovak Republic	1 040	-	25	1 065
Slovenia	134	-	-	134
Spain	1 902	-	-	1 902
Sweden	-	462	-	462
Türkiye	-	-	1 266	1 266
Sub-Total	**12 457**	**3 747**	**2 621**	**18 825**
Non-member countries				
Austria	78	-	-	78
Supranational	-	13	-	13
Sub-Total	**78**	**13**	**-**	**91**
Total	**12 535**	**3 760**	**2 621**	**18 916**

The loan portfolio breakdown by sector reflects the predominance of public sector exposure (i.e. sovereigns or central states, sub-sovereigns or regional and local authorities and state-owned financial institutions). Public sector-related exposures after CRM remained broadly stable, representing 81.4% of the total portfolio at the end of December 2021 (Figure 22).

Figure 22: Credit risk exposure of the loan portfolio by type of counterparty

In million euros	2015	2016	2017	2018	2019	2020	2021	/ End 2020
TOTAL	**13 071**	**13 715**	**13 792**	**14 625**	**14 427**	**17 427**	**18 916**	**8.5%**
Sovereign	6 558	7 255	6 961	7 457	7 710	9 107	9 956	9.3%
Sub Sovereign	2 993	3 040	3 369	3 596	4 085	4 738	5 443	14.9%
Banks	3 286	3 221	3 257	3 290	3 422	3 268	3 190	-2.4%
Other	234	199	205	192	210	313	327	4.3%
% Public Sector	*73.1%*	*75.1%*	*74.9%*	*76.2%*	*76.5%*	*79.4%*	*81.4%*	

It is worth highlighting the significant role of CRM in shaping the risk profile of the loan portfolio. The table below displays the improvement in credit quality of the loan portfolio owing to the use of credit enhancements to mitigate the risk. In total, 11.3% of the portfolio shifted from non-investment grade to the investment grade category when applying credit risk mitigation techniques.

Figure 23: Loan portfolio before versus after CRM by rating

In million euros	Before CRM	%	After CRM	%	Change
TOTAL	**18 916**	***100%***	**18 916**	***100%***	
Investment Grade	**14 159**	***74.9%***	**16 295**	***86.1%***	***11.3%***
AAA/AA	3 256	*17.2%*	3 760	*19.9%*	*2.7%*
A/BBB	10 903	*57.6%*	12 535	*66.3%*	*8.6%*
Non-Investment Grade	**4 757**	***25.1%***	**2 621**	***13.9%***	***-11.3%***

At the end of 2021, the CEB had received € 6.5 billion in guarantees and € 228 million in collateral (i.e. bonds pledged). These are the two main types of credit risk enhancements the Bank uses to mitigate risk in its loan activities.

Figure 24 below presents the shift in exposure from banks to sovereigns (including state-owned financial institutions) after considering guarantees and collateral. The exposure to sovereigns increased from 50% to 53% after CRM.

Finally, commercial financial institutions (mainly Banks) accounted for 17% of the loan portfolio after CRM (18% before CRM). A significant part of this exposure benefits from guarantees.

Figure 24: Loan portfolio before versus after CRM by type of counterparty

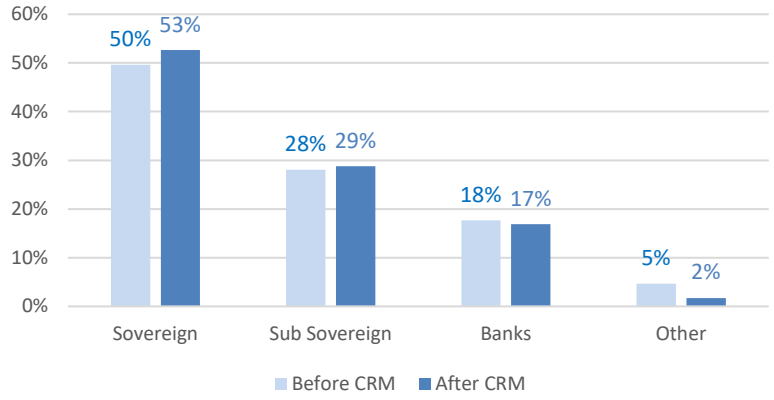
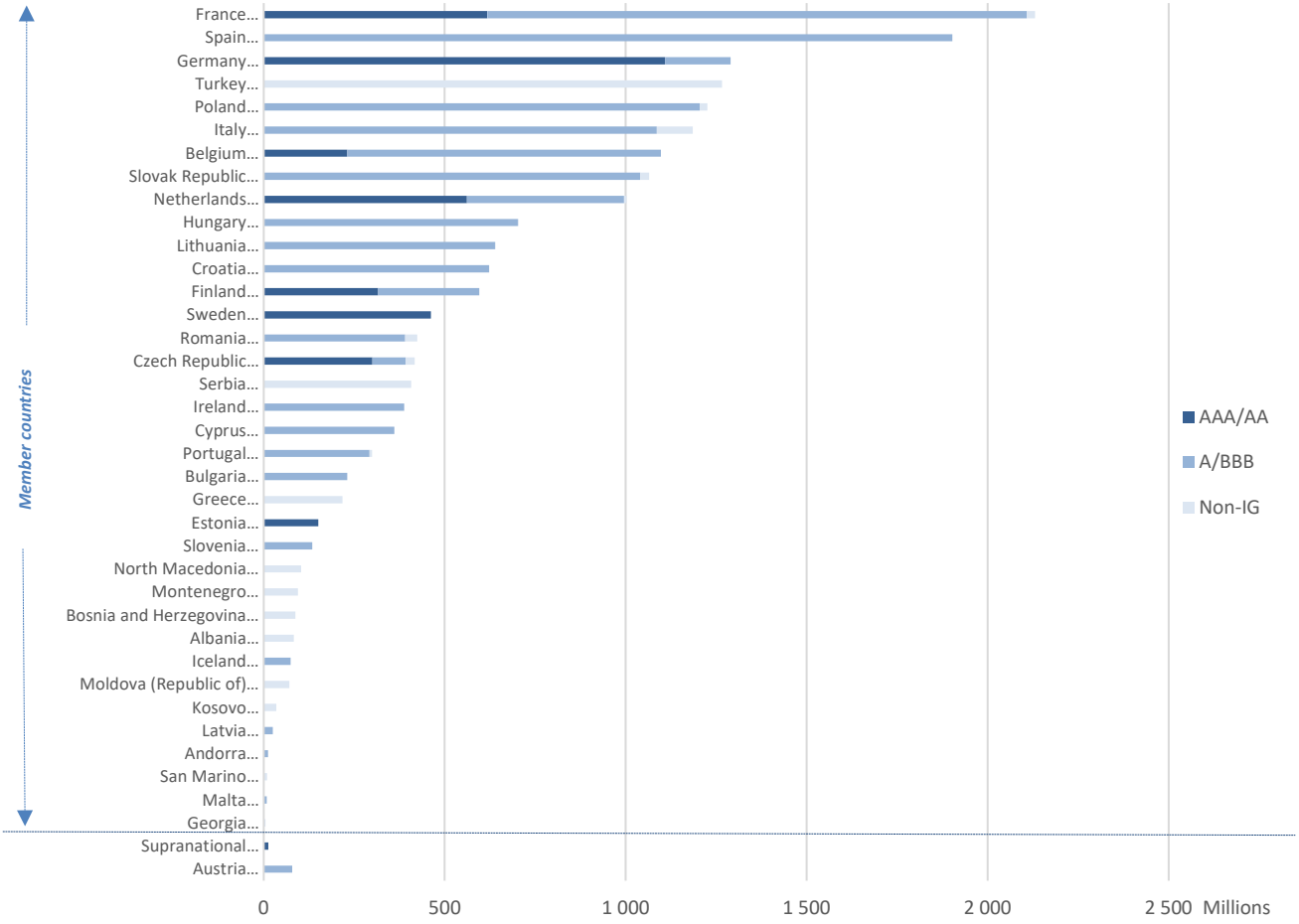


Figure 25 below shows the loan portfolio breakdown by country and by rating class after CRM. Investment Grade (IG) includes AAA/AA and A/BBB categories whereas non-IG includes counterparties rated BB and below.

Figure 25: Credit risk exposure of the loan portfolio by country and rating of counterparties



4.5.3.3 Loan portfolio by rating and type of counterparty

Figure 26: Loan portfolio by rating and type of counterparty

In million euros

	31.12.2021			
	AAA/AA	**A/BBB**	**Non-IG**	**Total**
Sovereign	6 247	1 329	2 379	9 956
Sub-sovereign	3 012	2 298	134	5 443
Banks	3 092	13	85	3 190
Other	184	120	23	327
Total	**12 535**	**3 760**	**2 621**	**18 916**

- *Rating as recommended by the Basel Committee (second best rating), or, when not rated by international rating agencies, internal rating*
- *Loans reported after CRM at nominal value and excluding accrued interest*

The loan portfolio breakdown by sector reflects the predominance of public sector exposure (i.e. sovereigns or central states; sub-sovereigns or regional and local authorities and state-owned financial institutions). Public sector-related exposures after CRM remained broadly stable, representing 81.4% of the total portfolio at the end of December 2021.

Figure 27 displays the breakdown of loans outstanding by remaining time to maturity:

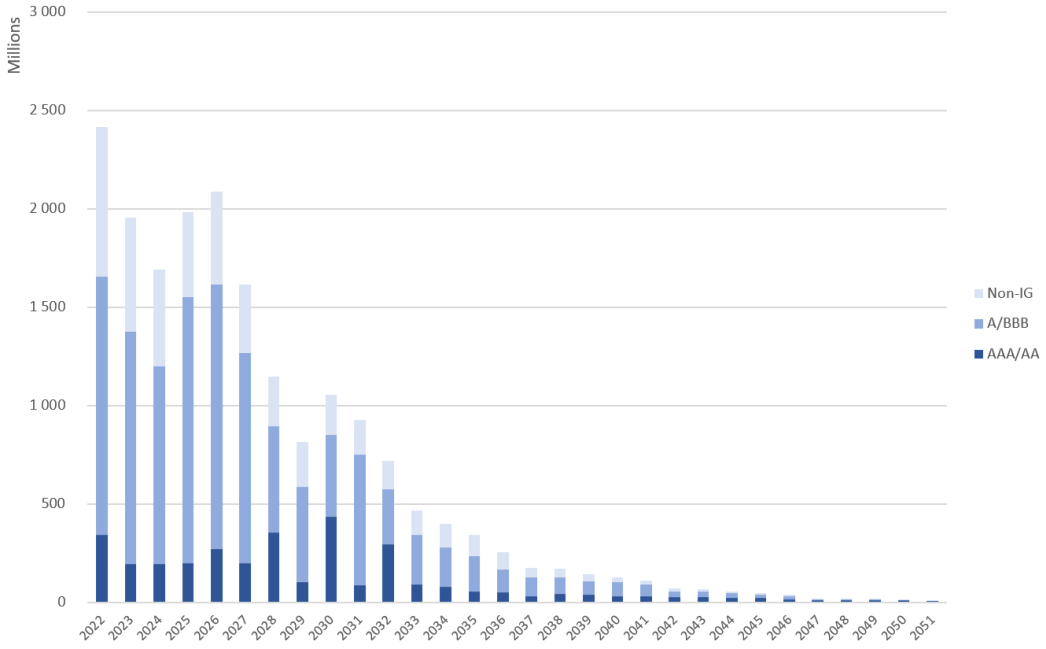
Figure 27: Loan portfolio by maturity

In million euros	31.12.2021	%	31.12.2020	%
Up to 1 year	2 414	13%	2 416	14%
1 year to 5 years	7 711	41%	7 395	42%
5 years to 10 years	5 552	29%	4 804	28%
10 years to 20 years	2 896	15%	2 609	15%
More than 20 years	343	2%	203	1%
Total	**18 916**	**100%**	**17 427**	**100%**

4.5.3.4 Loan portfolio scheduled reimbursements

To assess the future development of the loan portfolio, the credit risk profile of scheduled reimbursements (outflows) is compared to potential inflows arising from new loans. The current stock of projects is used as a proxy for new loans.

Figure 28: Loan portfolio reimbursements by rating as of 31.12.2021



4.5.4. Credit risk profile of the stock of projects

At the end of 2021, the stock of projects amounted to € 8.9 billion, down 6.3% compared to year-end 2020. The investment grade category decreased by 3.2% (approx. € 243 million), while the non-investment grade category decreased by 17.9% (approx. € 356 million) compared to year-end 2020 (Figure 29).

Figure 29: Credit risk profile of the stock of projects

In million euros	2015	2016	2017	2018	2019	2020	2021	/ End 2020
TOTAL	**4 720**	**5 651**	**6 981**	**7 891**	**8 521**	**9 514**	**8 915**	**-6.3%**
Investment Grade	3 755	4 448	5 783	6 924	7 320	7 520	7 277	-3.2%
AAA/AA	346	1 576	1 717	1 796	2 187	1 584	1 453	-8.3%
A/BBB	3 408	2 871	4 066	5 128	5 133	5 936	5 824	-1.9%
Non-Investment Grade	966	1 204	1 198	967	1 201	1 994	1 638	-17.9%
% Committed	*66.1%*	*73.8%*	*62.1%*	*75.9%*	*71.3%*	*85.9%*	*70.8%*	
% Investment Grade After credit enhancement	*79.5%*	*78.7%*	*82.8%*	*87.7%*	*85.9%*	*79.0%*	*81.6%*	

Credit risk profile of the financing commitments

At the end of 2021, the financing commitments reached € 6.3 billion, i.e. 70.8% of the total stock of projects. The credit quality of the financing commitments is close to that of the loan portfolio. The share of investment grade counterparties stood at 80.5%, compared to the 86.1% share of investment grade counterparties in the loan portfolio.

Figure 30: Credit risk profile of the financing commitments after CRM

In million euros	2015	2016	2017	2018	2019	2020	2021	/ End 2020
TOTAL	**3 119**	**4 172**	**5 011**	**5 992**	**6 079**	**8 175**	**6 316**	**-22.7%**
Investment Grade	2 251	3 274	3 718	5 404	5 533	6 645	5 087	-23.4%
AAA/AA	144	1 090	1 300	1 392	1 796	1 236	1 403	13.5%
A/BBB	2 107	2 184	2 668	4 012	3 736	5 409	3 684	-31.9%
Non-Investment Grade	868	899	1 043	588	546	1 530	1 228	-19.7%
% Investment Grade	*72.2%*	*78.5%*	*78.1%*	*90.2%*	*91.0%*	*81.3%*	*80.5%*	
After credit enhancement								

Figure 31: Financing commitments by country

31.12.2021	*In million euros*				
Country	**AAA/AA**	**A/BBB**	**BIG**	**Non-IG**	**Total**
Albania	-	-	3	-	3
Andorra	-	-	-	-	-
Belgium	-	-	-	-	-
Bosnia and Herzegovina	-	-	15	-	15
Bulgaria	-	-	-	-	-
Croatia	-	75	-	-	75
Cyprus	-	34	-	-	34
Czech Republic	-	-	-	100	100
Estonia	50	-	-	25	75
Finland	-	-	-	272	272
France	439	75	-	456	970
Georgia	-	-	9	-	9
Germany	331	28	-	261	620
Greece	-	-	53	-	53
Hungary	-	103	-	-	103
Iceland	-	-	-	-	-
Ireland	-	50	-	119	169
Italy	-	510	-	75	585
Kosovo	-	-	-	25	25
Latvia	-	-	-	9	9
Lithuania	-	86	-	42	127
Malta	-	20	-	-	20
Montenegro	-	-	23	-	23
Moldova (Republic of)	-	-	80	-	80
Netherlands	-	20	-	-	20
North Macedonia	-	-	25	-	25
Poland	-	507	-	-	507
Portugal	-	132	-	118	250
Romania	-	399	-	26	425
San Marino	-	-	-	-	-
Serbia	-	-	452	-	452
Slovak Republic	-	60	-	77	137
Slovenia	-	-	-	-	-
Spain	-	733	-	47	780
Sweden	100	-	-	-	100
Türkiye	-	-	220	-	220
Sub-Total	**920**	**2 832**	**880**	**1 650**	**6 282**

31.12.2021			*In million euros*		
Country	**AAA/AA**	**A/BBB**	**BIG**	**Non-IG**	**Total**
Non-member countries					-
Austria	-	30	-	-	30
Supranational	-	-	-	3	3
Sub-Total	**-**	**30**	**-**	**3**	**33**
Total	**920**	**2 862**	**880**	**1 654**	**6 316**

4.5.5. Social Dividend Account (SDA) guarantee window

The SDA guarantee is an internal credit risk mitigation mechanism that secures a pool of CEB loan exposures with part of the funds deposited on the CEB's Social Dividend Account.

New loans can be added to the SDA guarantee scheme as long as the anticipated credit losses on the pool of SDA-guaranteed loans (within a one-year time horizon and at a 99% confidence level) do not exceed the SDA guarantee endowment. If the anticipated credit losses exceed 75% of the SDA guarantee endowment, new loan additions will be restricted.

Figure 32: SDA guarantees by country

	In million euros	
Country	**31.12.2021**	**31.12.2020**
Existing Loans	**13**	**8**
Bosnia and Herzegovina	4	5
Georgia	2	2
Italy	4	1
Romania	1	1
Greece	1	-
North Macedonia	1	-
Committed loans	**3**	**7**
Bosnia and Herzegovina	1	3
Georgia	1	3
Greece	1	-
North Macedonia	1	-
Romania	-	1
Uncommitted loans	**13**	**16**
Bosnia and Herzegovina	4	-
Kosovo	2	2
Lithuania	4	-
Luxembourg	3	-
Total	**29**	**16**

As of December 2021:

- the total endowment of the fund was € 23.3 million;
- the current amount of loans outstanding was € 12.6 million;
- the stock of projects committed awaiting disbursement was € 3.3 million;
- the stock of projects uncommitted was € 13.0 million.

The expected shortfall, with a 99% confidence level and a one-year time horizon, reached € 7.5 million at the end of 2021. The ES level is well below the threshold of 75% of the endowment (i.e. € 17.5 million). Therefore, new projects can be submitted to the fund.

The risk borne under the SDA guarantee window is monitored on a regular basis and reported to the CRC.

4.5.6. Finance portfolio

Credit risk exposure in Finance operations mainly arises from the purchase of securities, placement in deposits, repos / reverse repos, derivative transactions for hedging purposes, and collateral posted in the context of derivative transactions.

At the end of 2021, the credit risk arising from Finance operations amounted to € 9.5 billion compared to € 8.7 billion at year-end 2020, increasing by 9.1%.

Figure 33: Credit risk profile of Finance operations

In million euros	2015	2016	2017	2018	2019	2020	2021	/ End 2020
TOTAL	**9 365**	**9 275**	**8 463**	**8 230**	**9 174**	**8 733**	**9 524**	***9.1%***
AAA	2 216	1 579	1 451	1 318	1 197	1 203	991	*-17.7%*
AA	3 717	3 626	3 352	4 036	4 079	3 697	4 425	*19.7%*
A	2 581	3 279	2 959	2 626	3 290	3 372	3 389	*0.5%*
BBB/BB	851	791	701	250	607	460	721	*56.5%*
% AAA/AA	*63.4%*	*56.1%*	*56.8%*	*65.1%*	*57.5%*	*56.1%*	*56.9%*	

4.5.6.1 Finance portfolio breakdown by counterparty type and country

Figure 34: Credit risk exposure of Finance operations by country

31.12.2021	*In million euros*				
Country	**Sovereign**	**Sub-sovereign**	**Banks**	**Other**	**Total**
Belgium	100	-	31	-	131
Czech Republic	-	-	0	-	0
Denmark	-	-	0	-	0
Finland	76	-	87	-	162
France	2 069	227	579	545	3 420
Germany	178	69	339	-	586
Ireland	10	-	-	-	10
Italy	770	-	-	-	770
Luxembourg	142	-	0	-	142
Netherlands	167	-	2	-	168
Norway	-	-	96	-	96
Spain	240	-	600	-	840
Sweden	-	8	50	-	58
Switzerland	-	-	504	-	504
Türkiye	-	-	0	-	0
Sub-Total	**3 751**	**303**	**2 288**	**545**	**6 886**
Non-member countries					**-**
Australia	0	-	195	-	195
Austria	10	-	-	78	89
Canada	-	50	243	-	293
Hong Kong	-	-	0	-	0
Japan	54	-	140	-	194
New Zealand	-	52	-	-	52
South Korea	4	-	-	-	4
United Kingdom	-	-	946	-	946
United States of America	-	-	272	-	272
Supranational	593	-	-	-	593
Sub-Total	**661**	**102**	**1 797**	**78**	**2 638**
Total	**4 412**	**404**	**4 084**	**624**	**9 524**

The overall credit quality in Finance operations remained sound with exposure to counterparties rated AAA/AA, representing 56.9% of the total. This portion of the portfolio has been volatile in the last few years due to the scarcity of highly rated counterparties and the increase in lower-rated counterparties for the short-term activity, namely deposits and short-term bonds.

Long-term activity involves mainly investments in sovereign and quasi-sovereign counterparties with high ratings. Conversely, the shorter-term operations, mostly for liquidity management purposes and derivative transactions, are carried out through banks which are usually assigned a lower rating.

Figure 35: Finance operations by type of transaction

In million euros	2015	2016	2017	2018	2019	2020	2021	/ End 2020
TOTAL	**9 365**	**9 275**	**8 463**	**8 230**	**9 174**	**8 733**	**9 524**	***9.1%***
Deposits	2 771	3 079	2 605	1 831	2 849	2 629	4 146	*57.7%*
Securities	5 925	5 714	5 566	6 019	5 856	5 579	5 085	*-8.8%*
Swaps SA-CCR	605	463	271	325	398	367	288	*-21.7%*
Forex SA-CCR	13	10	5	45	67	149	6	*-96.0%*

SA-CCR methodology for Swaps and Forex was implemented in October 2021

Exposure to Finance operations, broken down by type of transaction, remained concentrated in securities purchased and deposits (including "Nostro" Accounts) placed mainly in banks and central banks. At the end of December 2021, securities and deposits accounted for 97% of the total credit risk embedded in Finance operations.

The Front Office manages the Bank's treasury activity through different portfolios: the treasury monetary portfolio (TM) of short-term placements, and three securities portfolios, namely the long-term (LT) portfolio, the medium-term (MT) portfolio and the short-term (ST) portfolio.

4.5.6.2 The credit risk profile of the deposit portfolios

The treasury monetary portfolio (TM) consists of short-term placements such as "nostro" accounts, bank deposits up to one year, and cash received as collateral from derivative and (reverse) repurchase (repo) activities. Repo transactions are included in this portfolio. The objective of the portfolio is to manage day-to-day cash-flows in all different currencies. To be eligible for investments up to three months, counterparties must have a minimum internal rating of 6.5 (BBB+). For investments between 3 months and one year, the minimum required rating is 7.0 (A-).

Exposure development over time fluctuates in line with business activity, optimising return while maintaining an adequate credit risk profile. At the end of 2021, the nominal value of deposits and "nostro" accounts was € 4.1 billion (i.e. € 2.1 billion in deposits and € 2.1 million in "nostro" accounts), compared to € 2.6 billion at the end of 2020.

Figure 36: Money market transactions by rating

In million euros	2015	2016	2017	2018	2019	2020	2021	/ End 2020
TOTAL	**2 072**	**2 423**	**2 051**	**1 358**	**2 162**	**1 562**	**2 094**	***34.0%***
AAA	500	-	-	-	-	-	-	
AA	525	624	461	320	473	80	-	*-100.0%*
A	1 047	1 650	1 260	995	1 689	1 482	2 044	*37.9%*
BBB	-	149	330	43	-	-	50	
% AAA/AA	*49%*	*26%*	*22%*	*24%*	*22%*	*5%*	*0%*	

Figure 37: Nostro exposure by rating

In million euros	2015	2016	2017	2018	2019	2020	2021	/ End 2020
TOTAL	**699**	**655**	**554**	**473**	**687**	**1 067**	**2 052**	***92.2%***
AAA	544	484	361	242	269	291	280	*-3.7%*
AA	132	66	80	110	162	521	1 457	*179.7%*
A	23	104	104	118	253	254	315	24.1%
BBB		2	8	2	3	2	0	*-100.0%*
% AAA/AA	*97%*	*84%*	*80%*	*74%*	*63%*	*76%*	*85%*	

4.5.6.3 The credit risk profile of the securities portfolios

The CEB manages three bond portfolios: a long-term (LT) portfolio, a medium-term (MT) portfolio, and a short-term (ST) portfolio. At the end of 2021, the aggregate nominal value of the different bond portfolios was € 5.1 billion, down 8.8% from year-end 2020. In detail, each of the three securities portfolios presented the following nominal values: € 1 499 million (LT), € 2 000 million (MT) and € 1 586 million (ST).

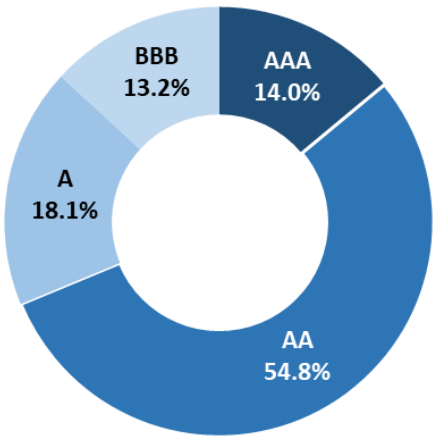
Eligible counterparties must have a minimum internal rating for maturities up to 3 months of 6.0 (BBB) for sovereign and 6.5 (BBB+) for financial institutions; a minimum rating of 7.0 (A-) for investments (bonds issued by sovereigns, sub-sovereigns, agencies, supranational and financial institutions) with maturities between 3 months and 2 years; and a minimum rating of 8.0 (A+) for investments with maturities of more than 2 years.

The overall credit quality of the securities portfolios is robust, with 68.8% of the exposure rated AAA or AA, i.e. 14.0% AAA and 54.8% AA.

Figure 38: Securities (all portfolios) breakdown by rating

In million euros	2015	2016	2017	2018	2019	2020	2021	/ End 2020
TOTAL	**5 925**	**5 714**	**5 566**	**6 019**	**5 856**	**5 579**	**5 085**	***-8.8%***
AAA	1 173	1 095	1 091	1 063	928	882	711	*-19.4%*
AA	2 678	2 694	2 688	3 359	3 052	2 743	2 786	*1.6%*
A	1 229	1 295	1 431	1 397	1 277	1 499	919	*-38.7%*
BBB	646	630	357	200	600	455	670	*47.3%*
BB	200	-	-	-	-	-	-	
% AAA/AA	*65.0%*	*66.3%*	*67.9%*	*73.5%*	*68.0%*	*65.0%*	*68.8%*	
% A/BBB/BB	*35.0%*	*34.0%*	*32.0%*	*26.5%*	*32.0%*	*35.0%*	*31.2%*	

Figure 39: All securities portfolios by rating at of 31.12.2021



The **long-term (LT) portfolio** consists of investments with an initial maturity above one year and up to 30 years. This portfolio is managed with the following objectives:

- to contribute to maintaining the Bank's interest rate risk position in line with the ALM strategy;
- to establish a liquidity reserve of highly rated liquid bonds (the LT portfolio is mainly invested in debt obligations eligible as high-quality liquid assets for Liquidity Coverage Ratio purposes and included in the list of marketable assets eligible as collateral for Eurosystem credit operations).

Figure 40: Long-term portfolio by rating

In million euros	2015	2016	2017	2018	2019	2020	2021	/ End 2020
TOTAL	**2 523**	**2 313**	**2 063**	**2 033**	**1 883**	**1 703**	**1 499**	***-12.0%***
AAA	755	679	679	679	644	615	514	*-16.5%*
AA	1 359	1 434	1 294	1 264	1 149	998	945	*-5.3%*
A	10	-	-	40	40	40	40	*0.0%*
BBB	200	200	90	50	50	50	-	*-100.0%*
BB	200	-	-	-	-	-	-	
% AAA/AA	*83.8%*	*91.4%*	*95.6%*	*95.6%*	*95.2%*	*94.7%*	*97.3%*	
% A/BBB/BB	*16.2%*	*8.6%*	*4.4%*	*4.4%*	*4.8%*	*5.3%*	*2.7%*	

At the end of 2021, financial assets in the long-term (LT) portfolio had a nominal value of € 1 499 million, lower than at the end of 2020. The credit quality of the LT portfolio remained robust, with 97.3% of investments concentrated in the AAA/AA category, improving slightly from the levels registered at year-end 2020 (94.7%).

The **medium-term (MT) portfolio** consists of investments with remaining maturities of over one year and up to 15 years. This portfolio is managed with the following objectives: to strengthen the Bank's liquidity buffer and to enhance profitability.

At the end of 2021, financial assets in this portfolio reached € 2 000 million, posting a 1.3% increase versus year-end 2020. The credit quality of the MT portfolio remained robust, with 96.3% of investments concentrated in the AAA/AA category.

Figure 41: Medium-term portfolio by rating

In million euros	2015	2016	2017	2018	2019	2020	2021	/ End 2020
TOTAL	**1 968**	**1 646**	**1 815**	**1 994**	**2 007**	**1 975**	**2 000**	***1.3%***
AAA	418	416	412	384	284	267	197	*-26.3%*
AA	969	1 181	1 311	1 565	1 635	1 595	1 730	*8.5%*
A	135	0	46	45	88	113	74	*-35.1%*
BBB	446	49	47	-	-	-	-	
BB	-	-	-	-	-	-	-	
% AAA/AA	*51.1%*	*97.0%*	*94.9%*	*97.8%*	*95.6%*	*94.3%*	*96.3%*	
% A/BBB/BB	*48.9%*	*3.0%*	*5.1%*	*2.2%*	*4.4%*	*5.7%*	*3.7%*	

The **short-Term (ST) portfolio** consists of short-term securities with maturities of up to one year (370 days). This portfolio is managed with the following objectives: to strengthen the short-term liquidity position and to optimise the return of the short-term exposure (treasury monetary portfolio and short-term liquidity portfolio).

At the end of 2021, financial assets in the ST portfolio reached € 1 586 million, down 16.5% compared to year-end 2020. The credit quality of the ST portfolio remained sound (7.0% in the AAA/AA category and 50.8% single A) in line with its short-term nature and its liquidity management purposes. It is important to highlight that BBB exposure mainly relates to sovereign counterparties with maturities below six months.

Figure 42: Short-term portfolio by rating

In million euros	2015	2016	2017	2018	2019	2020	2021	/ End 2020
TOTAL	**1 434**	**1 755**	**1 688**	**1 992**	**1 966**	**1 900**	**1 586**	***-16.5%***
AAA	-	-	-	-	-	-	-	
AA	350	79	83	530	267	150	111	*-26.0%*
A	1 084	1 295	1 385	1 313	1 149	1 345	805	*-40.2%*
BBB	-	381	220	150	550	405	670	*65.4%*
BB	-	-	-	-	-	-	-	
% AAA/AA	*51.1%*	*4.5%*	*4.9%*	*26.6%*	*13.6%*	*7.9%*	*7.0%*	
% A/BBB/BB	*48.9%*	*95.5%*	*95.1%*	*73.4%*	*86.4%*	*92.1%*	*93.0%*	

The figures below provide an illustrative comparison of the three securities portfolios according to broad rating class. They confirm that the longer the maturity profile of the investments, the safer the securities/bonds are, i.e. the higher the rating they are invested in.

Figure 43: Breakdown of ratings by portfolio type

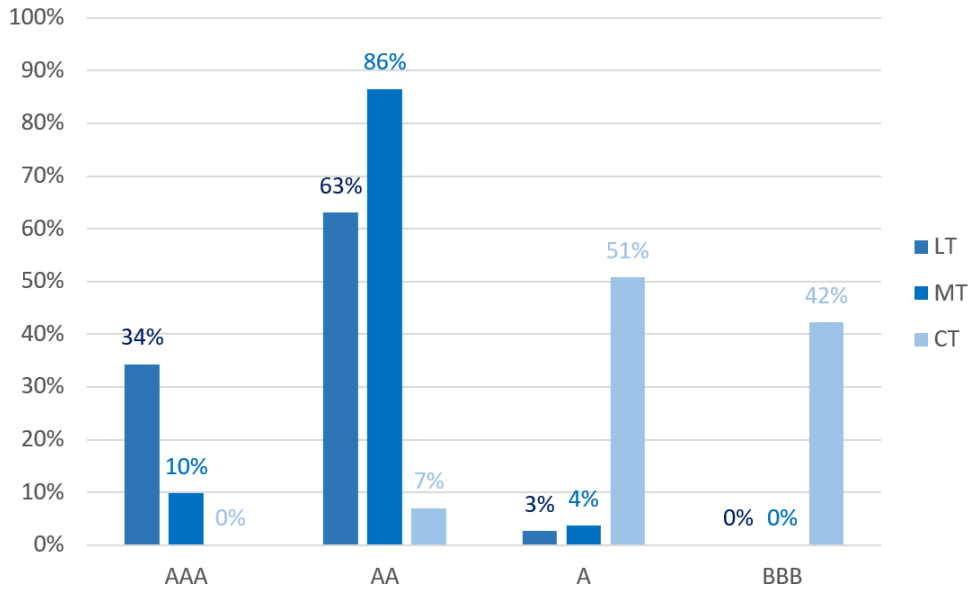
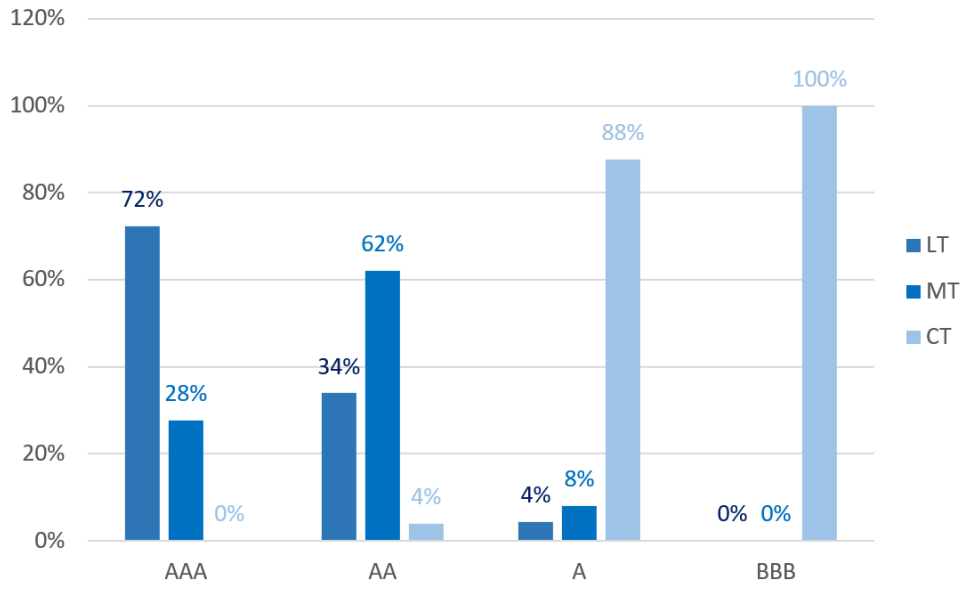
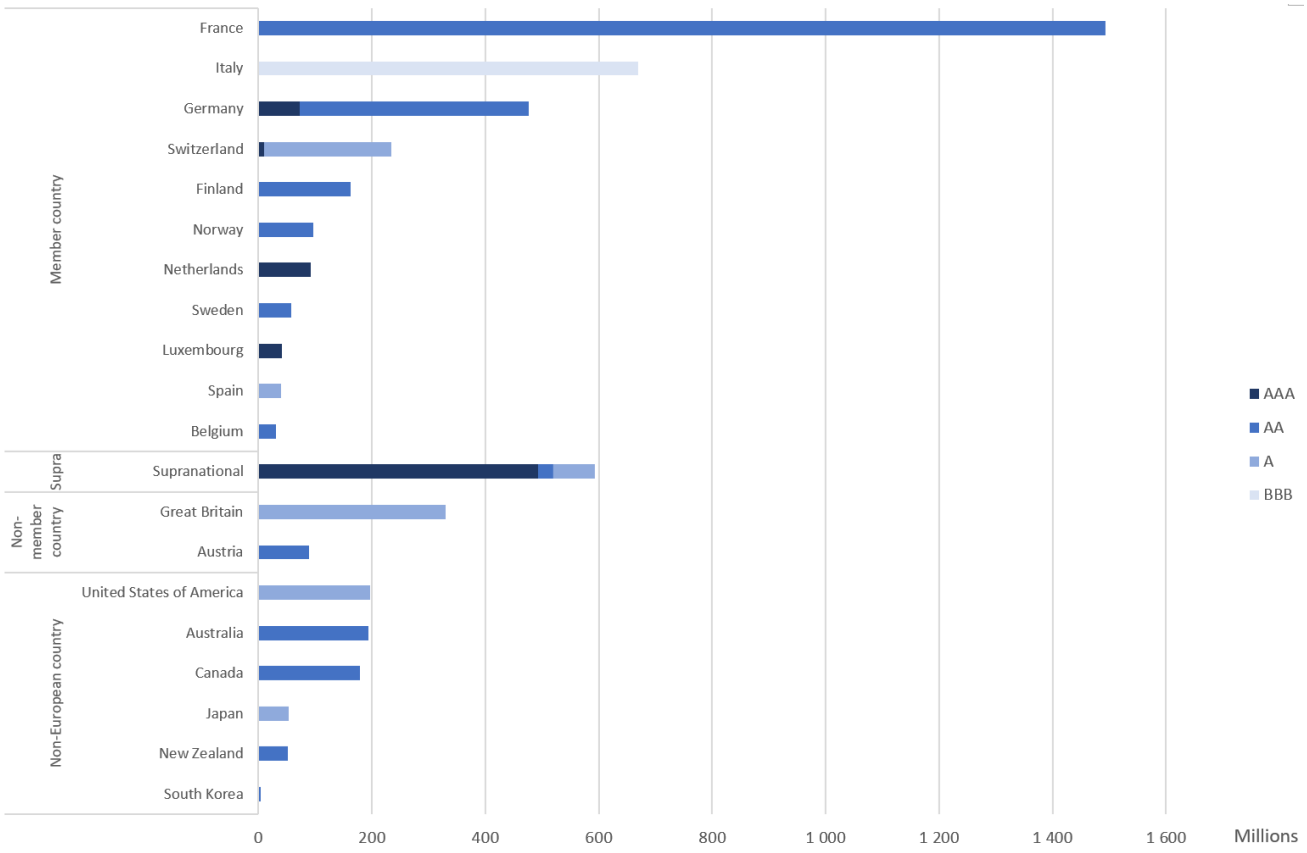


Figure 44: Breakdown of portfolio types by rating



The following figure presents a breakdown of all securities portfolios by country and issuer rating:

Figure 45: Securities nominal by issuer country and by rating



Finally, the figure below offers a more detailed and consolidated view of the three portfolios, including the remaining maturity profile, and confirms the robust credit quality of securities investments with 68.8% (65.0% at year-end 2020) in the AAA/AA category.

Figure 46: Credit risk profile of the securities portfolios by remaining maturity and rating

In million euros	***AAA***	***AA***	***A***	***BBB***	**Total**
LT	***514***	***945***	***40***	-	***1 499***
Up to 1Y	-	125	-	-	125
1Y to 2Y	45	83	-	-	128
2Y to 5Y	186	277	40	-	503
> 5Y	283	460	-	-	743
MT	***197***	***1 730***	***74***	-	***2 000***
Up to 1Y	50	40	63	-	153
1Y to 2Y	15	338	-	-	353
2Y to 5Y	85	646	11	-	742
> 5Y	47	706	-	-	753
ST	-	***111***	***805***	***670***	***1 586***
Up to 1Y	-	111	805	670	1 586
Total	**711**	**2 786**	**919**	**670**	**5 085**
% / total	*14%*	*55%*	*18%*	*13%*	

4.5.7. Large exposure

Large exposure is defined as the overall exposure (loans, securities, deposits and derivatives) to a single counterparty or a group of connected counterparties, exceeding 10% of prudential equity (paid-in capital, reserves, net profit). In this regulatory context, exposure to sovereign counterparties is not considered and is presented at the end of this chapter for information purposes only.

The risk concentration criteria used are as follows:

- Direct exposure over group: within a group of counterparties connected by a control relationship (subsidiaries and branches), even if there is no guarantee;
- Indirect exposure over group: when an entity has given its guarantee to another, even if they are not connected by a control relationship.

A total of twelve counterparties or groups of connected counterparties were considered as large exposure at the end of 2021 (eleven at year-end 2020). However, there was no counterparty with exposure above 25% of prudential equity (as in 2020).

At the end of December 2021, the sum of all large exposure stood at € 5.6 billion or 172% of prudential equity (€ 4.9 billion or 152%, respectively, in 2020), well below the limit of 800% of prudential equity.

Figure 47: Large exposures after credit risk mitigation

In million euros

	2021 *Counterparty*	*Country*	Loans (a)	Finance (b)	Total (a) + (b)	% of Equity	RWA
1	BPCE	FR	264	497	**761**	23.5%	273
2	BBVA Madrid	ES	-	600	**600**	18.6%	237
3	Credit Agricole S.A.	FR	522	43	**565**	17.5%	281
4	Societe Generale	FR	488	9	**497**	15.4%	248
5	State of Brandenburg	DE	454	-	**454**	14.1%	0
6	La Region Wallonne	BE	450	-	**450**	13.9%	0
7	Cooperatieve Rabobank UA	NL	434	2	**436**	13.5%	217
8	Autonomous Community of Madrid	ES	395	-	**395**	12.2%	79
9	Nederlandse Waterschapsbank N.V.	NL	276	92	**368**	10.7%	173
10	Caisse des Depots et Consignations	FR	365	-	**365**	11.4%	74
11	CAIXABANK	ES	347	-	**347**	11.3%	20
12	Barclays PLC	GB	-	332	**332**	10.3%	142
	Total 2021		**3 995**	**1 575**	**5 569**	**172.0%**	**1 744**

Figure 48: Sovereign largest exposures after CRM

2021 *In million euros*

Counterparty	Exposures Direct	Indirect	Total	% of Equity	RWA
Türkiye	968	290	**1 257**	38.5%	1 257
Italy	950	248	**1 198**	36.7%	599
Slovak Republic	855	1	**856**	26.2%	171
Hungary	501	196	**697**	21.4%	348
Croatia	240	382	**623**	19.1%	311
Spain	40	532	**572**	17.5%	114
Lithuania	513	-	**513**	15.7%	103
France	448	-	**448**	13.7%	0
Serbia	407	-	**407**	12.5%	407
Romania	391	-	**391**	12.0%	195
Ireland	37	349	**386**	11.8%	77
Cyprus	175	186	**361**	11.1%	181
Total 2021	**5 525**	**2 184**	**7 709**	**236.0%**	**3 765**

5. RISK-WEIGHTED ASSETS (RWA)

Risk-weighted Assets (RWA) are a bank's assets and off-balance-sheet exposures, weighted according to risk. Credit risk exposure amounts are converted into RWA by applying risk-weight factors. RWA are calculated per activity (loans or treasury) and per type of risk.

The CEB computes its RWA based on the Pillar I standardised method. However, the Bank also calculates RWA using the IRB foundation approach for benchmarking purposes. The IRB foundation approach allows for internal ratings be used for assigning the risk weights whereas the standardised method imposes external ratings for risk weights.

All the below tables for RWA are based on the Pillar I standardised method.

The risk weights are a function of the exposure type, exposure external rating and exposure maturity (see Figure 49):

Figure 49: Risk weight factors for the standardised approach

Counterparty Type	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Non-Rated
Sovereigns	0%	20%	50%	100%	150%	100%
Banks	20%	50%	50%	100%	150%	50%
Short Term	*20%*	*20%*	*20%*	*50%*	*150%*	*20%*
Corporates	20%	50%	100%	150%	150%	100%

Committed off-balance sheet exposure is also converted to RWA after multiplying credit commitments by the credit conversion factors (CCFs).

5.1. Overall RWA Exposure

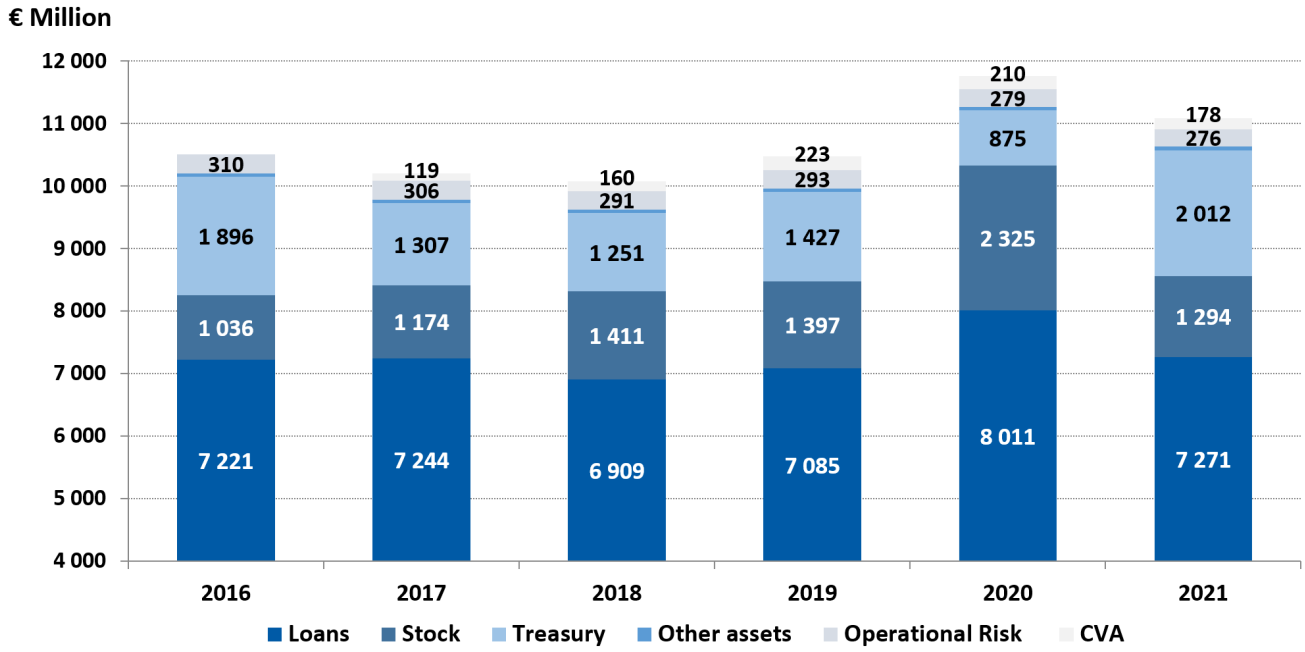
The following figure shows the breakdown of risk-weighted assets after CRM by exposure class under the standardised IRB approach.

Figure 50: RWA by exposure class

31.12.2021	*In million euros*	
	Total Risk-weighted Assets	% of Total RWA
Loans	7 271	65.6%
Stock	1 294	11.7%
Securities	1 081	9.7%
Deposits	840	7.6%
Swaps SA-CCR	90	0.8%
Forex SA-CCR	1	0.0%
Sub-Total	**10 577**	**95.4%**
Other assets	57	0.5%
Operational Risk	276	2.5%
CVA	178	1.6%
Sub-Total	**511**	**4.6%**
Total	**11 089**	**100.0%**

The following figure presents the evolution of RWA by product type over time.

Figure 51: Risk-weighted asset evolution



As of the end of 2021, RWA reached € 11 089 million, a decrease compared to 2020, when RWA stood at € 11 759 million. The decrease stemmed from changes in loan RWA which decreased by € 1 771 million (decrease of € 740 million in loan RWA and decrease of € 1 031 million in stock RWA) despite increases in exposure that were offset by rating upgrades outpacing downgrades, and methodological changes in sector allocation. During 2021, treasury RWA increased more than twofold to reach € 2 012 million from € 875 million, also due to longer maturities and methodological changes in sector allocation.

All tables for RWA below exclude other assets, operational risk and CVA risk-weighted assets.

The following figure shows the effect of CRM on the RWA in the CEB's portfolio as at 31 December 2020 and 31 December 2021 under the standardised approach.

Figure 52: Effect of CRM on risk-weighted assets

In million euros	31.12.2021		31.12.2020	
	RWA before CRM	RWA after CRM	RWA before CRM	RWA after CRM
Sovereign	6 732	6 284	6 320	5 666
Sub-sovereign	1 317	1 065	3 891	2 583
Banks	3 755	2 932	3 466	2 501
Other	297	297	532	460
Total	**12 101**	**10 577**	**14 210**	**11 210**

The following figure shows the geographical distribution of RWA as at 31 December 2020 and 31 December 2021 under the standardised approach.

Figure 53: Geographical distribution of risk-weighted assets

In million euros

Country	31.12.2021	31.12.2020
Member countries		
Albania	85	96
Andorra	6	5
Belgium	7	288
Bosnia and Herzegovina	95	90
Bulgaria	115	134
Croatia	330	297
Cyprus	189	217
Czech Republic	61	99
Denmark	0	0
Estonia	3	13
Finland	34	597
France	1 188	1 238
Georgia	9	8
Germany	171	455
Greece	244	214
Hungary	377	391
Iceland	37	84
Ireland	115	150
Italy	1 212	991
Kosovo	48	26
Latvia	13	22
Lithuania	145	192
Luxembourg	0	0
Malta	9	0
Moldova (Republic of)	111	95
Montenegro	106	91
Netherlands	357	215
North Macedonia	116	125
Norway	19	13
Poland	593	688
Portugal	251	235
Romania	342	368
San Marino	10	9
Serbia	633	510
Slovak Republic	294	376
Slovenia	46	56
Spain	920	1 087
Sweden	10	5
Switzerland	145	20
Türkiye	1 372	1 374
Sub-Total	**9 816**	**10 873**
Other countries		
Australia	39	38
Austria	47	46
Canada	59	59
Hong Kong	0	0
Japan	70	14
New Zealand	10	0
South Korea	1	0
United Kingdom	354	136
United States of America	76	43
Supranational	105	0
Sub-Total	**761**	**337**
Total	**10 577**	**11 210**

5.2. Loan RWA

The following figure shows the geographical distribution of RWA in the CEB's loan portfolio as at 31 December 2020 and 31 December 2021 under the standardised approach.

Figure 54: Geographical distribution of loan risk-weighted assets

	In million euros	
Country	**31.12.2021**	**31.12.2020**
Albania	83	94
Andorra	6	4
Austria*	39	38
Belgium	1	253
Bosnia and Herzegovina	88	74
Bulgaria	115	134
Croatia	311	220
Cyprus	181	207
Czech Republic	43	74
Denmark	-	0
Finland	10	522
France	745	914
Georgia	5	3
Germany	78	124
Greece	218	158
Hungary	351	354
Iceland	37	84
Ireland	78	81
Italy	662	457
Kosovo	35	18
Latvia	11	15
Lithuania	129	151
Malta	4	-
Montenegro	94	60
Netherlands	333	148
North Macedonia	104	102
Poland	509	614
Portugal	159	149
Romania	229	252
San Marino	10	7
Serbia	407	189
Slovak Republic	263	315
Slovenia	46	46
Spain	540	790
Türkiye	1 262	1 324
Moldova (Republic of)	71	37
Supranational	13	0
Total	**7 271**	**8 011**

** Non-CEB Member State: projects undertaken in a CEB Member State, but guaranteed by Austrian counterparties.*

The figure below discloses the RWA in the CEB's loan portfolio split by counterparty type as at 31 December 2020 and 31 December 2021 under the standardised approach.

Figure 55: Loan RWA by counterparty type

	Risk-weighted Assets	
In million euros	**31.12.2021**	**31.12.2020**
Sovereign	4 826	4 217
Sub-sovereign	819	1 957
Banks	1 532	1 657
Other	93	179
Total	**7 271**	**8 011**

5.3. Stock RWA

The figure below discloses the geographical distribution of RWA in the CEB's loan commitments (stock) portfolio as at 31 December 2020 and 31 December 2021 under the standardised approach.

Figure 56: Geographical distribution of committed loan (stock) risk-weighted assets

	In million euros	
Country	**31.12.2021**	**31.12.2020**
Albania	1	1
Andorra	-	1
Austria	8	8
Belgium	-	25
Bosnia and Herzegovina	8	16
Croatia	19	77
Cyprus	9	10
Czech Republic	17	25
Estonia	3	13
Finland	6	69
France	88	249
Georgia	5	6
Germany	24	231
Greece	26	56
Hungary	26	37
Ireland	35	69
Italy	165	306
Kosovo	13	9
Latvia	2	7
Lithuania	16	41
Malta	5	-
Montenegro	11	31
Netherlands	5	46
North Macedonia	13	23
Poland	83	74
Portugal	92	86
Romania	113	116
San Marino	-	2
Serbia	226	321
Slovak Republic	31	61
Slovenia	-	10
Spain	95	190
Sweden	0	0
Türkiye	110	50
Moldova (Republic of)	40	58
Supranational	2	0
Total	**1 294**	**2 325**

The figure below discloses the RWA in the CEB's loan commitment (stock) portfolio split by counterparty type as at 31 December 2020 and 31 December 2021 under the standardised approach.

Figure 57: Stock risk-weighted assets by counterparty type

	Risk-weighted Assets	
In million euros	**31.12.2021**	**31.12.2020**
Sovereign	880	1 213
Sub-sovereign	180	626
Banks	114	211
Other	121	275
Total	**1 294**	**2 325**

5.4. Finance RWA

The figure below discloses the geographical distribution of RWA in the CEB's finance portfolio as at 31 December 2020 and 31 December 2021 under the standardised approach.

Figure 58: Geographical distribution of finance risk-weighted assets

	In million euros	
Country	**31.12.2021**	**31.12.2020**
Member countries		
Belgium	6	10
Czech Republic	0	0
Denmark	0	0
Finland	17	6
France	355	75
Germany	69	99
Ireland	2	-
Italy	385	228
Luxembourg	0	0
Netherlands	19	21
Norway	19	13
Spain	285	107
Sweden	10	5
Switzerland	145	20
Türkiye	0	-
Sub-Total	**1 311**	**584**
Non-member countries		
Australia	39	38
Austria	0	0
Canada	59	59
Hong Kong	0	0
Japan	70	14
New Zealand	10	0
South Korea	1	0
United Kingdom	354	136
United States of America	76	43
Supranational	91	0
Sub-Total	**700**	**291**
Total	**2 012**	**875**

Figure 59 discloses the RWA in the CEB's finance portfolio split by counterparty type as at 31 December 2020 and 31 December 2021 under the standardised approach.

Figure 59: Finance risk-weighted assets by counterparty type

	Risk-weighted Assets	
In million euros	**31.12.2021**	**31.12.2020**
Sovereign	578	236
Sub-sovereign	66	0
Banks	1 285	633
Other	83	7
Total	**2 012**	**875**

Figure 60 discloses the distribution of RWA per product type as at 31 December 2020 and 31 December 2021 under the standardised approach.

Figure 60: Distribution of risk-weighted assets per product type

	In million euros	
	31.12.2021	**31.12.2020**
Deposits	840	319
Securities	1 081	446
Swaps SA-CCR	90	109
Forex SA-CCR	1	1
Total	**2 012**	**875**

6. COUNTERPARTY CREDIT RISK

Counterparty credit risk at the CEB is the translation of the credit risk embedded in over-the-counter (OTC) derivative contracts.

Counterparty risk is due to the default of a counterparty on its obligations to pay the Bank the full present value of the flows relating to a transaction or a portfolio for which the Bank is a net receiver.

It is linked to the replacement cost of a derivative or portfolio in the event of counterparty default. The amount of this risk may vary over time in line with changing market parameters. Hence, counterparty risk can be seen as a market risk in case of a counterparty default.

6.1. Counterparty Credit Risk Mitigation

The CEB uses interest rate swaps (IRS) and currency interest rate swaps (CIRS) to hedge the balance sheet, and convert fixed rate instruments mainly into floating rate in EURO. The notional amount reached € 39.4 billion at the end of December 2021, € 5.1 billion higher than the amount recorded at the end of 2020.

Figure 61: Swaps by type as at 31.12.2021

In million euros	< 1 year	1 to 5 Y	5 to 10 Y	> 10 years	Total
Total	**5 291**	**18 094**	**10 557**	**5 423**	**39 366**
Interest Rate Swap	1 876	9 649	9 100	5 213	25 838
Currency Interest Rate Swap	2 735	8 445	1 457	210	12 848
Forex	680	-	-	-	680
% of Total	*13.4%*	*46.0%*	*26.8%*	*13.8%*	*100.0%*

As part of its risk management, the CEB has implemented several counterparty risk mitigation mechanisms.

Derivative transactions require prior credit clearance of the counterparty by the CRC and the signing of an ISDA Master Agreement and a Credit Support Annex (CSA) collateral agreement with the counterparty. The minimum rating required for swap counterparties at the date of entering into new swap transactions must be 6.5 (BBB+). Eligible collateral may be cash or debt securities. The minimum rating for eligible debt securities received as collateral must be 7.0 (A-). All swap transactions are valued at their net present value, and positions per counterparty are monitored daily so that additional collateral can be called according to the CSA margin call options ranging from daily to three times per month. The CEB has signed CSA collateral agreements with all its derivative counterparties within the framework of its swap activities.

6.2. Counterparty Credit Risk Assessment

From 2021 onward, the CEB has applied the Standardised Approach to Counterparty Credit Risk (SA-CCR) published by the Basel Committee in 2014, which replaced the Current Exposure Method (CEM).

Figure 62: Counterparty Credit Risk (SA-CCR) exposure and RWA by type

31.12.2021	*In million euros*		
	Notional Outstanding	EAD (SA-CCR)	RWA
Swap	38 686	6	90
Forex	680	288	1

Basel requires the use of this method for exposures arising from OTC derivatives, exchange-traded derivatives, and long settlement transactions.

The SA-CCR method is a “risk-sensitive methodology”, conscious of asset class and hedging, that differentiates between margined and non-margined trades and recognises netting benefits. It applies higher add-on factors to most of the asset classes and increases the categories within those classes.

Under the SA-CCR method, the counterparty credit risk exposure, or EAD, is calculated separately for each netting set, using the following formula:

$$EAD = alpha * (RC + PFE)$$

Where:

1 alpha = 1.4

2 RC = the replacement cost

3 PFE = the amount for potential future exposure

The RC intends to capture the loss that would occur if a counterparty were to default at the present time or at a future time, assuming that the closeout and replacement of transactions occur instantaneously. However, there may be a period (the margin period of risk) between the last exchange of collateral before default and the replacement of the trades in the market. The PFE add-on represents the potential change in value of the trades during this period.

The replacement cost (RC) is defined as the greatest exposure that would not trigger a call for variation margin, taking into account the mechanics of collateral exchanges in margining agreements. Such mechanics include, for example, "Threshold", "Minimum Transfer Amount" and "Independent Amount".

The RC is given by :

$$RC = max(V - C; TH + MTA - NICA; 0)$$

Where:

- V is the net present value of the derivative transactions and C is the collateral held
- TH is the positive threshold before collateral is exchanged between the parties
- MTA is the minimum transfer amount applicable to the counterparty
- NICA is the net independent collateral amount

In this formula:

- $Max(V - C, 0)$ represents the uncovered NPV
- $TH + MTA - NICA$ represents the largest exposure that would not trigger a variation margin call and it contains levels of collateral that need always to be maintained.

For example, without an independent collateral amount, the greatest exposure that would not trigger a variation margin call is the threshold plus any minimum transfer amount. In the adapted formulation, $NICA$ is subtracted from $TH + MTA$. This makes the calculation more accurate by fully reflecting both the actual level of exposure that would not trigger a margin call and the effect of collateral held and/or posted by a bank. The calculation is floored at zero, recognising that the Bank may hold NICA in excess of $TH + MTA$, which could otherwise result in a negative replacement cost.

6.3. Credit Valuation Adjustment (CVA)

6.3.1. Accounting CVA

A credit valuation adjustment (CVA) is a provision or adjustment to cover expected credit losses on derivatives. The adjustment amount is determined by assessing the potential credit risk exposure to a given counterparty taking into account: any collateral held, the effect of any relevant netting arrangements, the expected loss given default, and the credit risk based on available market information, such as CDS spreads.

The standard formula for computing CVAs is:

$$CVA_{Cpty} = \left(1 - RR_{Cpty}\right) \sum_{i=1}^{n} EPE(t_i) \cdot PD_{Cpty}(t_{i-1}, t_i) \cdot Df(t_i)$$

Where :

- RR is the recovery rate or percentage amount of the exposure expected not to be lost. In accordance with the current market practice, the recovery rate is assumed to be 40%.
- EPE (ti) is the expected positive exposure from the Bank's view for the relevant dates in the future given by ti with i = 1,…n. It takes into account the details of the CSA with the counterparty, namely the exchange of collateral.
- PD (ti-1, ti) is the probability that the counterparty defaults between t i-1 and t I (marginal probability of default). The PD is derived from market quotes of credit default swap (CDS) spreads for the corresponding counterparty.
- Df (ti) is the discount factor at time ti.

A debit valuation adjustment (DVA) reflects the credit risk that CEB counterparties carry on the CEB. The formula is similar to the one above. The probability of default for the CEB is estimated based on historic probabilities for entities with similar ratings.

The amounts of the International Financial Reporting Standard (IFRS13) provision (CVA and DVA) are calculated semi-annually. They reached € 1.1 million at the end of June 2020, with € -1.3 million for the CVA and € 0.2 million for the DVA.

6.3.2. Capital requirement on CVA

To protect banks against the risk of losses due to CVA variations, Regulation (EU) No. 575/2013 introduced a dedicated capital charge on CVA, namely the CVA Capital Charge. This charge aims at capitalising the risk of losses due to a change in the default probability of a counterparty, which is not provided for in the CVA provisions.

The CEB calculates a capital charge for credit valuation adjustment risk (CVA) under the standardised approach using the following formula.

$$K = 2.33 \cdot \sqrt{h} \cdot \sqrt{\left(\sum_i 0.5 \cdot w_i \cdot \left(M_i \cdot EAD_i^{total} - M_i^{hedge} B_i \right) - \sum_{ind} w_{ind} \cdot M_{ind} \cdot B_{ind} \right)^2 + \sum_i 0.75 \cdot w_i^2 \cdot \left(M_i \cdot EAD_i^{total} - M_i^{hedge} B_i \right)^2}$$

Where:

- h is the one-year risk horizon; h = 1.
- w_i is the weight applicable to counterparty 'i'. Counterparty 'i' must be mapped to one of the seven weights wi based on its external rating, as shown in Figure 63 below. When a counterparty does not have an external rating, the Bank maps the internal rating of the counterparty to one of the external ratings.
- EAD_i total is the exposure at default of counterparty 'i' (summed across its netting sets), including the effect of collateral as per the existing SA-CCR rules and as applicable to the calculation of counterparty risk capital charges for that counterparty by the Bank.
- M_i is the effective maturity of the transactions with counterparty 'i'.

The weights are given in the table below, and are based on the external rating of the counterparty:

Figure 63: Weight by counterparty rating

Rating	Weight w_i
AAA	0.70%
AA	0.70%
A	0.80%
BBB	1.00%
BB	2.00%
B	3.00%
CCC	10.00%

Figure 64 provides an overview of the CVA Capital Charge at the CEB according to the standardised approach.

Figure 64: Credit valuation adjustment RWA

In million euros

	31.12.2021	31.12.2020
Credit Valuation Adjustment (CVA) Exposure	293	342
Credit Valuation Adjustment (CVA) risk-weighted assets	178	210

7. PROVISIONING: EXPECTED CREDIT LOSSES & IMPAIRMENT OF FINANCIAL ASSETS

The CEB makes timely recognition of, and provision for, expected credit losses (ECL) and the impairment of financial assets and commitments in accordance with IFRS 9. The estimation of ECL takes into account a broad range of information, including forward-looking macroeconomic factors.

The new IFRS 9 standard on "Impairment" moves from incurred credit loss to forward-looking expected credit loss. Expected credit loss (ECL) computation is given by the following formula:

$$ECL = EAD \cdot PD \cdot LGD$$

where EAD stands for "Exposure at Default", PD for "Probability of Default", and LGD for "Loss Given Default".

The IFRS 9 impairment model requires recognition of an impairment amount of 12-month expected credit losses for all relevant financial instruments from their origination or acquisition day. In subsequent reporting periods, lifetime credit losses are then recognised if there has been a significant increase in a financial instrument's credit risk.

The financial assets under scope are allocated into three categories (stages) at each reporting date:

- Stage 1: Financial assets which are performing and for which no significant increase in credit risk has been identified since initial recognition. The ECL is calculated over a one-year time horizon;
- Stage 2: Financial assets which are performing but include exposures having experienced "credit deterioration"[8] since origination. The ECL is calculated over the full life of the exposure (until maturity date);
- Stage 3: Exposures in default (90 days past due). The provision is set to EAD·LGD, using a 100% PD.

It will be noted that the CEB uses internal ratings to calculate provisions.

On a forward-looking basis, the IFRS 9 standard requires different scenarios (stress tests) to be carried out based on potential macroeconomic conditions. The macroeconomic scenarios are linked to two variables - gross domestic product (GDP) and stock exchange performance in the Eurozone. Three scenarios are considered, namely best, base and worst. The final provision is based on the weighted average of these scenarios with weights of 20%, 60%, and 20%, respectively.

The final step in the calculation depends on the correlations between macroeconomic factors and counterparties as well as counterparties per country/sector to implicit stressed PD and LGD used in the different scenarios.

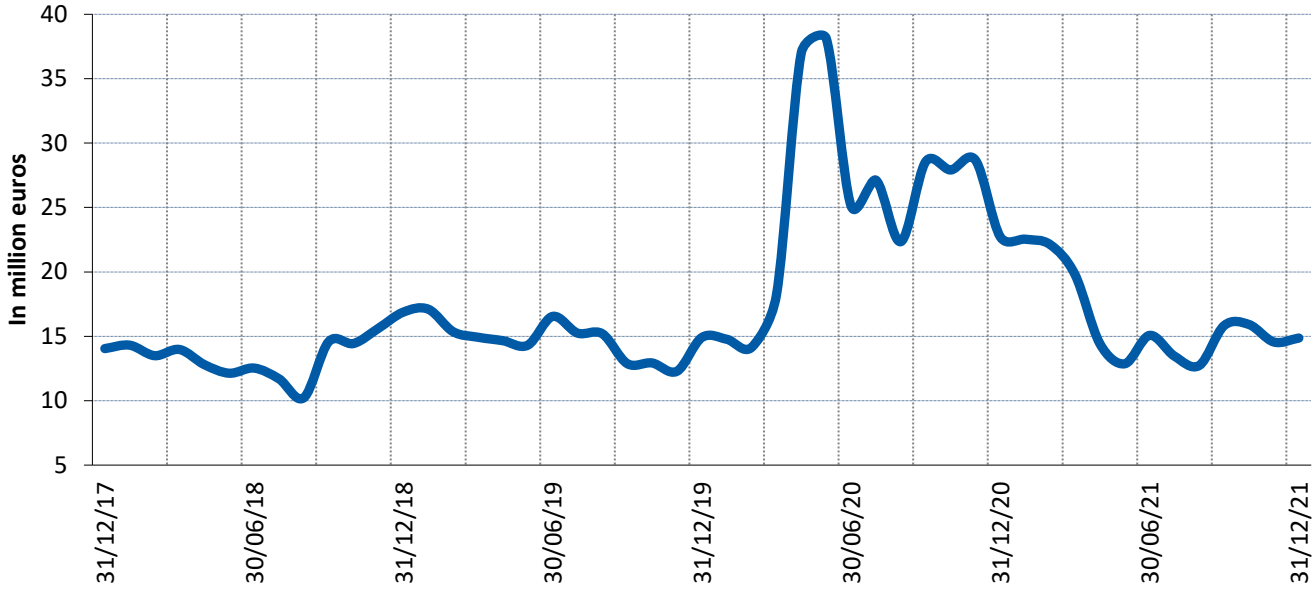
As at end-December 2021, the amount of provision (ECL) reached € 14.9 million, down from € 22.72 million at the end of December 2020.

Figure 65: IFRS provisioning

In million euros	31.12.2017	31.12.2018	31.12.2019	31.12.2020	31.12.2021
Weighted scenario ECL					
Stage 1	13.0	16.9	14.9	22.7	14.9
Stage 2	1.1	-	-	-	-
Total	**14.0**	**16.9**	**14.9**	**22.7**	**14.9**

[8] **Credit deterioration** is assessed by the downgrade of the internal rating to a level equal to or below 3.5 from origination to reporting date.

Figure 66: IFRS provisioning evolution



As shown in the figures above, there was non-negligible volatility during the year which affected the P&L:

By product type, the main source of provision stemmed from L&D activity, representing 89.8% (loans 80% and committed stock 12.0%) Meanwhile, Finance activity accounted for 8.2%.

The largest ECL contributors were Türkiye, Serbia, and the Republic of Moldova, i.e. sovereign exposure (not all counterparties in the country). The 20 largest ECLs accounted for 47.3% of the total provision.

The provision broken down by type of product is mainly concentrated in L&D activity (see Figure 67).

Figure 67: IFRS provisioning by product type as at 31.12.2021

In million euros **Product**	**Stage allocation**	**Provision**	**Outstanding**	**% Provision**
Loan	Stage1	11.9	18 916	80%
Stock	Stage1	1.8	3 221	12%
Bond	Stage1	0.7	5 271	5%
Money Market	Stage1	0.4	2 094	2%
Nostro	Stage1	0.2	2 052	1.2%
Collateral Cash given	Stage1	0.0	68	0.1%
Other assets	Stage1	0.0	1	0.006%
Grand Total		**14.9**	**31 622**	**100%**

Figure 68 presents the list of the 20 largest ECL (and outstanding) by counterparty after credit risk mitigation i.e. the provisions for counterparties on the list take the guarantees received/granted into consideration. The 20 largest ECL are concentrated mainly on sovereign counterparties and account for 72% of the total provision:

Figure 68: IFRS provisioning as at 31.12.2021

In million euros

Counterparty	Stage allocation	Internal Rating	Provision	% of total Provision	Outstanding
Türkiye	Stage1	4.0	6.0	40.2%	1 376
Serbia	Stage1	4.5	0.6	3.8%	633
Moldova (Republic of)	Stage1	2.0	0.5	3.3%	111
Croatia	Stage1	5.0	0.4	2.8%	660
Hungary	Stage1	6.0	0.4	2.7%	749
Romania	Stage1	5.5	0.3	2.0%	590
Greece	Stage1	4.0	0.3	1.7%	244
Italy	Stage1	7.0	0.2	1.6%	1 396
Cyprus	Stage1	5.5	0.2	1.5%	378
Montenegro	Stage1	3.5	0.2	1.5%	107
Bosnia and Herzegovina	Stage1	3.0	0.2	1.4%	95
Caixabank	Stage1	6.5	0.2	1.3%	347
Comunidad de Madrid	Stage1	7.0	0.2	1.2%	595
Portugal	Stage1	5.5	0.2	1.1%	346
La Region Wallonne	Stage1	7.0	0.2	1.1%	450
Kosovo	Stage1	2.5	0.2	1.0%	48
Slovak Republic	Stage1	7.5	0.2	1.0%	916
Procredit Holding AG	Stage1	5.5	0.1	1.0%	103
BBVA Madrid Vizcabao	Stage1	7.0	0.1	1.0%	600
Societe Generale	Stage1	7.5	0.1	0.9%	455
			10.7	**72%**	**10 198**

Total outstanding (EAD) increased by 4% over the period while the provision decreased by 35%. By product type, loans represent the major changes in ECL (€ -6.2 million).

Figure 69: ECL by product type as at 31.12.2021

In million euros	ECL				Outstanding			
Product	**31.12.2021**	**31.12.2020**	**Change**	**% Change**	**31.12.2021**	**31.12.2020**	**Change**	**% Change**
Loan	11.9	18.1	-6.2	-34%	18 916	17 427	1 490	9%
Stock	1.8	3.7	-2.0	-53%	3 221	4 227	-1 006	-24%
Bond	0.7	0.6	0.12	21%	5 271	5 762	-492	-9%
Money Market	0.4	0.2	0.20	132%	2 094	1 537	557	36%
Nostro	0.2	0.1	0.07	63%	2 052	1 067	984	92%
Collateral Cash	0.01	0.08	-0.07	-84%	68	422	-354	-84%
Other assets	0.001	0.0004	0.0004	108%	1	1	0	0%
Grand Total	**14.9**	**22.7**	**-7.9**	**-35%**	**31 622**	**30 443**	**1 179**	**4%**

The table below further elaborates on the breakdown by product and provides some insight into the average rating of each product. It also adds the lifetime ECL which is a good proxy for the provision that would be required if all exposures moved to Stage 2.

Figure 70: Product type stage allocation and average rating as at 31.12.2021

In million euros Product	Stage allocation	Provision	One Year ECL	Lifetime ECL	Outstanding	Avg. Rating Weighted by Exposure	Average PD*LGD
Loan	Stage1	11.9	11.9	96.6	18 916.4	6.9	0.06%
Stock	Stage1	1.8	1.8	1.8	3 220.8	6.7	0.05%
Bond	Stage1	0.7	0.7	8.1	5 270.5	8.7	0.01%
Money Market	Stage1	0.4	0.4	0.4	2 093.8	7.4	0.02%
Nostro	Stage1	0.2	0.2	0.2	2 051.8	9.2	0.01%
Collateral Cash given	Stage1	0.0	0.0	0.0	67.5	8.1	0.02%
Other assets	Stage1	0.0	0.0	0.0	1.4	6.0	0.06%
Grand Total		**14.9**	**14.9**	**107.0**	**31 622.2**	**7.4**	**0.05%**

Figure 71 shows the main drivers of the provision move since the end of last year with their relative weights. It can be observed that the update of macroeconomic scenarios is the main driver of the change.

Figure 71: Main drivers of IFRS9 provisioning as at 30.9.2021

Source of Change	Weight	Impact on provision
New deals	-54%	Increase
Matured deals	31%	Decrease
Amortisation of notional	22%	Decrease
Passage of time	23%	Decrease
PD	73%	Decrease
LGD	20%	Decrease
Internal Ratings	0%	Decrease
Macroeconomic Scenarios	-50%	Increase
Correlations	35%	Decrease
FX rate	0%	Increase
Total	**100%**	

8. FOREIGN EXCHANGE RISK

8.1. Definition

Foreign exchange risk is defined as the potential loss of 'on- and off-balance-sheet' positions arising from unfavourable movements in foreign exchange rates.

The Bank is naturally exposed to currency risk since it raises funds in the international capital markets in different currencies and provides loans or may invest funds in currencies other than the borrowing currencies.

8.2. Foreign Exchange Risk Management and Measurement

The CEB does not take any currency position and systematically hedges assets and liabilities back into euro currency. The residual risk arises from carrying interest in foreign currencies. This risk is monitored and hedged at the end of each month. The open currency position is limited to the equivalent of € 1 million per currency.

The table below shows the foreign exchange (FX) exposure by currency (CCY) as at 31 December 2021.

Figure 72: Foreign exchange positions by currency as at 31.12.2021

Currency	FX position - Local Currency	FX position - EUR	FX rate
CHF	847 181	820 038	1.03
CZK	441 790	17 773	24.86
DKK	193 208	25 981	7.44
GBP	620 969	739 002	0.84
HUF	6 284 293	17 022	369.19
NOK	66 344	6 642	9.99
PLN	165 383	35 977	4.60
SEK	276 819	27 006	10.25
TRY	85 144	5 589	15.23
USD	326 659	288 415	1.13
CAD	375 154	260 650	1.44
AUD	640 146	409 956	1.56
HKD	148 706	16 835	8.83
JPY	56 910 889	436 500	130.38
CNY	77 285	10 742	7.19
NZD	3 083	1 860	1.66

9. INTEREST RATE RISK

9.1. Definition

Interest rate risk is defined as the current or prospective risk to both the Bank's capital and earnings arising from adverse interest rate movements.

The CEB is structurally exposed to interest rate risk because of mismatches in the repricing and maturity characteristics of its assets, liabilities, and derivatives and because its equity has no intrinsic maturity and is not sensitive to interest rate levels.

Interest rate risk includes the interest rate, credit spread, and currency basis risks.

9.2. Management

The Bank manages interest rate risk throughout the balance sheet, using derivatives to convert fixed-rate instruments into floating-rate instruments in euros, seeking to maintain a stable revenue profile while monitoring the volatility of the economic value of equity (EVE).

For debt-funded activity, the Bank uses derivatives to convert assets and liabilities into euro-denominated variable-rate instruments. However, to optimise the funding cost, the Bank may decide to maintain assets and liabilities at fixed interest rates.

The Bank manages its structural interest rate risk by investing its equity in fixed-rate long-term securities or loans in euros. The CEB runs a reinvestment risk when maturing investments are reinvested at the prevailing yield, and a valuation risk as the EVE is exposed to interest rate changes.

As equity has no intrinsic maturity and is not sensitive to interest rate levels, it cannot be matched to interest-rate-sensitive instruments, which are the counterparts of equity on the asset side. Consequently, the Bank, like any other financial institution, adopts a convention for the duration of its equity known as the target duration of equity. This convention is reviewed semi-annually depending on the CEB's risk appetite, its preference for the stability of its revenues or its EVE, and trends in financial markets.

In line with the Principles for the Management and Supervision of Interest Rate Risk issued by the BCBS, the Bank manages interest rate risk using economic value and earnings-based indicators, ensuring notably that the actual duration of the asset counterparts to equity does not deviate from the target duration of equity.

9.3. Measurement

The Bank assesses interest rate risk every month, establishing indicators and setting limits to measure the impact of interest rate changes on the economic value of equity (EVE) and the earnings.

9.3.1. Economic value-based measures

9.3.1.1 Deviation between the actual and target duration of equity

The Bank uses the sensitivity of the EVE including own funds[9] as a primary metric to measure the deviation between the target duration of equity and the actual duration of the asset counterparts to equity (see above). The CEB limits the sensitivity of the EVE including own funds at 0.5% of "own funds market risk[10] for a +/-10 bps interest rate (IR) shock. At the end of December 2021, the EVE sensitivity reached € -6.3 million[11], which is within the authorised limit of +/- 18.5 million euros.

[9] In calculating the economic value of equity sensitivity (EVS) including own funds, a target duration is assigned to the equity compartment. Consequently, the result is affected by the sensitivity of the capital to the target duration and to the interest rate shock.

[10] Own funds market risk: paid-in capital, reserves, net profit, amount on the Social Dividend Account and provisions for post-employment benefits.

[11] Excluding embedded interest rate floors in floating-rate loans.

9.3.1.2 Regulatory stress tests on the economic value of equity

The Bank performs stress tests on the EVE[12] to understand the impact of interest rate shocks. Notably, the Bank measures the impact on the EVE of the six standardised stress scenarios prescribed by the BCBS, monitoring whether the decline in EVE is less than 20% of the Tier 1 capital value in each case.

The six BCBS standardised scenarios are a parallel change in interest rates of +/-200 basis points; a flattening/steepening of the yield curve; and an increase/decrease in the yield curve in the short term, with the downward shock scenario being floored.

At the end of December 2021, the CEB had no outlier exposure for the sensitivity of EVE as prescribed by BCBS, meaning that the decline in EVE is less than 20% of the Tier 1 capital value for all six scenarios. Notably, a +200 bps parallel change in interest rate impacts the core equity Tier 1 by -14.3% (below the BCBS limit of 20%).

Figure 73: Basel standardised stress test scenarios for the sensitivity of the EVE as at 31.12.2021

In million euros	Flattener	Parallel Down	Parallel Up	Short Rate Down	Short Rate Up	Steepener
EVE sensitivity	56	239	-485	101	-110	-120
EVE sensitivity ratio (% of Equity Tier 1)	1.6%	7.0%	-14.3%	3.0%	-3.2%	-3.5%

The CEB notably monitors the sensitivity of the market value of treasury securities to interest rate movements. At the end of December 2021:

- The market value of the long-term portfolio, which is recorded at amortised cost, would decrease by € 10.4 million and € 191.5 million respectively for a parallel shift in interest rates of +10bps and +200bps.
- The market value of the short and medium-term liquidity portfolios, which is recorded at fair value through equity and fair value hedged, is not sensitive to interest rate movements.

9.3.2. Earnings-based measure

9.3.2.1 Interest rate gaps

The CEB monitors interest rate exposure using interest rate gaps, which, for each future period, measure the potential impact of interest rate movements on the earnings due to mismatches in rate characteristics between assets and liabilities. Interest rate gaps can also include the optional effects of the embedded floor options, which are represented as their delta equivalent.

The table below provides the interest rate gap of the debt and equity funded activity without interest rate options[13].

[12] Economic value of equity, "excluding own funds". In calculating the EVE excluding own funds" a duration of zero years is assigned to the equity compartment (liability). Consequently, the result is not affected by the sensitivity of the equity to the target duration and interest rate shock.

[13] The table reads as follows: the amounts in each time band represent the amount that will reprice or refix during this period.

Figure 74: Interest rate risk amortising profile as at 31.12.2021

In thousand euros

31 December 2021	Up to 1 month	1 to 3 months	3 months up to 1 year	1 to 5 years	More than 5 years	Undefined	Net Book Value
Assets							
Cash in hand, balances with central banks	2 044 716	-	-	-	-	-	2 044 716
Financial assets at fair value through equity*	785 367	1 842 670	1 010 934	-	-	65 706	3 704 677
Financial assets at amortised cost							
Loans*	3 911 631	11 993 522	1 266 853	436 525	1 352 584	58 725	19 019 840
Advances	282 961	718 398	1 092 458	-	-	2 853	2 096 670
Debt securities	134 000	-	125 000	630 646	743 297	(62 127)	1 570 816
Deposits of guarantees paid	67 464	-	-	-	-	-	67 464
Other assets	-	-	-	-	-	1 210 674	1 210 674
Sub-total of assets	**7 226 138**	**14 554 590**	**3 495 245**	**1 067 171**	**2 095 881**	**1 275 832**	**29 714 857**
Liabilities							
Financial liabilities at amortised cost							
Amounts owed to credit institutions and to customers	(40 937)	(26 997)	(1 482)	(735)	(551)	27	(70 675)
Debt securities in issue*	(11 108 761)	(12 025 480)	(0)	(500 000)	(500 000)	(690 226)	(24 824 467)
Deposits of guarantees received	(540 534)	-	-	-	-	-	(540 534)
Provisions	(735)	(1 469)	(6 611)	(35 259)	(326 147)	2 169	(368 052)
Other liabilities	-	-	-	-	-	(677 457)	(677 457)
Sub-total of liabilities	**(11 690 966)**	**(12 053 947)**	**(8 093)**	**(535 994)**	**(826 698)**	**(1 365 487)**	**(26 481 185)**
Equity	-	-	-	-	-	**(3 233 672)**	**(3 233 672)**
Net during the period	**(4 464 828)**	**2 500 643**	**3 487 152**	**531 177**	**1 269 183**	**(3 323 327)**	
Cumulative net during the period	**(4 464 828)**	**(1 964 185)**	**1 522 968**	**2 054 144**	**3 323 327**		

*after hedging

9.3.2.2 Sensitivity of revenues to interest rate levels

The CEB also measures the sensitivity of revenues to interest rate changes on a going concern basis, incorporating dynamic changes in balance sheet items.

At the end of December 2021, the sensitivity of revenues was € -0.4 million over the coming 12 months[14] for a positive 10 bps shock.

- **Equity-funded activity:** the CEB benefits when interest rates increase due to its structural reinvestment risk on equity (equity is a non-interest-bearing resource); the impact of an instant +10 bps interest rate move is a variation in earnings of € 0.3 million the first year and up to € 1.0 million the third year.
- **Debt-funded activity:** the CEB benefits when interest rates decrease, mainly due to embedded floors on floating-rate loans; the impact of an instant +10 bps interest rate move is a variation in earnings of € -1.8 million the first year and up to € 0.0 million the third year.

[14] Leaving aside the embedded interest rate floors which are not presented in the earnings sensitivity indicator.

Figure 75: Sensitivity of revenues to interest rate levels under a +10-bps shock (floors included) as at 31.12.2021

Earning sensitivity *(in million euros / + 10 bps)*	**Year 1**	**Year 2**	**Year 3**
Earning sensitivity - Equity funded activity	0.3	0.7	1.0
Earning sensitivity - Debt funded activity	-0.6	0.8	1.0
Total Earning sensitivity without embedded IR floors	-0.4	1.5	2.0
Debt funded activity - embedded IR floors	-1.8	-0.3	0.0
Total Earning sensitivity with embedded IR floors	-2.2	1.2	2.0

9.3.2.3 Optional indicator

The CEB performs stress tests to measure the impact of embedded interest rate floors on earnings.

Figure 76 presents a grid for reading the profit generated by the floors as a function of the evolution of the short rate, the blue area representing the path of 3M Euribor forward rates. It shows that the impact of interest floors on earnings is significant and non-linear when interest rate levels change.

Figure 76: Revenues from interest rate floors based on short-rate evolution as at 31.12.2021

In million euros

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
0.50%	1.9	0.1	0.0	0.0	0.0
0.40%	1.9	0.1	0.0	0.0	0.0
0.30%	1.9	0.1	0.1	0.0	0.0
0.20%	1.9	0.1	0.1	0.0	0.0
0.10%	1.9	0.1	0.1	0.0	0.0
0.00%	2.0	0.1	0.1	0.0	0.0
-0.10%	2.1	0.2	0.1	0.1	0.0
-0.20%	2.5	0.5	0.3	0.2	0.1
-0.30%	3.4	1.3	1.0	0.7	0.5
-0.40%	4.9	2.7	2.1	1.6	1.2
-0.50%	6.8	4.6	3.6	2.8	2.1
-0.60%	8.9	6.7	5.2	4.2	3.1
-0.70%	11.3	9.0	7.0	5.6	4.1
-0.80%	13.7	11.4	8.8	7.0	5.2
-0.90%	16.3	13.9	10.8	8.6	6.3
-1.00%	19.0	16.6	12.8	10.2	7.4

9.3.3. Hedging of the interest rate and foreign exchange risk

The CEB uses derivative financial instruments for hedging purposes and applies hedge accounting rules under IFRS 9 to limit volatility in the income statement and equity.

A hedging relationship consists of combining a hedging instrument with a hedged instrument (loans, securities, or debt instruments) with the same characteristics. Each hedging relationship is documented at inception. The document describes the hedging strategy and identifies the hedged item, the hedging instrument, and the nature of the risk being hedged. The Bank documents different types of micro-hedging strategies.

- Fixed/floating swaps and fixed/floating currency swaps are documented as fair value hedges to cover the interest rate risk of individual assets and liabilities with fixed interest rates (loans, debt securities, issues).

- Floating/floating currency swaps are documented as cash flow hedges to cover changes in the future cash flows of individual assets and liabilities (loans, securities, or debt) that may affect the income statement because of interest rate or foreign exchange rate fluctuations.

The CEB does not document any micro-hedging strategy for floating/floating swaps or FX forwards.

9.3.4. Credit spread risk

Credit spread risk refers to the risk that changes in the perceived credit quality of individual instruments may result in fluctuations in spreads relative to the underlying interest rates.

The Bank monitors credit spread risk given its close association with interest rate risk, which may result in a loss in the Bank's equity.

The Bank manages its exposure to credit spread risk by calculating the sensitivity of the market value of its marketable securities to credit spread movements.

At the end of December 2021:

- The market value of the long-term portfolio, which is recorded at amortised cost, would decrease by € 10.4 million and € 191.5 million respectively for a parallel shift in credit spreads of +10bps and +200bps.
- The market value of the short-term and medium-term liquidity portfolios, which is recorded at fair value through equity, would decrease by € 9.2 million and € 170.1 million respectively for a parallel shift in credit spreads of +10bps and +200bps.

9.3.5. Currency basis risk

Currency basis risk is the risk that fluctuations in currency basis spreads may affect the value of derivatives and therefore the value of the Bank's equity. The Bank monitors currency basis risk, which is closely associated with interest rate risk in the banking book.

10. LIQUIDITY RISK

10.1. Definition

Liquidity risk is defined as the risk of losses resulting from the inability to meet payment obligations on time when they become due or from being unable to do so at a sustainable cost. Liquidity risk can be further divided into funding liquidity risk, which refers to the inability to meet payment obligations since liabilities cannot be refinanced over a certain period, and market liquidity risk, which is the inability to monetise assets due to insufficient market depth or to market disruptions.

Liquidity risk is inherent to the Bank's business, as it typically originates from assets and liabilities with different maturity profiles.

10.2. Management

Liquidity risk management at the Bank plays a crucial role in safeguarding financial flexibility, especially when adverse market conditions constrain access to long-term funding in the markets. The Bank maintains a prudent approach by establishing liquidity indicators at different time horizons and by holding sufficient liquid assets to withstand potential periods without access to the market under extreme market conditions while continuing its regular activity.

The Bank ensures that it holds a liquidity reserve composed of highly rated liquid securities whose market value and liquidity would be preserved during adverse market conditions. Most of these securities are eligible as high-quality liquid assets (HQLA) under the "Liquidity Coverage Ratio" (LCR) framework. At the end of 2021, the amount of HQLA after haircut was € 3.64 billion (65.8% of total portfolio).

The Bank's funding strategy is to avoid any significant gap between the maturity profiles of its assets and liabilities and to diversify its debt issuance programmes, funding markets and investor base. This strategy is pursued within the annual borrowing authorisation approved by the Administrative Council.

10.3. Measurement

The CEB assesses liquidity risk based on several internal and regulatory metrics complemented by qualitative analysis. These indicators are calculated under severe stress scenarios that include disruptions in the repayment of loans, no access to the market for new funding, contingent collateral requirements due to adverse valuation of the derivatives portfolio, and a decline in the valuation of the treasury securities portfolios.

The survival horizon (SH) is the main metric used by the CEB and it assesses the period during which the Bank can fulfil its stressed expected net cash outflows stemming from ongoing business operations without access to the market but including the sale/repoing of its available liquid assets.

The CEB also measures and monitors short-term liquidity ratios as well as regulatory liquidity ratios. The Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR) compare the liquidity sources, including the sale/repoing of liquid assets, to the liquidity requirements.

In addition, the CEB monitors the self-sufficiency period (SSP) indicator, which measures the period during which the Bank is able to fulfil its payment obligations stemming from ongoing business operations under a severe stress scenario without access to new funding by using only its available cash, excluding the non-matured liquid assets.

10.3.1. Liquidity gaps

10.3.1.1 Maturity profile of assets and liabilities

Figure 77 presents the static liquidity schedule of the balance sheet as at 31 December 2021. This schedule shows the liquidity risk in a static mode with cash flows of maturing assets and liabilities being scheduled according to contractual payment dates without any future operations[15].

Figure 77: Maturity profile of financial assets and liabilities as at 31.12.2021

In thousand euros

31 December 2021	Current outstanding			Non-current outstanding		Total
	Up to 1 month	1 to 3 months	3 months up to 1 year	1 to 5 years	More than 5 years	
Assets						
Cash in hand, balances with central banks	2 044 894	-	-	-	-	2 044 894
Financial assets at fair value through equity	200 622	475 238	1 097 405	1 163 811	779 959	3 717 035
Financial assets at amortised cost						
Loans	(62 289)	103 654	2 197 197	8 321 728	9 391 832	19 952 122
Advances	295 895	716 216	1 088 350	-	-	2 100 461
Debt securities	2 908	3 527	172 955	800 058	899 475	1 878 922
Deposits of guarantees paid	67 477	-	-	-	-	67 477
Sub-total of assets	**2 549 507**	**1 298 636**	**4 555 906**	**10 285 597**	**11 071 266**	**29 760 911**
Liabilities						
Financial liabilities at amortised cost						
Amounts owed to credit institutions and to customers	459	7 584	10 795	35 355	16 545	70 738
Debt securities in issue	496 226	895 554	3 192 431	14 328 452	6 166 255	25 078 917
Deposits of guarantees received	540 534	-	-	-	-	540 534
Social Dividend Account	47 169	-	-	-	-	47 169
Sub-total of liabilities	**1 084 387**	**903 138**	**3 203 226**	**14 363 807**	**6 182 800**	**25 737 358**
Off-balance sheet						
Financing commitments	(440 000)	(738 000)	(1 518 000)	(2 861 739)	(757 874)	(6 315 613)
Term financial instruments						
To be received	567 066	1 067 373	2 404 655	9 169 333	1 725 921	14 934 348
To be paid	(549 769)	(958 723)	(2 319 156)	(8 849 056)	(1 723 206)	(14 399 911)
Sub-total of off-balance sheet	**(422 703)**	**(629 351)**	**(1 432 501)**	**(2 541 463)**	**(755 159)**	**(5 781 176)**
Net during the period	**1 042 417**	**(233 853)**	**(79 820)**	**(6 619 673)**	**4 133 306**	**(1 757 623)**
Cumulative net during the period	**1 042 417**	**808 564**	**728 743**	**(5 890 930)**	**(1 757 623)**	

10.3.1.2 Funding concentration over time

As stated in its Financial and Risk Policy, the CEB closely monitors the maturity profile of its long-term debt to avoid any significant gaps. As at 31 December 2021, there were no significant gaps in the maturity profile of long-term debt.

10.3.2. Survival horizon

The survival horizon (SH) assesses the period during which the Bank can fulfil its stressed expected net cash outflows stemming from ongoing business operations without access to the market, but including the sale/repoing of its available liquid assets.

The stress test used to calculated the SH is the same as for the SSP (see section above).

The minimum SH is 12 months, with a comfort zone between 18 and 24 months.

The SH reached 14 months at the end of December 2021.

[15] Undiscounted principal and interest cash flows are presented until the contractual final maturity of the financial instrument (loans, borrowing, and derivatives). Cash-flows are presented on a net basis for interest rate swaps and on a gross basis for other swaps. Interest cash flows are projected based on the interest rate curve prevailing on the closing date.

10.3.3. Self-sufficiency period

The self-sufficiency period (SSP) is used to steer the short-term liquidity risk. It assesses the period during which the Bank can fulfil its stressed expected net cash outflows stemming from ongoing business operations without access to the market and without sale/repoing of its available liquid assets.

The stress test used to calculate the SSP includes:

- the disbursement of new loans as planned;
- default on asset repayments;
- a decrease in the value of the liquidity buffer due to a reversal in market conditions;
- no further access to funding due to a reversal in market conditions;
- adverse collateral requirements on derivatives due to adverse exchange rate movements.

The minimum SSP is 6 months, with a comfort zone between 9 and 12 months.

The SSP reached 9 months at the end of December 2021, well above the minimum level of 6 months.

10.3.4. Short-term liquidity ratios

The short-term liquidity ratios (STLRs) measure the Bank's capacity to handle its net liquidity requirements over an extended market disruption or economic downturn at different time periods. The analysis of potential "liquidity gaps" between sources (including the sale of liquid assets) and uses (liquidity requirements) of cash is carried out over different time periods: one, three, six, and twelve months and thereafter stressed for adverse market and economic conditions by applying risk haircuts depending on asset class, rating, and maturity.

The minimum level of liquid assets is set at 100% of the net liquidity requirements for each timeframe.

As at year-end 2021, all ratios from 1 month to 1 year were well above the established floor of 100%.

Figure 78: Short-term liquidity ratios as at 31.12.2021

In million euros

Short Term liquidity ratio		1 Month	3 Months	6 Months	12 Months
		387%	207%	162%	118%
Sources of liquidity (A)		**6 323**	**7 226**	**8 766**	**10 358**
Nostri account	100%	2 052	2 052	2 052	2 052
Money Market maturing before y months (1)	Credit Risk	266	941	1 804	1 968
Money Market maturing after y months	0%	-	-	-	-
Bonds maturing before y months (2)	Credit Risk	188	627	880	1 769
Bonds maturing after y months (3)	Liquidity Risk	3 696	3 300	3 069	2 369
Capital reimbursement on loans before y month (4)	Credit Risk	122	306	961	2 200
Capital reimbursement on loans after y month	0%	-	-	-	-
Uses of liquidity (B)		**1 632**	**3 494**	**5 409**	**8 766**
Repayment of issues (before y months)	100%	481	1 321	2 270	4 410
Disbursement of financing commitment (before y month) (5)	100%	440	1 178	1 839	2 696
Stress test on collateral outflows		711	995	1 300	1 660

10.3.5. Adverse variation margin requirements on derivatives

The CEB faces a liquidity risk related to adverse variation margin requirements on derivatives because it has signed CSA collateral agreements with most of its derivative counterparties that require the transfer of cash in the event of adverse changes in the market value of the derivatives. Liquidity risk related to adverse variation margin is measured using an internal model based on a Monte Carlo approach, in line with best

banking practices. The amount at risk depends on the time horizon and the confidence level, which reflect the Bank's liquidity risk appetite.

At the end of December 2021, the potential maximum collateral outflows due to adverse variation margin were: € 300 million at one day, € 420 million at one week, € 710 million at one month, € 1 190 million at six months, and € 1 560 million at one year.

10.3.6. Liquidity buffer

To ensure sufficient liquidity in stressed financial conditions, the Bank holds a liquidity buffer consisting of cash and cash equivalents and several portfolios of highly rated and liquid securities that can be sold or transformed into cash for liquidity needs without significant losses.

The CEB closely monitors the asset quality of this liquidity reserve to ensure it has a sufficient quantity of marketable securities to withstand severe stress scenarios. The CEB ensures that the reserve is mainly invested in highly-rated liquid bonds, most of which are eligible as high-quality liquid assets (HQLA) for the Basel Liquidity Coverage Ratio (LCR).

The breakdown of highly-rated and liquid securities eligible as high-quality liquid assets for the Basel Liquidity Coverage Ratio at the end of December 2021 shows that the CEB holds a buffer of € 3.7 billion of HQLA securities: € 3.0 billion of Level 1 and € 0.7 billion (after haircut) of Level 2.

10.3.7. Regulatory liquidity ratios

Although not subject to the international regulatory framework, the CEB pursues compliance with the regulatory liquidity ratios prescribed by the BCBS.

10.3.7.1 Liquidity Coverage Ratio

The Basel Committee has developed the Liquidity Coverage Ratio (LCR) to promote the short-term resilience of the liquidity risk profile of banks by ensuring that they have sufficient high-quality liquid assets (HQLA) to survive a significant stress scenario lasting 30 calendar days.

The LCR is defined as follows:

Figure 79: Liquidity Coverage Ratio (LCR) formula

$$\frac{\text{Stock of High Quality Liquid Assets}}{\text{Total net cash outflows over the next 30 calendar days}} \geq 100\%$$

The term "total net cash outflows" is defined as the total expected cash outflows minus total expected cash inflows in the specified stress scenario for the subsequent 30 calendar days.

This ratio should be equal to at least 100% on an ongoing basis.

Total expected cash outflows are calculated by multiplying the outstanding balances of various categories or types of liabilities and off-balance sheet commitments by the rates at which they are expected to run off or be drawn down. Total expected cash inflows are calculated by multiplying the outstanding balances of various categories of contractual receivables by the rates at which they are expected to flow in under the scenario up to an aggregate cap of 75% of total expected cash outflows.

At the end of December 2021, all ratios were above the 100% threshold.

Figure 80 provides the LCR at the end of December 2021.

Figure 80: Breakdown data of the LCR as at 31.12.2021

31 December 2021	*In million euros*		
	Gross Amount	Weight	Weighted Amount
LEVEL 1 - Central bank reserves	2 045	100%	2 045
LEVEL 1 - Securities portfolio	3 015	100%	3 015
LEVEL 1 - Securities borrowed	-	100%	-
LEVEL 1 - Securities lent	-	100%	-
LEVEL 2A - Securities portfolio	738	85%	628
LEVEL 2A - Securities borrowed	-	85%	-
Total HQLA	**5 799**		**5 688**
Deposits by financial customers	7	100%	7
Deposits by other customers	37	40%	15
Term Deposit	-	100%	-
Credit Facility to non-financial customers other than retail customers	4 321	10%	432
Credit Facility to regulated credit institutions	1 118	40%	447
Credit Facility to other customers	800	100%	800
Credit Facility with value date within 30 days	203	100%	203
Loan MM (incl. FW)	0	100%	0
Outflows from secured lending	-	0%	-
Others (FW settlement of Securities)	-	100%	-
Others Liabilities (ECP issued by CEB)	481	100%	481
Others Liabilities (Bond issued by CEB)	9	100%	9
Outflows from derivatives	8	100%	8
Additional outflow for adverse scenario on derivatives	300	100%	300
Total Outflows	**7 284**		**2 703**
Due from SOV, MDB and public sector entities	31	50%	16
Due from other financial customers (Money Market)	283	100%	283
Inflows from secured lending	-	0%	-
Due from other financial customers (Loan Ord)	133	100%	133
Due from other financial customers (Nostro excl. Central Bank)	7	100%	7
Other inflows	-	100%	-
Other inflows	-	100%	-
Due from securities maturing within 30 days	63	100%	63
Inflows from derivatives	23	100%	23
Total Inflows	**540**		**524**
Capped Inflows (75% of Outflows)			**2 027**
Net Outflows after capping			**2 178**
Liquidity Coverage Ratio (%)			**261%**

10.3.7.2 Net Stable Funding Ratio

The Net Stable Funding Ratio (NSFR) is defined as the amount of available stable funding relative to the amount of required stable funding.

This ratio should be equal to at least 100% on an ongoing basis.

“Available stable funding” is defined as the portion of capital and liabilities expected to be reliable over the time horizon considered by the NSFR, which extends to one year. The amount of such stable funding required (“Required stable funding”) of a specific institution is a function of the liquidity characteristics and residual

maturities of the various assets held by that institution as well as those of its off-balance sheet (OBS) exposures.

Figure 81: Net Stable Funding Ratio (NSFR) formula

$$\frac{\text{Available Stable Funding (ASF)}}{\text{Required Stable Funding (RSF)}} \geq 100\ \%$$

The table below provides the NSFR at the end of December 2021.

Figure 82: Breakdown data of the NSFR as at 31.12.2021

31 December 2021	*In million euros*						
Available Stable Funding (ASF)	**< 3M**	**3-6M**	**6-9M**	**9-12M**	**> 12M**	**Weight**	**Weighted value**
Regulatory Capital Tier 1					3 336	100%	3 336
Bond issued > 1Y					20 043	100%	20 043
Bond issued 6M to 1Y			2 133			50%	1 066
Bond issued < 6M	1 782					0%	-
ECP issued 6M to 1Y				-		50%	-
ECP issued < 6M	481					0%	-
Term Deposit > 1Y					27	100%	27
Demand Deposit from non-financial entity < 1Y		37				50%	18
Demand Deposit from financial entity < 6M	7					0%	-
All other liabilities				0		0%	-
Net Derivative Liabilities				-		0%	-
Total ASF	**27 845**					**88%**	**24 490**
REQUIRED STABLE FUNDING (RSF)	**< 3M**	**3-6M**	**6-9M**	**9-12M**	**> 12M**	**Weight**	
Central Bank reserves			2 045			0%	-
Unencumbered HQLA L1 assets with RW = 0%			1 563			0%	-
Unencumbered HQLA L1 assets with RW > 0%			1 452			5%	73
Unencumbered HQLA L2A assets with RW = 20%			738			15%	111
Unencumbered non HQLA assets < 12M		969				50%	485
Unencumbered non HQLA assets > 12M					813	85%	691
Unencumbered loans to financial customers < 6M with HQLA L1 (RR)	-					10%	-
Unencumbered loans to financial customers < 6M	2 190					15%	329
Unencumbered loans to financial customers 6M to 1Y			390			50%	195
Unencumbered loans to financial customers > 1Y					5 038	100%	5 038
Unencumbered loans to non-financial customers < 1Y		344				50%	172
Unencumbered loans to non-financial customers > 1Y with RW 35% max					7 430	65%	4 830
Unencumbered loans to non-financial customers > 1Y with RW > 35%					5 624	85%	4 780
All other assets			1 117			100%	1 117
Committed credit facilities			6 442			5%	322
Net Derivative Assets + Add-on			433			100%	433
Total RSF			**36 590**			**51%**	**18 576**
Total balance sheet amount			**29 715**				
NET STABLE FUNDING RATIO							**132%**

11. OPERATIONAL RISK

The CEB defines operational risk as the risk of potential loss resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risk. Moreover, the CEB takes into account the reputational risks linked to its activities.

By deliberately choosing to apply the Basel Committee recommendations and best practices, the Bank is committed to assessing its operational risk and to implementing the appropriate mitigating measures on a continuous basis. Acceptable levels for the operational risks are set by the biannual meeting of the Committee for Operational Risks and Organisation (CORO) and the extent of operational risk is calculated and presented in a quarterly risk management report. The collection of operational risk incidents ensures the effectiveness of the control framework and completes the risk mapping and assessment processes.

The permanent internal control framework ensures that each Directorate's control environment is adequate in terms of design and effectiveness; its efficiency is asserted in an annual report.

The Basic Indicator Approach (BIA) method has been adopted to calculate the operational risk capital charge against the Bank's equity. The CEB calculates this capital charge based on the average net banking income over the previous three years. As at 31 December 2021, the operational risk capital charge amounted to € 22.1 million, lower compared to € 22.4 million as at 31 December 2020.

12. GLOSSARY

Called capital
Total capital paid in and to be paid in.

Financing commitment
Projects still awaiting financing and for which a framework loan agreement has been signed.

Loan disbursed
A loan that has actually been disbursed to the borrower.

Loan tranche
Loans are disbursed in tranches, depending on the progress of the project, up to the maximum amount approved by the Administrative Council.

Loans outstanding
Total amount of loans disbursed and not yet repaid.

Member States
At 31 December 2021, the Bank had 42 Member States: Albania, Andorra, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Holy See, Hungary, Iceland, Ireland, Italy, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova (Republic of), Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, San Marino, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland and Türkiye.

Own funds
Paid-in capital, reserves, net profit, amount on the Social Dividend Account and provisions for post-employment benefits.

Project approved
A project that has been submitted to the Administrative Council and approved for funding.

Social Dividend Account (SDA)
Funded mainly by the earmarked portion of the Bank's shareholder approved annual results and used to finance grants in favour of high social impact projects. These grants may take the form of interest rate subsidies, technical assistance grants, loan guarantees or grant contributions.

Subscribed capital
Participating certificates issued by the CEB and subscribed by its members.

Swap add-on
To obtain the potential future credit exposure, the swap notional amounts are multiplied by a percentage based on residual maturity and contract type.

Target countries
Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Georgia, Hungary, Kosovo, Latvia, Lithuania, Malta, Moldova (Republic of), Montenegro, North Macedonia, Poland, Romania, Serbia, Slovak Republic, Slovenia and Türkiye.

Uncalled capital
Difference between the subscribed capital and the called capital.

13. ACRONYMS / ABBREVIATIONS

AC	Administrative Council
AFS	Available for Sale
ALCO	Asset & Liability Committee
ALM	Asset & Liability Management
BBB	Best Banking Practices
BCBS	Basel Committee on Banking Supervision
BIA	Basic Indicator Approach
CAR	Capital Adequacy Ratio
CCP	Central Counterparty
CDS	Credit Default Swap
CEB	Council of Europe Development Bank
CIRS	Currency Interest Rate Swaps
CISO	The Chief Information Security Officer
CORO	Committee for Operational Risks & Organisation
CRC	Credit Risk Committee
CRM	Credit Risk Mitigation
CRU	Credit Risk Unit
CSA	Credit Support Annex
CV	Countervalue
CVA	Credit Valuation Adjustment
DF	Discount factor
DVA	Debit Valuation Adjustment
EAD	Exposure at Default
ECAP	Economic Capital
ECL	Expected Credit Loss
ECPs	European Commercial Paper
EP	Prudential Equity
EPE	Expected positive exposure
ES	Earnings Sensitivity
EVS	Economic Value of Equity Sensitivity
FIN	Finance Directorate
FO	Front Office
FRP	Financial & Risk Policy
FRPG	Financial & Risk Policy Guidelines
FRPH	Financial & Risk Policy Handbook
FX	Foreign exchange
GDP	Gross Domestic Product
GMC	General Management Committee
GR	Gearing Ratio
GRE	Government-related entity
HQLA	High-Quality Liquid Assets
HTM	Held to Maturity
ICAAP	Internal Capital Adequacy Assessment Process
IFAC	International Federation of Accountants

IFRS	International Financial Reporting Standard
ILAAP	Internal Liquidity Adequacy Assessment Process
IR	Interest Rate
IRB	Internal Ratings based approach
IRRBB	Interest rate risk in the Banking Book
IRS	Interest Rate Swaps
ISDA	International Swaps and Derivatives Association
L&D	Loans & Social Development Directorate
LCR	Liquidity Coverage Ratio
LGD	Loss Given Default
LRGs	Local and Regional Governments
MDB	Multilateral Development Bank
MR	Market Risk
MRU	Market Risk Unit
MTM	Marked to Market
NII	Net Interest Income
NPV	Net Present Value
NSFR	Net Stable Funding Ratio
OBS	Off-balance sheet
OCCO	Office of the Chief Compliance Officer
OCI	Other Comprehensive Income
OTC	Over-The-Counter
P&L	Profit and Loss account
PD	Probability of Default
PFE	Potential future exposure
R&C	Risk & Control Directorate
RAF	Risk appetite framework
RC	Replacement cost
REPO	Repurchase Agreement Transaction
RR	Recovery rate
RWA	Risk-weighted Assets
S&PC	Settlements, Payments & Collateral
SA-CCR	Standardised approach for counterparty credit risk
SDA	Social Dividend Account
SH	Survival Horizon
SSP	Self-Sufficiency Period
STD	Standardised approach
STLR	Short-Term Liquidity Ratios
TAR	Treasury Assets Ratio
TDE	Target Duration of Equity
TM	Treasury monetary portfolio
UL	Unexpected Loss

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