LBBW

Breaking new ground

# Disclosure Report 2021

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# 1 General provisions (Article 431 – 434 a CRR)

The Basel Committee on Banking Supervision (BCBS) has published a comprehensive package of reforms known as »Basel III« for the purpose of reinforcing regulation, supervision and risk management in the banking sector.

The Basel rules have been implemented as European law in Regulation (EU) No. 575/2013 of the European Parliament and of the Council (CRR – Capital Requirements Regulation). The rules contained in the supplementary Directive 2013/36/EU (CRD IV – Capital Requirements Directive) were transposed into German national law with the publication of the CRD IV Implementation Act.

CRR II (Capital Requirements Regulation – Regulation (EU) No. 2019/876) and CRD V (Capital Requirements Directive V – Directive (EU) 2019/878) took effect in stages from 27 June 2019. Further significant amendments took effect on 28 June 2021, and LBBW implemented them in the disclosure report accordingly. Hereinafter, for the purposes of this report, Regulation (EU) No 575/2013 is supplemented by the revisions of Regulation (EU) No 2019/876 and defined as “CRR”.

Landesbank Baden-Württemberg (LBBW) prepares the disclosure report in aggregate form at group level in its function as a parent company (application of waiver rule pursuant to Article 7 (3) CRR) in order to comply with the currently applicable requirements pursuant to Part Eight of the CRR in conjunction with Implementing Regulation (EU) 2021/637.

This report is based on the International Financial Reporting Standards (IFRS).

The supervisory relief that regulators require to be published during the COVID-19 pandemic under the EBA Guidelines EBA/GL/2020/07 is also included in this report. The section on the disclosure of own funds pursuant to Article 437 CRR also continues to be supplemented by GL 2018/01 (Comparison of own funds and capital and leverage ratio applying and not applying transitional provisions for IFRS 9 in conjunction with Article 473a CRR II).

In addition, the results of the quantitative analysis for global systemically important banks (G-SIB) as required by Commission Implementing Regulation (EU) No. 1030/2014 and the remuneration report required under the Remuneration Ordinance for Institutions (Instituts-Vergütungsverordnung), which also includes the disclosures required under Article 450 CRR, are published at the same location on LBBW’s website. As at the publication date of this report, not all relevant remuneration components for the 2021 reporting year have been finalized yet.

Changes to figures are commented on at the time the tables in question are published. There are thus various observation periods for comments.

The figures published in the disclosure report have been rounded to the next million in accordance with commercial principles. Amounts under EUR 500,000 are therefore shown as »0«. Accordingly, rounding differences may arise through aggregation.

The obligation to disclose tables EU INS1 and EU INS2 does not apply to LBBW, as LBBW has no equity holdings in insurance undertakings and is not a financial conglomerate.

# 2 Disclosure of key metrics and overview of risk-weighted exposure amounts (Articles 438, 447 CRR)

## 2.1 Key metrics (Articles 438 b, 447 a-g CRR)

The disclosure of various key metrics has been required since CRR II took effect on 28 June 2021. Prior-period values cannot be shown for some of these key metrics, as they were not disclosed in the past (e.g. net stable funding ratio (NSFR)).

There are currently no additional own funds requirements to address the risk of excessive leverage or leverage ratio buffer requirements for LBBW.



Total capital is virtually unchanged as against the previous quarter. Due to the slightly increased risk-weighted exposure amounts, the Common Equity Tier 1 ratio declined by 0.2% to 14.8%, the Tier 1 ratio by 0.3% to 15.9% and the total capital ratio by 0.3% to 21.4%. An explanation of the changes can be found in section 2.2 Overview of total risk exposure amounts (Article 438 d CRR).

The leverage ratio on the basis of the CRR transitional provisions (phase-in) came to 5.1% as at the end of 2021 (as at 30 September 2021: 4.6%). The increase in the ratio is primarily due to reduced leverage ratio exposure (phase-in). The development of the leverage ratio exposure is particularly attributable to the reduction in transactions with sovereigns and central banks.

In the fourth quarter of 2021, the liquidity coverage ratio remained stable in a corridor between 131% and 141% as at the reporting dates and thus nearly level with the previous quarters.

As at 31 December 2021, the net stable funding ratio (NSFR) sank by 7.7 percentage points on the previous quarter to 108.5%. The decline in the ratio as at the end of 2021 is due among other things to an excess of new lending business volume over funding activities in the second half of 2021.

| EUR million | 31/12/2021 | 30/9/2021 | 30/6/2021 | 31/3/2021 | 31/12/2020 |
|---|---|---|---|---|---|
| **Available own funds (amounts)** | | | | | |
| Common Equity Tier 1 (CET1) capital | 12,473 | 12,478 | 12,454 | 12,472 | 12,415 |
| Tier 1 capital | 13,456 | 13,462 | 13,439 | 13,457 | 13,641 |
| Total capital | 18,090 | 18,101 | 18,204 | 18,816 | 18,741 |
| **Risk-weighted exposure amounts** | | | | | |
| Total risk-weighted exposure amount | 84,416 | 83,260 | 82,357 | 84,888 | 82,112 |
| **Capital ratios (as a percentage of risk-weighted exposure amount)** | | | | | |
| Common Equity Tier 1 ratio (%) | 14.8 | 15.0 | 15.1 | 14.7 | 15.1 |
| Tier 1 ratio (%) | 15.9 | 16.2 | 16.3 | 15.9 | 16.6 |
| Total capital ratio (%) | 21.4 | 21.7 | 22.1 | 22.2 | 22.8 |
| **Additional own funds requirements to address risks other than the risk of excessive leverage (as a percentage of risk-weighted exposure amount)** | | | | | |
| Additional own funds requirements to address risks other than the risk of excessive leverage (%) | 1.75 | 1.75 | 1.75 | | |
| of which: to be made up of CET1 capital (percentage points) | 0.98 | 0.98 | 0.98 | | |
| of which: to be made up of Tier 1 capital (percentage points) | 1.31 | 1.31 | 1.31 | | |
| Total SREP own funds requirements (%) | 9.75 | 9.75 | 9.75 | | |
| **Combined buffer requirement (as a percentage of risk-weighted exposure amount)** | | | | | |
| Capital conservation buffer (%) | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 |
| Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%) | | | | | |
| Institution specific countercyclical capital buffer (%) | 0.03 | 0.03 | 0.03 | 0.02 | 0.02 |
| Systemic risk buffer (%) | | | | | |
| Global Systemically Important Institution buffer (%) | | | | | |
| Other Systemically Important Institution buffer | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| Combined buffer requirement (%) | 3.28 | 3.28 | 3.28 | 3.27 | 3.27 |
| Overall capital requirements (%) | 13.03 | 13.03 | 13.03 | | |
| CET1 available after meeting the total SREP own funds requirements (%) | 8.63 | 8.86 | 9.01 | | |
| **Leverage ratio** | | | | | |
| Total exposure measure | 261,816 | 295,492 | 287,847 | 320,544 | 289,880 |
| Leverage ratio (%) | 5.1 | 4.6 | 4.7 | 4.2 | 4.7 |
| **Additional own funds requirements to address the risk of excessive leverage (as a percentage of total exposure measure)** | | | | | |
| Additional own funds requirements to address the risk of excessive leverage (%) | | | | | |
| of which: to be made up of CET1 capital (percentage points) | | | | | |
| Total SREP leverage ratio requirements (%) | | | | | |
| **Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)** | | | | | |
| Leverage ratio buffer requirement (%) | | | | | |
| Overall leverage ratio requirements (%) | | | | | |
| **Liquidity Coverage Ratio** | | | | | |
| Total high-quality liquid assets (HQLA) (Weighted value - average) | 82,086 | 80,510 | 76,407 | 71,492 | 66,494 |
| Cash outflows - Total weighted value | 76,816 | 74,420 | 72,511 | | |
| Cash inflows - Total weighted value | 18,129 | 18,267 | 20,066 | | |
| Total net cash outflows (adjusted value) | 58,687 | 56,153 | 52,446 | 49,155 | 46,814 |
| Liquidity coverage ratio (%) | 140.2 | 143.7 | 146.3 | 145.5 | 141.9 |
| **Net Stable Funding Ratio** | | | | | |
| Total available stable funding | 142,536 | 148,293 | 144,858 | | |
| Total required stable funding | 131,322 | 127,632 | 124,278 | | |
| NSFR ratio (%) | 108.5 | 116.2 | 116.6 | | |

Figure 1: EU KM1 - Key metrics template

## 2.2 Overview of total risk exposure amounts (Article 438 d CRR)

LBBW uses the internal ratings-based approach (foundation IRB approach) approved by the Federal Financial Supervisory Authority (BaFin) for calculating the own funds requirements for counterparty risks arising from the main exposure classes.

Equity exposures are reported exclusively under the IRB approach. If a rating is available, this is reported in accordance with the internal rating. Otherwise, the simple risk weighted approach is applied with the corresponding risk weight. Significant investments in financial sector entities must be risk-weighted at 250%.

The own funds requirements for securitization transactions take place in accordance with the securitization regulations. A distinction is made between SEC-ERBA (Securitization – External Ratings-Based Approach), SEC-IAA (Securitization – Internal Assessment Approach) and SEC-SA (Securitization – Standardized Approach).

The own funds requirements for market price risks for the general interest rate risk, general share price risk and associated option price risks of LBBW (Bank) are calculated based on an internal market price risk model also approved by the regulatory authority. This also includes the own funds requirements for the stressed VaR. The other market price risks are calculated using the standardized approach.

Own funds requirements for operational risks are calculated using the standardized approach.



The following table sets out the total risk exposure amounts and own funds requirements for risk types that are relevant from a prudential point of view.
Significant investments in financial sector entities to which a 250% risk weight must be applied along with deferred taxes resulting from temporary differences are reported in the line »Amounts below the thresholds for deductions«.

A breakdown by exposure class is provided as follows:

- Disclosure of the use of the standardized approach, section 11
- Disclosure of the use of the IRB approach to credit risk, section 12
- Disclosure of exposures to counterparty credit risk, section 14

| EUR million | Total risk exposure amounts (TREA) 31/12/2021 | Total risk exposure amounts (TREA) 30/9/2021 | Total own funds requirements 31/12/2021 |
|---|---|---|---|
| *Credit risk (excluding CCR)* | *66,123* | *64,213* | *5,290* |
| Of which the standardized approach | 10,318 | 10,218 | 825 |
| Of which the foundation IRB (FIRB) approach | 53,039 | 49,249 | 4,243 |
| Of which: slotting approach | 70 | 73 | 6 |
| Of which: equities under the simple risk-weighted approach | 1,529 | 1,530 | 122 |
| Of which the advanced IRB (AIRB) approach | | | |
| *Counterparty credit risk - CCR* | *5,403* | *6,376* | *432* |
| Of which the standardized approach | 2,658 | 2,784 | 213 |
| Of which internal model method (IMM) | | | |
| Of which exposures to a CCP | 131 | 307 | 10 |
| Of which credit valuation adjustment - CVA | 1,213 | 1,567 | 97 |
| Of which other CCR | 1,401 | 1,717 | 112 |
| *Settlement risk* | *0* | *0* | *0* |
| *Securitization exposures in the non-trading book (after the cap)* | *1,769* | *1,691* | *142* |
| Of which SEC-IRBA approach | 248 | 215 | 20 |
| Of which SEC-ERBA (including IAA) | 873 | 798 | 70 |
| Of which SEC-SA approach | 190 | 220 | 15 |
| Of which 1250%/ deduction | 458 | 458 | 37 |
| *Position, foreign exchange and commodities risks (Market risk)* | *6,763* | *6,623* | *541* |
| Of which the standardized approach | 3,675 | 3,809 | 294 |
| Of which IMA | 3,089 | 2,814 | 247 |
| *Large exposures* | | | |
| *Operational risk* | *4,815* | *4,815* | *385* |
| Of which basic indicator approach | | | |
| Of which standardized approach | 4,815 | 4,815 | 385 |
| Of which advanced measurement approach | | | |
| *Amounts below the thresholds for deduction (subject to 250% risk weight)* | *3,029* | *2,885* | *242* |
| *Total* | *84,875* | *83,719* | *6,790* |

Figure 2: EU OV1 – Overview of total risk exposure amounts

The total risk exposure amount increased immaterially as against the previous quarter.

Credit risk exposure increased slightly. The main reason for this development was the business performance for receivables measured in accordance with the internal rating approach. Counterparty credit risk developed in the opposite direction. The decline resulted primarily from the optimized presentation of the transactions in connection with the new SA-CCR method.

In the presentation of securitization exposures, exposures subject to capital deduction and thus not backed with RWAs must also be reported in this template. The total RWAs shown in the template are therefore EUR 458m higher than the total RWAs actually reported.

## 2.3 ICAAP information (Article 438 a, c CRR)

For a description of internal capital adequacy, please refer to section 3.1 Institution's risk management approach (Article 435 (1) CRR) below.

# 3 Disclosure of risk management objectives and policies (Article 435 (1)–(2) CRR)

## 3.1 Institution’s risk management approach (Article 435 (1) CRR)

## Risk-oriented integrated bank management

Risks are managed under LBBW’s strategy, LBBW legislation and LBBW’s articles of association. Risks and the associated opportunities for income and growth potential are taken within the scope of a defined risk appetite, in a deliberate and controlled manner. Particular focus is given to capital and liquidity management.

Clearly defined organizational structure and procedures, internal control processes, risk management and controlling structures, and process-independent internal auditing ensure that business operations are consistent with the strategy.

The processes, procedures and methods are regularly reviewed to ensure their adequacy and further developed. These reviews also take account of the findings of the statutory auditor, the Group Auditing division and the SREP process of the European Central Bank (ECB) and these findings are implemented accordingly.

**Material risk types**

An annual Group risk inventory is used to identify, manage and monitor all of LBBW’s material risk types.

This is used to ascertain the overall risk profile of the LBBW Group, which is presented to the Board of Managing Directors for approval. Risk measurement of the material subsidiaries from a risk point of view is based on the transparency principle; i.e. the types of risk identified as material in the respective companies are integrated in the Group-wide risk measurement of the respective type of risk for material subsidiaries. This also applies to risks from LBBW pension funds to which the bank has outsourced most of its direct defined benefit obligations. LBBW assigns companies whose risks are regarded as immaterial in investment risk.

### The following material risk types were identified:

a) Financial risks

- Counterparty default risks
- Market price risks
- Liquidity risks
- Real estate risks
- Development risks
- Investment risks

b) Non-financial risks

- Operational risks including compliance risks
- Reputation risks
- Business risks
- Model risks

LBBW defines »financial risks« as risks that are taken deliberately ex ante and that can be priced to generate income. »Non-financial risks« are defined as risks that result from factors outside the bank's ordinary business.

LBBW also considers »interdisciplinary topics« – these can also have material adverse effects on several other risk types, but they are already (implicitly) taken into account there and so do not comprise a risk type of their own.



The material interdisciplinary topics are:

- ESG risks (environmental, social, governance)
- Concentration risks
- Pandemic risks

LBBW is currently working intensive on developing its methods and procedures for managing non-financial risks and ESG risks as part of dedicated projects.

Specific risk strategies are created for all risk types that the Group considers material. In addition, a concentration analysis is carried out for these risks to identify central vulnerabilities. In addition to the concentration effects within the respective risk type (»intra-risk concentrations«), this also takes into account effects between different risk types »inter-risk concentrations«).

### Risk strategy and risk tolerance

The Board of Managing Directors and the Risk Committee of the Supervisory Board stipulate the principles of the risk management system for all risk types identified as material by defining risk strategies that are consistent with LBBW's business strategy. The risk strategies are drawn up by the Board of Managing Directors in line with the business strategy and noted by the Risk Committee.

Risk strategy guidelines are defined in the group risk strategy, which applies to the entire Group and across all risk types, in accordance with the Minimum Requirements for Risk Management (MaRisk) and the relevant European standards.

In this context, the Group risk strategy defines specifications on risk appetite from both qualitative and quantitative points of view that are to be observed in all business activities.

In terms of capital, the quantitative part of risk appetite sets out concrete specifications in the form of thresholds for LBBW's material economic and regulatory steering parameters – specifications are set out for times of normal business operations as well as under stress conditions. There are processes in place to ensure that these requirements are adhered to all times, including escalation processes based on a traffic light system and regular stress tests. As part of the quantitative risk appetite, the strategic limit system operationalizes the requirements and objectives defined in the business strategy for all material risk types included in the risk inventory.

The liquidity risk tolerance caps the liquidity risk in the narrower meaning (i.e. it limits the risk of not meeting payment obligations). Further information can be found in the section on liquidity risks.

The risk guidelines form the qualitative element of risk appetite. They constitute the key strategic principles and rules of conduct that are used for weighing up risks and opportunities within the LBBW Group. They contribute to the creation of a uniform risk culture and form the framework for the precise organization of processes and methods of risk management. This qualitative element of risk appetite is completed with further guidelines – such as in the form of a Code of Conduct and Ethics which applies to all employees throughout the entire Group.

The sustainability policy of the LBBW Group must be observed. It is the LBBW Group's intention to act in the best and long-term interest of its customers and stakeholders. In order to implement the sustainability policy, the organizational unit defines sustainability and ESG standards for all business areas.

In addition, the specific risk strategies approved for each material risk type document the current and target risk profile of LBBW, specify customer-, product- and market-specific guidelines and thereby set out regulations on how to handle the identified risks in a deliberate and controlled manner in order to take advantage of the opportunities they present from a risk/return perspective. Additional information on the specific risk strategies is provided in the sections on the respective risk type.



## Risk capital and liquidity management

The objective of this process is to ensure adequate capital and liquidity, both during normal business operations and under stress conditions, and thus to guarantee the permanent viability of the LBBW Group.

### Capital adequacy that is suitable in the long term

Annual medium-term planning comprises the economic and regulatory considerations, brings these together and acts as a link between the strategic framework and integrated bank management throughout the year. The planning period covers five years and is based on expected economic development, with particular consideration given to the state of the coronavirus pandemic and to business activity planned in this environment.

The planning thus lays the groundwork for monitoring the targets set at all management levels. Within the management areas and dimensions, deviations from targets are subsequently analyzed, forecasts and target/actual deviations reported and, where necessary, measures to achieve the targets are agreed, implemented and monitored throughout the year.

In addition, compliance with the internal targets and thus with minimum regulatory requirements is also ensured in the case of adverse economic development. Both the long-term time horizon of medium-term planning and a shock occurrence of stress events are considered here.

### Economic considerations complement regulatory considerations

To ensure adequate capitalization from an economic point of view, in addition to the regulatory capital view a Group-wide compilation of risks across all material risk types and subsidiaries, and the comparison of these with the capital calculated from an economic perspective (aggregate risk cover).

Risks within the framework of the LBBW Group's risk-bearing capacity are described before possible measures to limit risks (so-called gross presentation).

At LBBW, aggregate risk cover (corresponds to risk coverage potential as per MaRisk) denotes the equity restricted according to economic criteria which is available to cover unexpected losses. In addition to equity (as per IFRS including revaluation reserves), the realized income statement gains/losses in accordance with IFRS are considered components of aggregate risk cover. Conservative deductible items are also included due to regulatory requirements.

Economic capital is calculated as a uniform risk measure at the highest level. This is deemed to constitute the amount of capital necessary to cover the risk exposure resulting from LBBW's business activities. In contrast to the equity stipulated by regulatory bodies, it is quantified as value at risk (VaR) at a confidence level of 99.9% and a one-year holding period for counterparty, market price, real estate, development, investment and operational risks. For other risks (reputation, business and model risks), it is quantified using simplified procedures.

The upper risk limit for economic capital (economic capital limit) as part of the quantitative risk tolerance represents the Group-wide overarching limit for all relevant quantified risk types. This limit reflects the maximum willingness of the LBBW Group to accept risk. In keeping with the conservative principle underlying risk tolerance, it is below the aggregate risk cover and thus provides scope for risks arising from unforeseeable stress situations. On the basis of the upper economic capital limit, economic capital limits are defined for the various directly quantified risk types and for the other risks not quantified within a model approach.



By contrast, the liquidity risks (within the meaning of the risk of not meeting payment obligations) are managed and limited in accordance with the quantitative and procedural rules defined in the liquidity risk tolerance for regulatory and economic considerations. Further information can be found in the section on liquidity risks. The model risks are managed entirely via the model risk management process and the corresponding tools described in the relevant section.

### Stress tests and scenario analyses

In addition to risk measurement tools and statistical indicators based on historical data, various stress scenarios as shown play an important part in risk assessment. They analyze in advance the impact of potential heavier economic downturns in future and market crises in order to establish whether LBBW is able to withstand extreme situations.

The scenarios are designed using various criteria: LBBW takes into account both specific scenarios regarding how the coronavirus pandemic will develop, as well as general stress scenarios with exceptional but plausible events of varying degrees of severity and exposure scenarios under which the existence of the Bank is threatened within the context of the recovery plan. The stress scenarios are defined either for a several year time frame as part of medium-term planning or simulated as a sudden occurrence. Stress tests are based on the risk inventory, which specifically analyses LBBW's vulnerabilities using a holistic approach and thus serves as a basis for a comprehensive scenario analysis.

Medium-term planning accounts for adverse developments, both in top-down and in bottom-up planning. The design of the scenarios and their parameters are based on assumptions about macroeconomic conditions and the scenarios cover a five-year period. They also take account of the interdependency between the development of the real economy and the financial economy. This aims to assess how feasible the medium-term planning is under adverse market conditions and to demonstrate a clear relationship between risk tolerance, business strategy and the capital and liquidity plan.

The scenarios are arranged in such a way that they take into account the impact on the economic and regulatory capital and liquidity situation. The definition of the scenarios focuses in particular on LBBW's risk concentrations. These complex macroeconomic scenarios addressing multiple risk types are also complemented by simple sensitivity analyses.

# Risk management processes, organization and reporting

### Risk management and monitoring

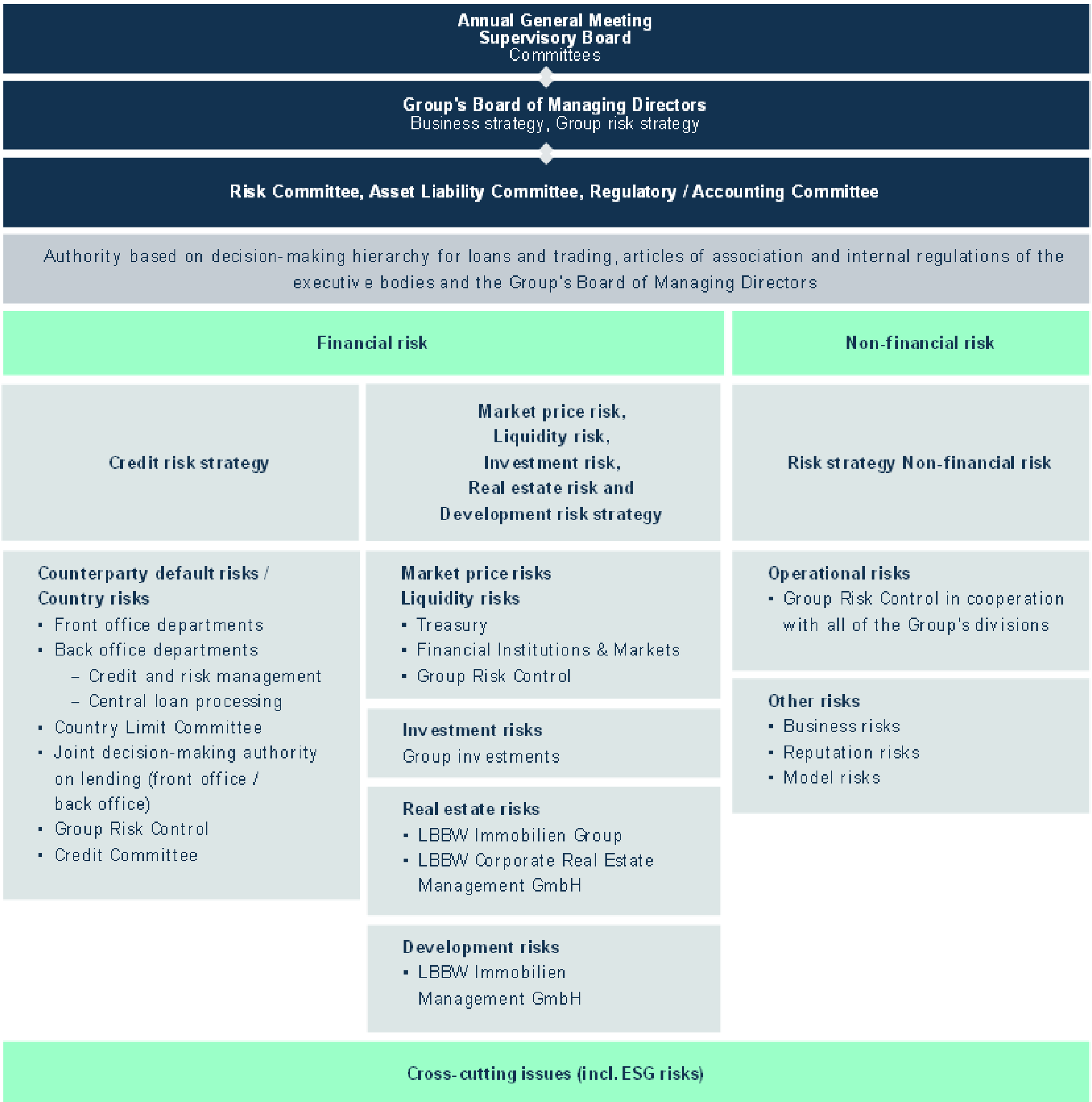
LBBW's risk management and monitoring is based on the guidelines of the risk strategy and the defined limits and approval powers.

At LBBW, transactions can only be entered into within clearly defined limits or approval powers and in accordance with the principles of the risk strategy. Within the defined framework, risk management decisions are made by the departments with portfolio responsibilities in the first line of defense, maintaining the separation of functions; these decisions are monitored by central Risk Control in the second line of defense. The risk controlling and risk management system set up for this purpose covers all material risks and the details specific to the risk types.

Potential concentration of risk receives particular attention. At LBBW, appropriate processes are used to identify and to deliberately manage risk concentration. Risks to the Group's going concern status must be excluded. Corresponding monitoring processes (e.g. report on risk concentrations, stress tests) and limits (e.g. sector and country limits) are available for the purpose of monitoring this strategic requirement.

An overview of the structure and individual elements of the risk management system of LBBW is given in the following chart. Additional information on this is provided in the sections on the respective risk type.

## Risk management structure




## Committees and reporting

The members of the Group's Board of Managing Directors with responsibility for managing risks are supported in their decision-making by corporate bodies and a comprehensive risk and subject-specific reporting system. The overall risk report and the report to the Asset Liability Committee (ALCo) thus form the reporting system relevant to risk within the context of the requirements of MaRisk.

The monitoring body, the Risk Committee, comprises the board members with responsibility for real estate and project finance, capital markets business and asset management/international business, risk management and compliance as finance and operations, as well as divisional managers from Risk Control, Group Compliance, Finance Controlling, Treasury and Back Office and key Front Office areas. As an advisory committee, it prepares decisions for the Board of Managing Directors and supports it in risk monitoring, risk methodology and risk strategy for the Group as a whole. The monthly overall risk report and other reports prepared on specific issues as required form the basis for this. Covering all risk types, the overall risk report describes the risk situation in the operational units, facilitating a structured discussion between front office and monitoring units in the Risk Committee.

The managing body, ALCo, also has an advisory role and works on preparing decisions for the Group's Board of Managing Directors. The focus of the ALCo is on strategic resource management for the Group as a whole. It supports the Board of Managing Directors, among other things in structuring the balance sheet, managing capital and liquidity as well as in funding and managing market price risks. The committee comprises the board members with responsibility for capital markets business and asset management/international business, risk management and compliance as finance and operations, as well as the divisional managers from Risk Control, Financial Controlling and Treasury.

The Regulatory/Accounting Committee evaluates at an early stage the requirements of the large number of provisions of banking supervisory law and accounting that are relevant for management purposes and takes the measures required. The committee comprises, among other areas, the board members with responsibility for capital markets business and asset management/international business, risk management and compliance as finance and operations, the head of information technology and divisional managers from the Legal division, Risk Control, Group Compliance, Finance, Finance Controlling, Group Auditing, Treasury and Back Office.

### Processes of adjustment

New types of trading and credit product at LBBW are subject to a New Product Process that ensures the product is included in LBBW's various systems, such as accounting or Risk Control. Any potential legal consequences are also outlined.

The main focus is on products from the capital markets business division. If it is not possible to fully integrate the products into the model immediately, a step-by-step approach is taken in which the products are initially traded only under very strict supervision.

In the case of material changes in the set-up and procedural organization and in the IT systems, LBBW analyzes the potential effects on control procedures and control intensity within the framework of a predefined standard process.

### Process-independent monitoring

The Group Auditing division is a process-independent division that, as the third line of defense, monitors the operations and business work flows, risk management and controlling and the internal control system (ICS) with the aim of safeguarding LBBW's assets and boosting its operating performance. The Group Auditing division exercises its duties autonomously. The Board of Managing Directors is informed of the results of audits in written audit reports, which are discussed with the audited operating units. The Group Auditing division also monitors the measures taken in response to the audit findings.

The auditing activities of the Group Auditing division are generally based on an audit schedule, approved annually by the Board of Managing Directors, on the basis of a long-term risk-oriented plan, which records all the activities and processes of the LBBW Group, allowing for risk weighting in a reasonable period, but always within three years.

In the past financial year, there were no changes to the heads of internal audit, the internal control function, the risk management function or the compliance function.

### Statement by the Board of Managing Directors

The Board of Managing Directors of LBBW regards the risk management procedures pursuant to Article 435 (1) e and f CRR as fundamentally appropriate in light of the type, scope, complexity and risk content of the business activities and the business strategy. The structure takes account of MaRisk and other relevant statements by national and international regulatory authorities. All the principal risks are included in the risk management procedures. The processes, procedures and methods are regularly reviewed to ensure their adequacy and permanently developed further. These reviews also take account of the findings of the statutory auditor and the Group Auditing division, as well as any comments made in the context of the SREP process of the European Central Bank (ECB), and these are implemented accordingly. Key figures and an overview of the bank's risk profile are described briefly in the chapter below. The risk declaration was approved by the Group's Board of Managing Directors.

# LBBW Group – Risk situation

LBBW Group – Risk-bearing capacity

| | 31/12/2021 | | 31/12/2020 | |
|---|---|---|---|---|
| **EUR million** | **Absolute[1]** | **Utilization in %** | **Absolute[1]** | **Utilization in %** |
| Aggregate risk cover | 12,210 | 50 | 11,808 | 55 |
| Economic capital limit[2] | 10,000 | 60 | 10,000 | 65 |
| Correlated total economic capital | 6,038 | | 6,447 | |
| **of which:** | | | | |
| Counterparty risk | 3,725 | | 3,969 | |
| Market price risk | 1,835 | | 1,948 | |
| Investment risk | 31 | | 38 | |
| Operational risk | 676 | | 588 | |
| Development risk | 101 | | 122 | |
| Real estate risk | 131 | | 131 | |
| Other risks[3] | 196 | | 314 | |
| Interrisk correlations | -656 | | – 663 | |

1 Confidence level 99.9%/1 year holding period.
2 The individual risk types are capped by economic capital limits.
3 Other risks (particularly reputation, business and model risks).

Aggregate risk cover increased by EUR 0.4bn compared to year-end 2020 to EUR 12.2bn. This rise is essentially due to improved operating income and interest rate developments and the impact of these on actuarial gains.

The economic capital commitment has declined by a total of EUR 0.4bn since the end of 2020. Lower counterparty risk is thanks chiefly to a methodological improvement in presenting derivatives. By contrast, the decline in market price risks is especially a result of the portfolio. A new damage scenario caused a rise in operational risk. The annual update of business and reputation risks lowered Other risks.

To sum up, it can be stated that the risk-bearing capacity of the LBBW Group was maintained at the reporting dates during the 2021 financial year as a whole. The stress resistance required in the sense of permanent viability was also guaranteed at all times. The economic capital limit was maintained at the reporting dates at Group level.

Other potential effects of the coronavirus pandemic on LBBW's economic and regulatory key performance indicators are regularly analyzed and investigated in stress scenarios.

In counterparty default risks, some individual sectors were hit harder by the pandemic in the last financial year than others. From a Group perspective, however, there has been no deterioration in portfolio quality.

Accordingly, lower market volatility had a positive impact on value-at-risk for market risks. This does not affect the economic capital in market price risk as the model already includes a parameterization for crisis volatility.

## 3.2 Disclosure of governance arrangements (Article 435 (2) CRR)

The maximum number of directorships which members of the Board of Managing Directors and the Supervisory Board may hold is determined by the German Banking Act (KWG). Under Section 25c of the German Banking Act, the managers of a significant institution are not permitted to act as the managing director of another company or to be a member of the management or supervisory body of more than two companies.

For this purpose, multiple directorships count as a single one if they are held with companies

- that belong to the same group within the meaning of Article 4 (1) no. 138 of Regulation (EU) no. 575/2013,
- that fall within the same institutional protection scheme or
- in which the institution holds a significant share.

Under Section 25d of the German Banking Act, the members of the supervisory body of a significant CRR institution are not permitted to simultaneously act as the managing director of another company or to be a member of the management or supervisory body of more than two companies. Similarly, a person who is a member of the management or supervisory body of more than four companies is disqualified from being a member of the supervisory body of a significant CRR institution.

Members of the Landesbank Baden-Württemberg Board of Managing Directors comply with the maximum number of directorships permitted under the German Banking Act. The members of the Supervisory Board have been duly informed of the maximum number of directorships permitted under the German Banking Act.

LBBW observes the requirements under Section 25c (2) No. 1 and Section 25d (3) No. 1 and 2 of the German Banking Act with respect to the non-compatibility of management and supervisory directorships.

The following table shows the number of directorships held by members of the Supervisory Board in management and/or supervisory bodies as per 31 December 2021 (Article 435 (2) (a) CRR):

| | Number of directorships held in management and/or supervisory bodies in accordance with the rules pursuant to Section 25d (3) KWG | Number of directorships of management and/or supervisory bodies effectively held in other undertakings, irrespective of whether the undertaking in question pursues commercial objectives or not |
|---|---|---|
| Jörg Armborst | 1 | 0 |
| Jens Baumgarten | 1 | 0 |
| Dr. Danyal Bayaz | 0 | 6 |
| Christian Brand | 3 | 2 |
| Wolfgang Dietz | 2 | 9 |
| Berhard Ilg | 2 | 4 |
| Gabriele Kellermann | 3 | 4 |
| Bettina Kies-Hartmann | 2 | 1 |
| Sabine Lehmann | 1 | 0 |
| Dr. Frank Nopper | 1 | 12 |
| Dr. Fritz Oesterle | 3 | 2 |
| Martin Peters | 2 | 61 |
| Christian Rogg | 1 | 0 |
| B. Jutta Schneider | 3 | 2 |
| Peter Schneider | 4 | 9 |
| Wiebke Sommer | 1 | 0 |
| Dr. Florian Stegmann | 3 | 5 |
| Dr. Jutta Stuible-Treder | 1 | 0 |
| Burkhard Wittmacher | 3 | 3 |
| Norbert Zipf | 1 | 0 |

The following table shows the number of directorships held by members of the Board of Managing Directors in management and/or supervisory bodies as per 31 December 2021 (Article 435 (2) (a) CRR):

| | Number of directorships held in management and/or supervisory bodies in accordance with the rules pursuant to Section 25c (2) KWG | Number of directorships of management and/or supervisory bodies effectively held in other undertakings, irrespective of whether the undertaking in question pursues commercial objectives or not |
|---|---|---|
| Rainer Neske | 3 | 3 |
| Anastasios Agathagelidis | 1 | 5 |
| Karl Manfred Lochner | 3 | 7 |
| Stefanie Münz | 1 | 1 |
| Dr. Christian Ricken | 3 | 5 |
| Thorsten Schönenberger | 2 | 2 |

Section 25c of the German Banking Act stipulates that managing directors must hold the necessary professional qualifications, be trustworthy and dedicate sufficient time to performing their functions. They are assumed to possess the necessary professional qualifications if they have sufficient theoretical and practical knowledge of the business concerned as well as managerial experience.

The Board of Managing Directors consists of several members. The members of the Board of Managing Directors are appointed for a maximum period of five years, after which they may be reappointed. A resolution approving the re-appointment of members of the Board of Managing Directors must be passed no earlier than twelve and no later than six months before the expiry of the previous appointment. In exceptional cases, the Supervisory Board may also pass a resolution approving an appointment or re-appointment beyond this.

The selection process is governed by the statutory provisions contained in the German Banking Act and the bylaws of the Executive Committee, which performs the duties of a nomination committee in accordance with Section 25d (11) of the German Banking Act.

Under these rules, the Executive Committee is responsible for preparing the Supervisory Board's decisions on the appointment and dismissal of the members of the Board of Managing Directors as well as long-term successor planning for the Board of Managing Directors. To this end, it particularly identifies candidates for a position on the Board of Managing Directors and, in doing so, takes account of the balance and diversity of the knowledge, skills and experience of all the members of the Board of Managing Directors, prepares a job description with a candidate profile and specifies the time commitment associated with the task.

LBBW's Supervisory Board takes into account the following aspects of diversity when selecting suitable candidates for the Board of Managing Directors and the Supervisory Board:

- Educational and professional background
- Gender
- Age

On account of the national focus of its customer and market structure, there is no need for the Board of Managing Directors or the Supervisory Board at LBBW to have an international nature. The various diversity aspects and their relevance to LBBW are reassessed regularly, at least once a year, to ensure they remain up to date.

When appointing members, LBBW takes into account the widest possible spectrum of educational and professional backgrounds and experience in relation to bodies' key activities. The aim of this is to bring together people with diverse occupational and educational backgrounds in the Board of Managing Directors and the Supervisory Board. Using this concept for a balanced and diverse composition, the Supervisory Board aims to ensure members are highly suitable at an individual level and that LBBW's management and supervision incorporates as many diverse perspectives and experience as possible.

On account of its legal form, LBBW is not subject to national requirements that require targets to be set regarding the share of women in the Board of Managing Directors and Supervisory Board as set out in the German act on equal participation of men and women in leadership positions in the private sector and in public service (*Gesetz für die gleichberechtigte Teilhabe von Frauen und Männern an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst*). The Executive Committee has set the Supervisory Board the target of encouraging a greater proportion of women, as well as a strategy for reaching this target. The target for a minimum percentage of women on the Supervisory Board and Board of Managing Directors at LBBW is to be maintained at the current level for the time being. In order to boost the proportion of women in upper management, including the Board of Managing Directors, LBBW has introduced measures to promote women in management positions.

LBBW aims for a balanced range of ages within the executive bodies as a whole (Board of Managing Directors and the Supervisory Board) to ensure the continuity of their work and to enable smooth successor planning. The articles of association set an age limit for the Board of Managing Directors. No individual should be over 65 years of age when appointed, although an exemption to this may be granted in justified cases.

The professional background of the members of the Board of Managing Directors is described in detail on LBBW's website.

LBBW's Supervisory Board has 21 members. The Chair and Deputy Chair of the Supervisory Board are elected from the Supervisory Board's own number on the basis of a proposal made by the shareholders' meeting in the absence of any requirements to the contrary in the Landesbank Baden-Württemberg Act. The members of the Supervisory Board must be reliable, possess the necessary expertise to assess and monitor the Bank's business in the performance of their supervisory duties and have sufficient time to perform their duties. They are not bound by any instructions. They must perform their duties impartially and responsibly.

At least one member of the Supervisory Board must have expertise in the field of accounting and at least one other member of the Supervisory Board must have expertise in the field of auditing.

In the absence of any requirements to the contrary in the Landesbank Baden-Württemberg Act, the members of the Supervisory Board cannot be appointed for a period exceeding the conclusion of the shareholders' meeting at which a resolution is passed to ratify the activities of the Supervisory Board for the fourth year after the commencement of their term of office. Repeated appointments are possible. Upon the expiry of their term of office, the members of the Supervisory Board continue to perform their duties until the new Supervisory Board has convened.

The selection process is governed by the statutory provisions contained in the German Banking Act and the bylaws of the Executive Committee, which performs the duties of a nomination committee in accordance with Section 25d (11) of the German Banking Act.



Under these rules, the Executive Committee is responsible for preparing proposals for the election of members of the Supervisory Board who are not appointed by employees. To this end, the Executive Committee takes account of the balance and diversity of the knowledge, skills and experience of all the members of the Supervisory Board, prepares a job description with a candidate profile and specifies the time commitment associated with the task. The members of the Supervisory Board are elected by the shareholders' meeting unless they are required to be elected by the employee representatives and in the absence of any requirements to the contrary in the Landesbank Baden-Württemberg Act. The owners have the right to submit nominations.

Moreover, the Executive Committee has defined a target for encouraging a greater proportion of women on the Supervisory Board as well as a strategy for reaching this target.

Furthermore, the Executive Committee assists the Supervisory Board with the regular evaluation, which must be conducted at least once a year, of the structure, size, composition and performance of the Board of Managing Directors and the Supervisory Board and submits relevant recommendations to the Supervisory Board. In doing so, the Executive Board ensures that individual persons or groups are unable to exert any influence on the decision-making processes within the Board of Managing Directors liable to have an adverse effect on the Bank.

In addition, the Executive Committee assists the Supervisory Board with the regular evaluation, which must be conducted at least once a year, of knowledge, skills and experience.

In addition, in accordance with Section 25d (11) sentence 1 no. 3 and 4 KWG, the Supervisory Board has established a process for the regular evaluation of the Board of Managing Directors as a whole and of the Supervisory Board.

Each member of the board must have an up-to-date understanding of LBBW's business model and the related risks. This also includes an adequate understanding of areas for which an individual member is not directly or solely responsible but for which the member is jointly responsible with another member.

Each member must clearly understand LBBW's governance regulations, their respective role, responsibilities, the Group structure and any potential conflicts of interest arising from this. In addition, all members must have the skills to put a suitable corporate culture into practice.

As a basis for assessing professional qualifications, target requirements in the form of job profiles for the Supervisory Board and the Board of Managing Directors have been established on the basis of roles and responsibilities. The job profiles describe the responsibilities of the respective positions and the professional and personal requirements that LBBW considers to be met for the current members of the Board of Managing Directors and Supervisory Board.

Key professional requirements for members of the Board of Managing Directors:

- Ideally a degree or equivalent qualification in banking (in particular, economics, banking or law)
- Managerial authorization in accordance with the German Banking Act (KWG)
- Many years of relevant professional and management experience at a bank
- Knowledge of legal and regulatory requirements and banking regulation
- Knowledge and practical experience in integrated bank management and internal governance

Key personal requirements for members of the Board of Managing Directors:

- Leadership skills, highly motivated and genuine personality combined with team focus
- High level of personal integrity, loyalty, excellent reputation
- Strategic vision, negotiating skills, ability to deal with criticism and conflict, good judgment, decisive
- Strong communication skills, convincing nature and strong focus on customers and quality

Key professional requirements for members of the Supervisory Board:

- Ideally a degree or vocational apprenticeship
- Good knowledge of banking, financial services, financial markets and the financial sector
- Good knowledge of legal and regulatory requirements and banking regulation
- Good knowledge of LBBW's strategic focus and business areas
- Efficient and effective monitoring skills
- General understanding of accounting and auditing issues

Personal requirements for members of the Supervisory Board:

- Analytical skills, structured approach and good judgment
- High level of personal integrity, loyalty and excellent reputation
- Strategic vision, strong communication skills and willingness to develop skills
- Ability to critically analyze and scrutinize reports

Practical experience from previous positions and theoretical knowledge and skills acquired through training must be taken into account when evaluating individual suitability. Knowledge and skills that the member of the Board of Managing Directors or Supervisory Board has demonstrably acquired while working for LBBW are also to be considered.

Based on the assessment carried out by the Supervisory Board, the structure, size, composition and performance of the Board of Managing Directors and the Supervisory Board as well as the knowledge, skills and experience of the individual members were deemed to meet the requirements in law and under the articles of association.

Members of the Supervisory Board and the Board of Managing Directors regularly take part in training events in order to keep up their professional qualifications and ensure they have the necessary expertise.

The Supervisory Board has established a Risk Committee from its own number. The Risk Committee comprises eight members. It elects a Chair and a Deputy Chair from its own number. The Chair and the Deputy Chair of the Risk Committee must possess banking expertise. The Risk Committee is managed by the Chair or, in their absence, the Deputy Chair.

In a total of eleven meetings, the Risk Committee held in-depth discussions on the Bank's risk situation and risk management as well as its exposure for which reporting duties apply in accordance with the law, the articles of association and the bylaws, granting its approval where this was required in individual cases. Within the framework of regular risk reporting of the Board of Managing Directors, the Risk Committee deliberated in depth the Bank's risk-bearing capacity and the Bank's main types of risk. The Risk Committee discussed the Group risk strategy as derived from the business strategy, as well as the Bank's credit, market-price, liquidity, real estate, development and investment risk and operational risk strategies with the Board of Managing Directors. The Risk Committee also discussed the non-financial risk strategy, in particular sustainability risks, reputation risks and information and communication technology risks, with the Board of Managing Directors. The Risk Committee also examined whether the Bank's remuneration system took adequate account of the Bank's risk, capital and liquidity structure. In addition, it took note of the annual report on country limits and utilization, the updates of the restructuring plan in accordance with the German Regulation on the Minimum Requirements for the Design of Recovery Plans for Institutions, the stress test concept, the ICAAP/ILAAP planning scenarios and the implementation of BCBS 239. The Board of Managing Directors regularly informed the Risk Committee about the current situation in connection with the COVID-19 pandemic, the regulatory requirements regarding the identification and measurement of credit risks, and the impact on business performance. The Risk Committee also dealt with other individual matters within the scope of the tasks assigned to it by the bylaws.

The Chair of the Committee regularly reported to the members of the Supervisory Board on the Risk Committee's activities and the resolutions which it passed.

At its meetings, the Board of Managing Directors was kept regularly informed in detail and with minimum delay of LBBW's risk situation and risk management as well as the exposures requiring approval under the Bank's rules and, where necessary, granted its approval.

# 4 Disclosure of the scope of application (Article 436 CRR)

Unless otherwise indicated, all disclosures in this report relate to the regulatory scope of consolidation of the LBBW Group in accordance with Section 10a of the German Banking Act in conjunction with Article 18 et seqq. CRR as at 31 December 2021.

## Application of waiver rule (Article 436 f-h CRR, EU LIB)

At the request of LBBW, the ECB upheld in April 2016 the option provided for in Article 7 (3) CRR, under which individual institutions may be excluded if organizational and procedural requirements of certain regulations for own funds and regulatory reporting at an institution level are satisfied (waiver rules). In its function as a parent company of LBBW Group, LBBW is exempt from the reporting requirements on solvency, leverage ratio and large exposures at institution level for the duration of the waiver. Only IFRS group reporting shall be prepared for these reports.

There is no material legal or factual impediment within LBBW Group to the immediate transfer of own funds or repayment of liabilities between LBBW as parent company and its subsidiaries.

As at 31 December 2021, no non-consolidated subsidiary had less than the prescribed own funds.



## 4.1 Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories (Article 436 b and c CRR, EU LIA)

### Reconciliation statement of items within the accounting and regulatory scope of consolidation

The disclosure requirements call for a full reconciliation of the published annual financial statements with data in accordance FINREP and moreover with data in accordance with COREP.

For FINREP, accounting figures will be used in accordance with the regulatory scope of consolidation; for COREP, the figures in question will be calculated in accordance with regulatory rules. The FINREP figures are reported in accordance with the respective COREP types of risk. Market price risk transactions are not reported more than once if they are reported under different types of risk in the COREP report.

| EUR million | Carrying values as reported in published financial statements | Carrying values under scope of regulatory consolidation | Carrying values of items | | | | |
|---|---|---|---|---|---|---|---|
| | | | Subject to the credit risk framework | Subject to the CCR framework | Subject to the securitization framework | Subject to the market risk framework | Not subject to own funds requirements or subject to deduction from own funds |
| Assets | | | | | | | |
| Cash and cash equivalents | 36,871 | 36,867 | 36,867 | | | 12,603 | |
| Financial assets measured at amortized cost: | 167,323 | 164,815 | 158,759 | | 1,102 | 31,183 | |
| Of which: Loans and advances to banks | 46,468 | 46,329 | 43,479 | | | 7,872 | |
| Of which: Loans and advances to customers | 119,851 | 117,481 | 114,703 | | 675 | 23,067 | |
| Of which: Debentures and other fixed-income securities | 1,004 | 1,004 | 577 | | 427 | 244 | |
| Financial assets measured at fair value through other comprehensive income | 33,288 | 33,763 | 33,763 | | | 4,853 | 0 |
| Financial assets designated at fair value | 1,374 | 1,374 | 1,374 | | | 300 | |
| Financial assets mandatorily measured at fair value through profit or loss | 36,976 | 37,513 | 5,107 | 18,550 | | 30,468 | 296 |
| Shares in investments accounted for using the equity method | 274 | | | | | | |
| Portfolio hedge adjustment attributable to assets | 708 | 708 | | | | | 708 |
| Non-current assets and disposal groups held for sale | 1 | 1 | 1 | | | | |
| Intangible assets | 158 | 157 | | | | | 157 |
| Investment property | 805 | 75 | 75 | | | | |
| Property and equipment | 731 | 675 | 675 | | | 1 | |
| Current income tax assets | 104 | 101 | 101 | | | 2 | |
| Deferred income tax assets | 1,029 | 1,063 | 895 | | | | 168 |
| Other assets | 2,703 | 2,156 | 1,772 | | | 375 | 9 |
| ***Total assets as at 31 Dec. 2021*** | ***282,344*** | ***279,268*** | ***239,389*** | ***18,550*** | ***1,102*** | ***79,785*** | ***1,338*** |

| | Carrying values as reported in published financial statements | Carrying values under scope of regulatory consolidation | Carrying values of items | | | | |
|---|---|---|---|---|---|---|---|
| EUR million | | | Subject to the credit risk framework | Subject to the CCR framework | Subject to the securitization framework | Subject to the market risk framework | Not subject to own funds requirements or subject to deduction from own funds |
| Equity and liabilities | | | | | | | |
| Financial liabilities measured at amortized cost, of which | 235,174 | 232,285 | | | | 53,737 | 178,548 |
| Deposits from banks | 88,259 | 87,515 | | | | 17,217 | 70,297 |
| Deposits from customers | 97,022 | 97,220 | | | | 19,795 | 77,426 |
| Securitized liabilities | 44,869 | 42,526 | | | | 15,718 | 26,808 |
| Subordinated capital | 5,024 | 5,024 | | | | 1,007 | 4,017 |
| Financial liabilities designated at fair value | 4,895 | 4,895 | | | | 1,322 | 3,573 |
| Financial liabilities mandatorily measured at fair value through profit or loss | 23,689 | 23,694 | | 16,123 | | 20,220 | 283 |
| Portfolio hedge adjustment attributable to liabilities | 11 | 11 | | | | | 11 |
| Provisions | 2,080 | 1,967 | | | | 1 | 1,966 |
| Liabilities from disposal groups | | | | | | | |
| Current income tax liabilities | 346 | 335 | | | | 2 | 333 |
| Deferred income tax liabilities | 24 | 5 | | | | | 5 |
| Other liabilities | 1,928 | 1,803 | | | | 2 | 1,801 |
| Equity | 14,197 | 14,271 | | | | | 14,271 |
| *Total equity and liabilities as at 31 Dec. 2021* | *282,344* | *279,268* | | *16,123* | | *75,284* | *200,792* |

Figure 3: EU LI1 – Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories

## 4.2 Main sources of differences between regulatory exposure amounts and carrying values in financial statements (Article 436 d CRR, EU LIA)

| | | Items subject to | | | |
|---|---|---|---|---|---|
| **EUR million** | **Total** | **Credit risk framework** | **Securitization framework** | **CCR framework** | **Market risk framework** |
| Assets carrying value amount under the scope of regulatory consolidation (as per template LI1) | 279,268 | 239,389 | 1,102 | 18,550 | 79,785 |
| Liabilities carrying value amount under the regulatory scope of consolidation (as per template LI1) | 279,268 | | | 16,123 | 75,284 |
| Total net amount under the regulatory scope of consolidation | 247,420 | 239,389 | 1,102 | 2,428 | 4,501 |
| Off-balance-sheet amounts | 69,585 | 65,339 | 4,246 | | |
| Differences in valuations | – 216 | | | | |
| Differences due to different netting rules, other than those already included in row 2 | 14,625 | | | 14,625 | |
| Differences due to consideration of provisions | | | | | |
| Differences due to the use of credit risk mitigation techniques (CRMs) | | | | | |
| Differences due to credit conversion factors | | | | | |
| Differences due to securitization with risk transfer | | | | | |
| Other differences | 24,234 | 24,809 | 0 | – 574 | |
| *Exposure amounts considered for regulatory purposes* | *355,648* | *329,537* | *5,348* | *16,478* | *4,320* |

Figure 4: EU LI2 – Main sources of differences between regulatory exposure amounts and carrying values in financial statements

Exposure amounts considered for regulatory purposes

- in the credit framework consist of on-balance-sheet and off-balance-sheet items, the securities financing activities of the CRSA and IRB, investments reported under IRB, other non-credit obligation assets and the default fund contributions of a central counterparty (CCP)
- in the CCR framework consist of the combined derivative positions in the CRSA and IRB approach
- in the securitization framework include securitizations pursuant to
  - SEC-ERBA (Securitization – External Ratings Based Approach)
  - SEC-IRBA (Securitization – Internal Ratings Based Approach)
  - SEC-SA (Securitization – Standardized Approach).

The other differences in the credit risk framework result mainly from the differing valuation for securities financing transactions.

## 4.3 Outline of the differences in the scopes of consolidation (entity by entity) (Article 436 b CRR, EU LIA)

Differences from the IFRS scope of consolidation particularly arise with regard to the following aspects:

- Companies outside the financial sector are also consolidated in the IFRS consolidated financial statements if it is possible to exercise control in accordance with IFRS. However, these companies are outside the regulatory scope of consolidation.
- Conversely, companies which do not meet the consolidation criteria in accordance with IFRS or are not consolidated due to their minor significance are also included in the scope of consolidation in accordance with CRR.

In the following table, the main companies included in the regulatory scope of consolidation in accordance with Article 436 CRR are classified according to the type of business and its regulatory treatment and are shown alongside their classification in the scope of consolidation under IFRS. Equity investments in entities in the financial sector not consolidated under the regulatory framework are taken into account in the threshold method. No deduction from own funds was necessary in the year under review. Both scopes of consolidation include numerous further companies which, however, are not disclosed here due to their immateriality. The companies are classified on the basis of the definitions set out in Article 4 CRR.

| Name of the entity | Method of accounting consolidation | Method of regulatory consolidation | | | | | Description of the entity |
|---|---|---|---|---|---|---|---|
| | | Full consolidation | Proportional consolidation | Equity method | Neither consolidated nor deducted | Deducted | |
| Landesbank Baden-Württemberg | Full consolidation | X | | | | | Credit institution |
| MMV Bank GmbH | Full consolidation | X | | | | | Credit institution |
| Hypo Vorarlberg Bank AG | At equity/accounted for using the equity method | | | | X | | Credit institution |
| LBBW Asset Management Investmentgesellschaft mbH | Full consolidation | X | | | | | Asset management company |
| LBBW México S.A. de C.V. | Full consolidation | X | | | | | Financial institution |
| LBBW Venture Capital GmbH | Full consolidation | X | | | | | Financial institution |
| Süd Beteiligungen GmbH | Full consolidation | X | | | | | Financial institution |
| SüdFactoring GmbH | Full consolidation | X | | | | | Financial institution |
| SüdLeasing GmbH | Full consolidation | X | | | | | Financial institution |
| Austria Beteiligungsgesell schaft mbH | Full consolidation | X | | | | | Financial institution |
| German Centre for Industry and Trade GmbH, Beteiligungsgesellschaft | Full consolidation | X | | | | | Financial institution |
| LBBW US Real Estate Investment LLC | Full consolidation | X | | | | | Financial institution |
| Zweite LBBW US Real Estate GmbH | Full consolidation | X | | | | | Financial institution |
| LBBW Leasing GmbH i. L. | Full consolidation | X | | | | | Financial institution |
| LBBW Immobilien-Holding GmbH | Full consolidation | X | | | | | Financial institution |
| LBBW Corporate Real Estate Management GmbH | Full consolidation | X | | | | | Ancillary services undertaking |
| LBBW Service GmbH | Full consolidation | X | | | | | Ancillary services undertaking |

Figure 5: EU LI3 – Outline of the differences in the scopes of consolidation (entity by entity)

## 4.4 Prudent valuation adjustments (PVA) (Article 436 e CRR)

In order to comply with the requirements for a prudent valuation in accordance with Article 105 and Article 34 CRR, LBBW regularly calculates various valuation reserves that adhere to the principle of prudent valuation. All positions measured at fair value are taken into account and the total valuation adjustments are deducted from Common Equity Tier 1 capital. These include adjustments for market price uncertainty, netting costs, model risks, as yet unearned risk premiums, concentration positions as well as administrative expenses and operational risks.

In order to quantify market price uncertainty and netting costs, LBBW uses an accuracy aim of 90%. LBBW uses a price approach for securities. To this end, the bid and offer prices of various price-makers are analyzed on a quarterly basis and a price level is determined at which there is a 90% probability that the positions in question can be liquidated. LBBW uses a sensitivity approach for derivatives. To this end, market price uncertainty and netting costs are calculated by the multiplication of net sensitivity for each risk factor (interest rate delta, interest rate vega, FX delta, FX vega, equity delta, equity vega and credit delta) against a risk factor and the uncertainty inherent to the risk factor in question.

A valuation adjustment is made for model risks if there are no reliably observed market price parameters. This adjustment is measured based on suitable alternative models or calibrations. The basic assumption in this case is strictly that there is a 90% probability that the valuation adjustments made will be sufficient to cover potential losses in the event of a liquidation of the transactions.

»As yet unearned risk premiums« are an estimate of uncertainty in relation to the counterparty credit risk (CVA) in the case of derivatives.

A »concentrated position« is defined as an exposure which cannot demonstrably be liquidated within the space of 10 days. The 10-day holding period is defined in Article 365 CRR on value-at-risk calculation. In order to determine a concentration, LBBW's own position is set against the volumes traded in the market. A valuation adjustment is made for the remaining exposure for positions which cannot be liquidated completely within the 10-day period. The adjustment is calculated for bond, interest-rate, credit and equity positions. An adjustment is made for future administrative costs for positions for which either market price uncertainty or netting costs cannot be calculated, or which are highly illiquid, require continuous additional hedging or which are complex. Administrative costs factor in continued costs over the period until the positions in question can be liquidated.

A valuation adjustment of 10% of the sum of market price uncertainty and netting costs is applied for operational risks in line with the definition in Article 17 (3) of Commission Delegated Regulation (EU) 2016/101.

| | Risk category | | | | | Category level AVA - Valuation uncertainty | | Total category level post-diversification | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Category level AVA | Equity | Interest Rates | Foreign exchange | Credit | Commodities | Unearned credit spreads AVA | Investment and funding costs AVA | | Of which: Total core approach in the trading book | Of which: Total core approach in the banking book |
| Market price uncertainty | 53 | 51 | 0 | 55 | | 13 | | 94 | 42 | 51 |
| Set not applicable in the EU | | | | | | | | | | |
| Close-out cost | 35 | 60 | 1 | 7 | | 12 | | 57 | 46 | 12 |
| Concentrated positions | | | | 9 | | | | 9 | 1 | 8 |
| Early termination | | | | | | | | | | |
| Model risk | 7 | 20 | 0 | 3 | 0 | 2 | | 17 | 17 | 0 |
| Operational risk | 5 | 6 | 0 | 4 | | | | 15 | 9 | 6 |
| Set not applicable in the EU | | | | | | | | | | |
| Set not applicable in the EU | | | | | | | | | | |
| Future administrative costs | 7 | 10 | 2 | 6 | 0 | | | 25 | 25 | |
| Set not applicable in the EU | | | | | | | | | | |
| Total Additional Valuation Adjustments (AVAs) | | | | | | | | 216 | 139 | 77 |

Template 6: EU PV1 – Prudent valuation adjustments (PVA)

# 5 Disclosure of own funds (Article 437 CRR and EBA/GL/2018/01)

## 5.1 Composition of regulatory own funds (Article 437 a, d-f CRR)

The following table shows the composition of regulatory own funds. The table also includes regulatory adjustments, regulatory ratios and relevant capital buffers.

The »Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation« column in Figure 7 reconciles the components of the Bank's own funds under CRR with the balance sheet. Figure 8 shows the relevant items of the balance sheet with figures according to IFRS and FINREP (Financial Reporting).

The LBBW Group's own funds are made up of

- Common Equity Tier 1 (CET1) capital, which comprises the following items:
  - paid-in capital
  - share premiums (capital reserves)
  - retained earnings
  - other eligible reserves (including revaluation reserves)
- Additional Tier 1 (AT1) capital, which comprises the following items:
  - silent partners' contributions
  - subordinated AT1 bonds
- Tier 2 (T2) capital, which comprises the following items:
  - long-term subordinated liabilities (and related premiums)
  - participation rights (and related premiums)
  - silent partners' contributions only eligible as T2 capital on the basis of the provisions of CRR

Tier 2 capital must be amortized to the day in the five years prior to maturity under the applicable rules.

Explanation of changes from 2020 to 2021:
The Common Equity Tier 1 (CET1) of the LBBW Group increased marginally as against the previous year. This is a result chiefly of actuarial gains and revaluation reserves for securities. Offsetting this, there was a rise in various deductions. New deductions were also to be taken into account for securitization exposures and non-performing loans. Unlike in the previous year, this year LBBW did not include year-end gains for the 2021 financial year in advance.

Additional Tier 1 (AT1) capital declined due to the transitional provisions in place, which allow silent partners' contributions to be offset only to a limited degree. Tier 2 (T2) capital also decreased. This was due chiefly to the premature redemption of a bond of EUR 500m well as maturities and the amortization of Tier 2 capital components. Other factors included the development of USD, AUD and SGD exchange rates and the effects of first-time adoption to be deducted from supplementary capital as per IFRS 9. By contrast, offsetting silent partners' contributions under transitional provisions that, in accordance with CRR, no longer fulfill the conditions for AT1 and instead meet only the conditions for T2, had the opposite effect. The eligible valuation adjustment surplus also increased Tier 2 capital.

The changes impacting on CET1 capital have an effect on all capital ratios. An increase in AT1 capital influences the Tier 1 ratio and the total capital ratio. Changes in T2 capital affect only the total capital ratio.

No restrictions are applied to the calculation of own funds in accordance with CRR (point (e) of Article 437 CRR). The calculation of capital ratios does not include any elements of own funds calculated on a basis other than that stipulated in the CRR (point (f) of Article 437 CRR).

The development of total risk is shown in more detail in figure 2 in section 2.1 Key metrics.

| EUR million<br>Capital instruments | Amounts | Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation |
|---|---|---|
| **Common Equity Tier 1 (CET1) capital: instruments and reserves** | | |
| Capital instruments and the related share premium accounts | 11,724 | j + k |
| of which: paid-in capital | 3,484 | j |
| of which: capital reserves | 8,240 | k |
| of which: other | | |
| Retained earnings | 1,041 | l |
| Accumulated other comprehensive income (and other reserves) | 322 | m + n + o |
| Funds for general banking risk | | |
| Amount of qualifying items referred to in Article 484 (3) and the related share premium accounts subject to phase out from CET1 | | |
| Minority interests (amount allowed in consolidated CET1) | | |
| Independently reviewed interim profits net of any foreseeable charge or dividend | | |
| *Common Equity Tier 1 (CET1) capital before regulatory adjustments* | *13,087* | |
| **Common Equity Tier 1 (CET1) capital: regulatory adjustments** | | |
| Additional value adjustments (negative amount) | - 216 | |
| Intangible assets (net of related tax liability) (negative amount) | - 216 | a + b |
| Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) are met) (negative amount) | - 64 | c |
| Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value | | |
| Negative amounts resulting from the calculation of expected loss amounts | - 7 | |
| Any increase in equity that results from securitized assets (negative amount) | | |
| Gains or losses on liabilities valued at fair value resulting from changes in own credit standing | - 7 | |
| Defined-benefit pension fund assets (negative amount) | - 1 | |
| Direct and indirect holdings by an institution of own CET1 instruments (negative amount) | | |
| Direct, indirect and synthetic holdings of the CET1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount) | | |
| Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount) | | |
| Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount) | | |
| Exposure amount of the following items which qualify for a RW of 1,250%, where the institution opts for the deduction alternative | - 37 | |
| of which: qualifying holdings outside the financial sector (negative amount) | | |
| of which: securitization positions (negative amount) | - 37 | |
| of which: free deliveries (negative amount) | | |
| Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met) (negative amount) | | |
| Amount exceeding the 17.65% threshold (negative amount) | | |
| of which: direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities | | |
| of which: deferred tax assets arising from temporary differences | | |
| Losses for the current financial year (negative amount) | | |
| Foreseeable tax charges relating to CET1 items except where the institution suitably adjusts the amount of CET1 items insofar as such tax charges reduce the amount up to which those items may be used to cover risks or losses (negative amount) | | |

| EUR million<br>Capital instruments | Amounts | Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation |
|---|---|---|
| Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount) | | |
| Other regulatory adjustments | - 67 | |
| Total regulatory adjustments to Common Equity Tier 1 (CET1) | - 614 | |
| Common Equity Tier 1 (CET1) capital | 12,473 | |
| **Additional Tier 1 (AT1) capital: instruments** | | |
| Capital instruments and the related share premium accounts | 744 | |
| of which: classified as equity under applicable accounting standards | 744 | p |
| of which: classified as liabilities under applicable accounting standards | | |
| Amount of qualifying items referred to in Article 484 (4) CRR and the related share premium accounts subject to phase out from AT1 | 240 | Sub-amount h |
| Amount of qualifying items referred to in Article 494a (1) subject to phase out from AT1 | | |
| Amount of qualifying items referred to in Article 494b (1) subject to phase out from AT1 | | |
| Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties | | |
| of which: instruments issued by subsidiaries subject to phase out | | |
| **Additional Tier 1 (AT1) capital before regulatory adjustments** | **983** | |
| **Additional Tier 1 (AT1) capital: regulatory adjustments** | | |
| Direct, indirect and synthetic holdings by an institution of own AT1 instruments (negative amount) | | |
| Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount) | | |
| Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount) | | |
| Direct, indirect and synthetic holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount) | | |
| Qualifying T2 deductions that exceed the T2 items of the institution (negative amount) | | |
| Other regulatory adjustments to AT1 capital | | |
| Total regulatory adjustments to Additional Tier 1 (AT1) capital | | |
| Additional Tier 1 (AT1) capital | 983 | |
| Tier 1 capital (T1 = CET1 + AT1) | 13,456 | |
| **Tier 2 (T2) capital: instruments** | | |
| Capital instruments and the related share premium accounts | 4,571 | e + f + g + i + sub-amount h |
| Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from T2 as described in Article 486 (4) CRR | | |
| Amount of qualifying items referred to in Article 494a (2) subject to phase out from T2 | | |
| Amount of qualifying items referred to in Article 494b (2) subject to phase out from T2 | | |
| Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties | | |
| of which: instruments issued by subsidiaries subject to phase out | | |
| Credit risk adjustments | 297 | |
| Tier 2 (T2) capital before regulatory adjustments | 4,868 | |
| **Tier 2 (T2) capital: regulatory adjustments** | | |
| Direct, indirect and synthetic holdings by an institution of own T2 instruments and subordinated loans (negative amount) | - 25 | |

| EUR million<br>**Capital instruments** | **Amounts** | **Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation** |
|---|---|---|
| Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount) | | |
| Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount) | | |
| Direct, indirect and synthetic holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount) | | |
| Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount) | | |
| Other regulatory adjustments to T2 capital | - 209 | |
| *Total regulatory adjustments to Tier 2 (T2) capital* | *- 234* | |
| *Tier 2 (T2) capital* | *4,634* | |
| *Total capital (TC = T1 + T2)* | *18,090* | |
| Total risk exposure amount | 84,416 | |
| **Capital ratios and requirements including buffers** | | |
| Common Equity Tier 1 (as a percentage of total risk exposure amount) | 14.8 | |
| Tier 1 (as a percentage of total risk exposure amount) | 15.9 | |
| Total capital (as a percentage of total risk exposure amount) | 21.4 | |
| Institution CET1 overall capital requirements | 8.8 | |
| of which: capital conservation buffer requirement | 2.5 | |
| of which: countercyclical buffer requirement | 0.0 | |
| of which: systemic risk buffer requirement | | |
| of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer | 0.8 | |
| of which: additional own funds requirements to address the risks other than the risk of excessive leverage | 1.0 | |
| Common Equity Tier 1 available to meet buffer (as a percentage of risk exposure amount) | 8.6 | |
| **Amounts below the thresholds for deduction (before risk weighting)** | | |
| Direct and indirect holdings of own funds and eligible liabilities of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions) | 486 | |
| Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 17.65% thresholds and net of eligible short positions) | 317 | |
| Deferred tax assets arising from temporary differences (amount below 17.65% threshold, net of related tax liability where the conditions in Article 38 (3) are met) | 895 | d |
| **Applicable caps on the inclusion of provisions in Tier 2** | | |
| Credit risk adjustments included in T2 in respect of exposures subject to standardized approach (prior to the application of the cap) | | |
| Cap on inclusion of credit risk adjustments in T2 under standardized approach | 131 | |
| Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap) | 297 | |
| Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach | 357 | |
| **Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)** | | |
| Current cap on CET1 instruments subject to phase out arrangements | | |
| Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities) | | |

| EUR million<br>Capital instruments | Amounts | Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation |
|---|---|---|
| Current cap on AT1 instruments subject to phase out arrangements | 240 | |
| Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities) | -597 | |
| Current cap on T2 instruments subject to phase out arrangements | | |
| Amount excluded from T2 due to cap (excess over cap after redemptions and maturities) | -597 | |

Figure 7: EU CC1 - Composition of regulatory own funds

## 5.2 Reconciliation of regulatory own funds to balance sheet in the audited financial statements (Article 437 a CRR)

The following table compares the components of the Bank's own funds relevant for the CRR report on the basis of the accounting and regulatory scopes of consolidation. It includes only those items of the balance sheet which are relevant for the calculation of the Bank's own funds in accordance with CRR. Accordingly, it does not show all the components reported on the face of the balance sheet.

The disclosure of the shareholders' equity rows in the following templates EU CC2 Reconciliation of regulatory own funds to balance sheet in the audited financial statements is not relevant for LBBW, as LBBW has no shareholders' equity.

| EUR million | Balance sheet as in published financial statements (IFRS) | Under regulatory scope of consolidation (FINREP) | Reference |
|---|---|---|---|
| | | As at period end | |
| **Assets – Breakdown by asset classes according to the balance sheet in the published financial statements** | | | |
| **Intangible assets** | **158** | **157** | |
| of which goodwill | 0 | 0 | a |
| of which other intangible assets | 158 | 157 | b |
| **Deferred income tax assets** | **1,029** | **1,063** | |
| of which from unused tax losses | 64 | 56 | c |
| of which from temporary differences | 965 | 1,007 | d |
| | | | |
| **Equity and liabilities** | | | |
| **Financial liabilities designated at fair value** | **4,895** | **4,895** | |
| of which subordinated liabilities | 682 | 682 | e |
| of which capital generated from profit-participation rights | 28 | 28 | f |
| **Subordinated capital** | **5,024** | **5,024** | |
| of which subordinated liabilities | 4,092 | 4,092 | g |
| of which typical silent partners' contributions | 911 | 911 | h |
| of which capital generated from profit-participation rights | 21 | 21 | i |
| **Equity** | **14,197** | **14,271** | |
| of which share capital | 3,484 | 3,484 | j |
| of which capital reserve | 8,240 | 8,240 | k |
| of which retained earnings | 1,211 | 1,041 | l |
| of which other income | 65 | 323 | |
| of which revaluation reserve | 38 | 314 | |
| of which revaluation reserve for equity investments | -40 | 235 | m |
| of which revaluation reserve for debt instruments | 78 | 78 | n |
| of which currency translation reserve | 25 | 9 | o |
| of which additional equity components (Additional Tier 1) | 745 | 745 | p |
| | | | |

Figure 8: EU CC2 - Reconciliation of regulatory own funds to balance sheet in the audited financial statements

## 5.3 Key features of regulatory own funds instruments and eligible liabilities instruments (Article 437 b-c CRR)

Because of their scope, the disclosures required under Article 437 (1) (b) CRR on the main features of all capital instruments issued are published in a separate annex entitled »Main features of capital instruments for the disclosure report pursuant to CRR II / CRD V as at 31 December 2021« as an additional document at the same location under »Investor Relations – Financial Information and Reports – Disclosure Reports« on the LBBW website. The full terms and conditions of subordinated bearer instruments pursuant to Article 437 (1)(c) CRR are published in the »LBBW Markets Portal« under »Startseite Privatkunden – Themen – Rechtliches – Nachrangemissionen – Endgültige Bedingungen« (available in German only). The relevant terms and conditions for subordinated registered securities and silent partners' contributions can be viewed at LBBW's main offices in Stuttgart during normal office hours.

## 5.4 Comparison of own funds and capital and leverage ratio applying and not applying transitional provisions for IFRS 9 in conjunction with Article 473 a CRR II (EBA/GL/2018/01)

The calculation of capital ratios does not include any elements of own funds calculated on a basis other than that stipulated in the CRR (point (f) of Article 437 CRR).

LBBW has been phasing in IFRS 9 since March 2020, which is causing a temporary increase in Common Equity Tier 1 capital. LBBW is therefore required to disclose the following values both applying and not applying the transitional provisions.

| Ratios in % | 31/12/2021 | 30/09/2021 | 30/06/2021 | 31/03/2021 | 31/12/2020 |
|---|---|---|---|---|---|
| **Available capital (amounts)** | | | | | |
| Common Equity Tier 1 (CET1) capital | 12,473 | 12,478 | 12,454 | 12,472 | 12,415 |
| Common Equity Tier 1 (CET1) capital not applying transitional provisions for IFRS 9 or similar expected credit losses | 12,252 | 12,248 | 12,217 | 12,235 | 12,140 |
| Tier 1 capital | 13,456 | 13,462 | 13,439 | 13,457 | 13,641 |
| Tier 1 capital not applying transitional provisions for IFRS 9 or similar expected credit losses | 13,235 | 13,233 | 13,202 | 13,219 | 13,366 |
| Total capital | 18,090 | 18,101 | 18,204 | 18,816 | 18,741 |
| Total capital not applying transitional provisions for IFRS 9 or similar expected credit losses | 18,078 | 18,089 | 18,192 | 18,804 | 18,724 |
| **Risk-weighted assets** | | | | | |
| Total amount of risk-weighted assets | 84,416 | 83,260 | 82,357 | 84,888 | 82,112 |
| Total amount of risk-weighted assets not applying transitional provisions for IFRS 9 or similar expected credit losses | 84,641 | 83,494 | 82,599 | 85,131 | 82,390 |
| **Capital ratios** | | | | | |
| CET1 capital (as a percentage of the total risk exposure amount) | 14.8 | 15.0 | 15.1 | 14.7 | 15.1 |
| Common Equity Tier 1 capital (as a percentage of the total risk exposure amount) not applying transitional provisions for IFRS 9 or similar expected credit losses | 14.5 | 14.7 | 14.8 | 14.4 | 14.7 |
| Tier 1 capital (as a percentage of the total risk exposure amount) | 15.9 | 16.2 | 16.3 | 15.9 | 16.6 |
| Tier 1 capital (as a percentage of the total risk exposure amount) not applying transitional provisions for IFRS 9 or similar expected credit losses | 15.6 | 15.8 | 16.0 | 15.5 | 16.2 |
| Total capital (as a percentage of the total risk exposure amount) | 21.4 | 21.7 | 22.1 | 22.2 | 22.8 |
| Total capital (as a percentage of the total risk exposure amount) not applying transitional provisions for IFRS 9 or similar expected credit losses | 21.4 | 21.7 | 22.0 | 22.1 | 22.7 |
| **Leverage ratio** | | | | | |
| Leverage ratio total exposure measure | 261,816 | 295,492 | 287,847 | 320,544 | 289,880 |
| Leverage ratio | 5.1 | 4.6 | 4.7 | 4.2 | 4.7 |
| Leverage ratio not applying transitional provisions for IFRS 9 or similar expected capital losses | 5.1 | 4.5 | 4.6 | 4.1 | 4.6 |

Figure 9: Comparison of own funds and capital and leverage ratio applying and not applying

# 6 Disclosure of countercyclical capital buffers (Article 440 CRR)

## 6.1 Geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer (Article 440 (a) CRR)

The composition of the institution-specific countercyclical capital buffer must be disclosed on a semi-annual basis. The CET1 capital cover of the total countercyclical capital buffer of all relevant countries is capped at 2.5%.

The countries with the greatest risk exposure in accordance with the guidelines for the countercyclical buffer and those that imposed a countercyclical capital buffer in 2021 are shown in the following table.

The ‘Other countries’ item groups 114 countries whose share in the weighted own funds requirements is only 7.9%. These are therefore regarded as non-material and not listed individually in accordance with Article 432 (1) CRR.

| EUR million | General credit exposures | | Relevant credit exposures – Market risk | | Securitization exposures | Total exposure value | Own funds requirements | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Breakdown by country: | Exposure value CRSA | Exposure value IRB | Sum of long and short positions of trading book exposures for SA | Value of trading book exposures for internal models | Securitization exposures Exposure value for non-trading book | | Relevant credit risk exposures - Credit risk | Relevant credit exposures – Market risk | Relevant credit exposures – Securitization positions in the non-trading book | Total | Risk-weighted exposure amounts | Own fund requirements weights | Countercyclical buffer rate (%) |
| Germany | 18,273 | 74,605 | 4,006 | | 4,808 | 101,693 | 3,303 | 66 | 87 | 3,456 | 43,201 | 0.67 | |
| France | 14 | 1,292 | 674 | | 150 | 2,131 | 53 | 21 | 4 | 79 | 983 | 0.02 | |
| United Kingdom | 111 | 2,531 | 1,059 | | 36 | 3,736 | 113 | 24 | 1 | 138 | 1,722 | 0.03 | |
| Ireland | 20 | 856 | 577 | | | 1,453 | 29 | 47 | | 76 | 951 | 0.01 | |
| Canada | 2 | 727 | 367 | | | 1,096 | 39 | 2 | | 40 | 504 | 0.01 | |
| Luxembourg | 45 | 5,259 | 472 | | | 5,776 | 201 | 10 | | 211 | 2,633 | 0.04 | 0.5 |
| Netherlands | 70 | 3,089 | 254 | | | 3,413 | 103 | 14 | | 117 | 1,458 | 0.02 | |
| Austria | 33 | 2,854 | 149 | | 83 | 3,120 | 107 | 2 | 3 | 112 | 1,400 | 0.02 | |
| Switzerland | 87 | 1,946 | 524 | | 49 | 2,605 | 75 | 8 | 2 | 85 | 1,057 | 0.02 | |
| USA | 76 | 11,055 | 647 | | 151 | 11,930 | 349 | 26 | 6 | 381 | 4,768 | 0.07 | |
| Bulgaria | 0 | | | | | 0 | 0 | | | 0 | 0 | 0.00 | 0.5 |
| Hong Kong | 1 | 448 | 50 | | | 499 | 20 | 0 | | 20 | 246 | 0.00 | 1.0 |
| Norway | 5 | 2,543 | 58 | | | 2,606 | 28 | 0 | | 28 | 355 | 0.01 | 1.0 |
| Slovakia | 1 | | 2 | | | 3 | 0 | 0 | | 0 | 1 | 0.00 | 1.0 |
| Czech Republic | 8 | 31 | 6 | | | 45 | 2 | | | 2 | 21 | 0.00 | 0.5 |
| Other countries | 744 | 10,796 | 2,726 | | 71 | 14,336 | 337 | 68 | 2 | 407 | 5,092 | 0.08 | |
| *Total* | *19,489* | *118,033* | *11,572* | | *5,348* | *154,443* | *4,759* | *288* | *105* | *5,152* | *64,395* | *1.00* | |

Figure 10: EU CCyB1 - Geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer

## 6.2 Amount of institution-specific countercyclical capital buffer (Article 440 (b) CRR)

The amount of LBBW's institution-specific countercyclical capital buffer is shown in the following figure.

| Amount of institution-specific countercyclical capital buffer | Amount |
|---|---|
| Total risk exposure amount (EUR million) | 84,416 |
| Institution specific countercyclical capital buffer rate (%) | 0.03 |
| Institution specific countercyclical capital buffer requirements (EUR million) | 25 |

Figure 11: EU CCyB2 - Amount of institution-specific countercyclical capital buffer

# 7 Disclosure of the leverage ratio (Article 451 CRR)

## 7.1 Summary reconciliation of accounting assets and leverage ratio exposures (Article 451 (1) b CRR)

| | | Applicable amount EUR million |
|---|---|---|
| *1* | *Total assets as per published financial statements* | *282,344* |
| 2 | Adjustment for entities which are consolidated for accounting purposes but are outside the scope of prudential consolidation | -3,076 |
| 3 | (Adjustment for securitized exposures that meet the operational requirements for the recognition of risk transference) | |
| 4 | (Adjustment for temporary exemption of exposures to central banks (if applicable)) | |
| 5 | (Adjustment for fiduciary assets recognized on the balance sheet pursuant to the applicable accounting framework but excluded from the total exposure measure in accordance with point (i) of Article 429a(1) CRR) | |
| 6 | Adjustment for regular-way purchases and sales of financial assets subject to trade date accounting | |
| 7 | Adjustment for eligible cash pooling transactions | |
| 8 | Adjustments for derivative financial instruments | 899 |
| 9 | Adjustment for securities financing transactions (SFTs) | 3,614 |
| 10 | Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures) | 25,208 |
| 11 | (Adjustment for prudent valuation adjustments and specific and general provisions which have reduced Tier 1 capital) | |
| EU-11a | (Adjustment for exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) CRR) | |
| EU-11b | (Adjustment for exposures excluded from the leverage ratio total exposure measure in accordance with point (j) of Article 429a(1) CRR) | |
| 12 | Other adjustments | -47,173 |
| *13* | *Total exposure measure* | *261,816* |

Figure 12: EU LR1 - LRSum: Summary reconciliation of accounting assets and leverage ratio exposures

## 7.2 Leverage ratio common disclosure (Article 451 (1) a-b, c, (2), (3) CRR)

Row EU-22e entirely comprises exposures arising from passing-through promotional loans to other credit institutions, if the promotional loans were granted by an entity set up by the central government, regional government or local authority of a Member State through an intermediate credit institution.

| EUR million | | CRR leverage ratio exposures 31/12/2021 | 30/6/2021 |
|---|---|---|---|
| **On-balance sheet exposures (excluding derivatives and SFTs)** | | | |
| 1 | On-balance sheet items (excluding derivatives, SFTs, but including collateral) | 241,129 | 257,164 |
| 2 | Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework | | |
| 3 | (Deductions of receivables assets for cash variation margin provided in derivatives transactions) | -8,826 | -7,165 |
| 4 | (Adjustment for securities received under securities financing transactions that are recognized as an asset) | | |
| 5 | (General credit risk adjustments to on-balance sheet items) | | |
| 6 | (Asset amounts deducted in determining Tier 1 capital) | -324 | -324 |
| 7 | Total on-balance sheet exposures (excluding derivatives and SFTs) | 231,979 | 249,675 |
| **Derivative exposures** | | | |
| 8 | Replacement cost associated with SA-CCR derivatives transactions (i.e. net of eligible cash variation margin) | 9,914 | 14,376 |
| EU-8a | Derogation for derivatives: replacement costs contribution under the simplified standardized approach | | |
| 9 | Add-on amounts for potential future exposure associated with SA-CCR derivatives transactions | 9,299 | 15,541 |
| EU-9a | Derogation for derivatives: Potential future exposure contribution under the simplified standardized approach | | |
| EU-9b | Exposure determined under Original Exposure Method | | |
| 10 | (Exempted CCP leg of client-cleared trade exposures) (SA-CCR) | -1,968 | -3,773 |
| EU-10a | (Exempted CCP leg of client-cleared trade exposures) (simplified standardized approach) | | |
| EU-10b | (Exempted CCP leg of client-cleared trade exposures) (original exposure method) | | |
| 11 | Adjusted effective notional amount of written credit derivatives | 4,699 | 4,225 |
| 12 | (Adjusted effective notional offsets and add-on deductions for written credit derivatives) | -2,680 | -2,169 |
| 13 | Total derivatives exposures | 19,265 | 28,199 |
| **Securities financing transaction (SFT) exposures** | | | |
| 14 | Gross SFT assets (with no recognition of netting), after adjustment for sales accounting transactions | 25,894 | 28,216 |
| 15 | (Netted amounts of cash payables and cash receivables of gross SFT assets) | -4,238 | -5,469 |
| 16 | Counterparty credit risk exposure for SFT assets | 2,570 | 2,666 |
| EU-16a | Derogation for SFTs: Counterparty credit risk exposure in accordance with Article 429 e(5) and Article 222 CRR | | |
| 17 | Agent transaction exposures | | |
| EU-17a | (Exempted CCP leg of client-cleared SFT exposure) | | |
| 18 | Total securities financing transaction exposures | 24,226 | 25,414 |
| **Other off-balance sheet exposures** | | | |
| 19 | Off-balance sheet exposures at gross notional amount | 68,030 | 66,718 |
| 20 | (Adjustments for conversion to credit equivalent amounts) | -42,822 | -42,860 |
| 21 | (General provisions deducted in determining Tier 1 capital and specific provisions associated with off-balance sheet exposures) | | |
| 22 | Off-balance sheet exposures | 25,208 | 23,858 |
| **Excluded exposures** | | | |
| EU-22a | (Exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) CRR) | -11,791 | -13,091 |
| EU-22b | (Exposures exempted in accordance with point (j) of Article 429a (1) CRR (on and off balance sheet)) | | |
| EU-22c | (Excluded exposures of public development banks (or units) – Public sector investments) | | |
| EU-22d | (Excluded exposures of public development banks (or units) – Promotional loans) | | |
| EU-22e | (Excluded passing-through promotional loan exposures by non-public development banks (or units)) | -24,333 | -23,561 |

| EUR million | | CRR leverage ratio exposures 31/12/2021 | 30/6/2021 |
|---|---|---|---|
| EU-22f | (Excluded guaranteed parts of exposures arising from export credits) | -2,738 | -2,647 |
| EU-22g | (Excluded excess collateral deposited at triparty agents) | | |
| EU-22h | (Excluded CSD related services of CSD/institutions in accordance with point (o) of Article 429a(1) CRR) | | |
| EU-22i | (Excluded CSD related services of designated institutions in accordance with point (p) of Article 429a(1) CRR) | | |
| EU-22j | (Reduction of the exposure value of pre-financing or intermediate loans) | | |
| EU-22k | (Total exempted exposures) | -38,862 | -39,299 |
| **Capital and total exposure measure** | | | |
| 23 | Tier 1 capital | 13,456 | 13,439 |
| 24 | Total exposure measure | 261,816 | 287,847 |
| **Leverage ratio** | | | |
| 25 | Leverage ratio (%) | 5.14 | 4.67 |
| EU-25 | Leverage ratio (excluding the impact of the exemption of public sector investments and promotional loans) (%) | 5.14 | 4.67 |
| 25a | Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) (%) | 5.14 | 4.67 |
| 26 | Regulatory minimum leverage ratio requirement (%) | 3.00 | 3.00 |
| EU-26a | Additional own funds requirements to address the risk of excessive leverage (%) | | |
| EU-26b | of which: to be made up of CET1 capital | | |
| 27 | Leverage ratio buffer requirement (%) | | |
| EU-27a | Overall leverage ratio requirement (%) | | |
| **Choice on transitional arrangements and relevant exposures** | | | |
| EU-27b | Choice on transitional arrangements for the definition of the capital measure | | |
| **Disclosure of mean values** | | | |
| 28 | Mean of daily values of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables | 25,583 | 24,687 |
| 29 | Quarter-end value of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables | 21,656 | 22,747 |
| 30 | Total exposure measure (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables) | 265,743 | 289,786 |
| 30a | Total exposure measure (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables) | 265,743 | 289,786 |
| 31 | Leverage ratio (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables) | 5.06 | 4.64 |
| 31a | Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables) | 5.06 | 4.64 |

Figure 13: EU LR2 - LRCom: Leverage ratio common disclosure

The promotional loans are granted in order to promote the public policy objectives of the central government, regional government or local authority in a Member State. These are stipulated in the respective articles of association of the promotional institutions. At LBBW, promotional loans are passed through both to other credit institutions and to customers.

The leverage ratio on the basis of the CRR transitional provisions (»phase-in«) came to 5.1% as at 31 December 2021 (as at 30 June 2021: 4.7%). The leverage ratio exposure (»phase-in«) decreased from EUR 287.8bn as at 30 June 2021 to EUR 261.8bn as at 31 December 2021.

The decline in the leverage ratio exposure against the previous period (30 June 2021) chiefly reflects the decrease in exposures to sovereigns.

## 7.3 Breakdown of on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures) (Article 451 (1) b CRR)

| | | CRR leverage ratio exposures<br>EUR million |
|---|---|---|
| EU-1 | Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which: | 198,671 |
| EU-2 | Trading book exposures | 15,081 |
| EU-3 | Banking book exposures, of which: | 183,590 |
| EU-4 | Covered bonds | 13,025 |
| EU-5 | Exposures treated as sovereigns | 58,795 |
| EU-6 | Exposures to regional governments, MDB, international organizations and PSE not treated as sovereigns | 865 |
| EU-7 | Institutions | 9,275 |
| EU-8 | Secured by mortgages of immovable properties | 25,534 |
| EU-9 | Retail exposures | 6,322 |
| EU-10 | Corporates | 65,230 |
| EU-11 | Exposures in default | 754 |
| EU-12 | Other exposures (e.g. equity, securitizations, and other non-credit obligation assets) | 3,790 |

Figure 14: EU LR3 - LRSpl: Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures)

The »Exposures treated as sovereigns« item mainly includes exposures to central banks.

## 7.4 Disclosure of qualitative information on the leverage ratio (Article 451 (1) d, e CRR)

LBBW takes account of the risk of excessive indebtedness by including the leverage ratio in its planning and management process. An internal future target for the leverage ratio is calculated on the basis of LBBW's business and risk strategy and its implementation in medium-term planning. The management of the leverage ratio is embedded in the management of the LBBW Group's balance-sheet structure. At monthly intervals LBBW's comprehensive internal management reporting is used to report on the leverage ratio and key influencing factors. If required, the management approaches of the leverage ratio that have been identified for LBBW are discussed in the Asset Liability Committee (ALCo) in detail. The ALCo submits proposals for specific management measures to the Group's Board of Managing Directors where appropriate. Decisions are taken by the Group's Board of Managing Directors.

# 8 Disclosure of liquidity requirements (Article 451 a CRR)

With Commission Implementing Regulation (EU) 2021/637 of 15 March 2021, the European Commission laid down implementing technical standards with regard to public disclosures by institutions of the information referred to in Titles II and III of Part Eight of Regulation (EU) No 575/2013 of the European Parliament and of the Council with respect to liquidity risk. In addition, the Regulation includes specifications and requirements as to which information institutions must disclose with regard to the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR).

The LCR shows the short-term resilience of the liquidity profile and is thereby defined as the ratio of liquid assets (liquidity buffer) to total net cash outflows over the next 30 days.

The NSFR ensures that institutions have an adequate ratio of stable funding by requiring the available stable funding – the liabilities side of the balance sheet – to at least equal the required stable funding – the assets side of the balance sheet.

## 8.1 Liquidity risk management



**Risk measurement**

Liquidity risk tolerance is primarily defined by reference to a survival period concept, i.e. time frames are specified by senior management over which LBBW is expected to remain at least solvent, even in the event of severely limited opportunities to borrow on the market, subject to different combinations of assumptions (development paths).

There is a limit system for the maximum funding requirements based on maturities from the business portfolio across various time frames and currencies, and utilization reviews that match the funding requirements with the potential funding capacity. A liquidity buffer requirement for excess liquidity and free collateral to be held was introduced in 2021 for the main time horizons in the Group perspective.

Internally developed models are used to determine call risks from demand and savings deposits, loan commitments and the collateralization of derivatives for the economic steering group. These models are used to determine the effect of uncertain cash flows on liquidity in normal market phases due to common fluctuations, and are in part the basis for identifying call risks in stress scenarios.

Call risks from demand and savings deposits are calculated using historic changes in portfolios and their volatility. As part of a revision of the model in March, 2021 improvements were made regarding accounting for trends, more flexible parameterization of sub-models and increasing the confidence level.

For loan commitments, future utilization is estimated based on their product features, existing and planned utilization and past draw-downs for the respective sub-portfolio.

The model for the securitization of derivatives is based on the value-at-risk approach and calculates potential additional contribution obligations for LBBW using the relevant market risk factors for the derivatives portfolio.

For the stress scenarios pursuant to MaRisk BTR 3, the results from the call risk models are predominantly expanded to include further call risks specific to the scenario. The results of the call risks calculated for internal management are integrated into the review of risk tolerance requirements. This examines whether solvency is ensured for at least three months at all times, even under stress. The call risks determined are also included in the calculation of liquidity risk for the MaRisk stress scenarios addressing multiple risk types.

LBBW analyzes the development of intraday liquidity in the key currencies every day and performs daily stress tests.

A liquidity flow analysis is prepared for longer-term views of liquidity of > 1 year, which limits LBBW's maturity transformation.

The LCR and NSFR stipulations apply in the regulatory steering view and are partially supplemented by internal guidelines. An internal guideline was introduced in 2021 for USD-LCR and the stress test concept was expanded to include a stressed LCR for various scenarios.

The stress scenarios and the model assumptions are regularly checked to determine whether they are still adequate under the ongoing market conditions. If they need to be adjusted due to current developments, this is reported to senior management via the Risk Committee and, if approved, results in timely adjustments. In addition to the direct control impulses of stress tests, their results are also translated into stipulations for daily controlling or taken as a basis for funding planning.

In order to identify new call risks or increased risk from known but previously immaterial call risks at an early stage, models, assumptions and materiality classifications are reviewed, in part within the scope of the risk inventory process, and changes to the liquidity position resulting from business activities or market changes are regularly analyzed.



All key subsidiaries as defined in the risk inventory (Risk Management Group) and conduits are transferred via the liquidity risk strategy into a single framework for strategic specifications of the activities involving liquidity risks. The liquidity risks for subsidiaries and affiliates are assessed using a regularly revised risk inventory and transferred to the Risk Management Group's regulatory framework, which essentially matches the regulatory framework in place at LBBW (Bank), according to their materiality.

### Risk monitoring and reporting

The regular monitoring of liquidity risks in terms of economic and regulatory aspects is the responsibility of the LBBW Risk Committee. It prepares decisions for the Group's Board of Managing Directors. As part of the second line of defense, Liquidity Risk Controlling is responsible for daily monitoring at the operational level. All material aspects of liquidity risk are reported in detail in the Risk Committee via the monthly overall risk report, such as liquidity requirements, liquidity buffer and compliance with the specifications on liquidity risk tolerance including the results of the stress tests carried out and the intraday liquidity. Detailed reports are prepared daily as part of the continuous monitoring, which show the different partial aspects of liquidity and liquidity risk – such as disaggregation of the liquidity gaps by currency – and are distributed to recipients in Group Risk Controlling and Treasury.

### Risk management

The Asset Liability Committee (ALCo), which meets on a monthly basis, is the central body for managing liquidity and funding. The ALCo also draws up the funding strategy and planning on behalf of the Group's Board of Managing Directors, presents it to the Board for approval and monitors implementation of decisions.

As part of the first line of defense, Treasury implements all the decisions to be made by ALCo with the aim of active income and risk optimization while simultaneously ensuring solvency at all times and compliance with the regulatory requirements and the requirements with respect to liquidity risk tolerance.

The management of the material stipulations and liquidity figures is coordinated centrally for all locations by Treasury. Regulatory liquidity requirements are firmly embedded in operational management and are actively managed using forecasts and monitored on an ongoing basis. The strategic parameters in terms of liquidity risk tolerance are designed in such a way that the Group's solvency in EUR and foreign currency is secured for a sufficiently long period even in extreme market situations and in the event of a marked deterioration of LBBW's credit rating as perceived by market players. This also ensures that in the event of temporary adverse developments an adequate time window is available for adapting the business strategy and considering alternative business policies.

In cooperation with Risk Controlling, the Treasury further develops the methods used to determine internal funds transfer pricing (FTP). The ALCo is responsible for FTP policy, internal netting interest rates (opportunity interest rates), for monitoring the steering effects of the opportunity interest rates and pricing models on the business units and on the liquidity and funding situation of the Group. Group Risk Controlling oversees and reviews the risk adequacy of changes to methodology before these are approved by the Board of Managing Directors on the recommendation of the ALCo.

For further information on the declaration approved by the management body on the adequacy of liquidity risk management arrangements, please refer to section 3.1 Institution's risk management approach (Article 435 (1) CRR).

Treasury is responsible for operational (risk) management.

LBBW's funding strategy is implemented by way of the capital market funding plan. As part of this, LBBW aims for diversification and a broad, international investor base with the goal of achieving optimal refinancing costs. The existing structural limit for the economic liquidity flow analysis or the regulatory NSFR are also significant here. Savings banks, institutional investors and retail business again constituted the main sources of medium and long-term funding. On the capital market, LBBW obtained funding in 2021 through senior preferred, senior non-preferred bonds in various currencies, both via private placements and as syndicated high-volume transactions and in some cases as ESG green and social bonds. LBBW also participated in the ECB's longer-term tender (TLTRO III). LBBW did not issue any high-volume covered bonds in 2021 due to participating in TLTRO III.



To avoid concentrations, LBBW manages the composition of eligible securities in terms of rating and product group. Thresholds are defined and monitored.

Treasury is responsible for securing the intraday liquidity. It actively manages the daily payments via the Bundesbank account and calculates liquidity requirements up to the end of the day, while continuously taking into account euro payment inflows and outflows that become known during the course of the day, as well as performing the central bank function for savings banks.

An emergency plan is in place for securing liquidity in acute crisis situations. The provisions made include the formation of a crisis response team bringing in members of the Board of Managing Directors. The emergency plan is reviewed annually and resolved anew by the Board of Managing Directors.

### Risk situation of the LBBW Group

The impact of continued excess liquidity in 2021 is also reflected in LBBW's extensive liquidity. Despite the pandemic, the customer deposit business remains stable and capital market placements attracted lively interest among national and international investors. The LBBW Group's sources of funding are very stable in terms of volume and diversification.

As at the reporting date of 31 December 2021, the funding needs and the counterbalancing capacity were as follows:

### Overview of funding requirements and counterbalancing capacity

| | 3 months | | 12 months | |
|---|---|---|---|---|
| **EUR billion** | **31/12/2021** | **31/12/2020** | **31/12/2021** | **31/12/2020** |
| Funding requirement from the business portfolio (deterministic cash flow) | – 9.6 | – 5.7 | – 15.9 | – 17.3 |
| Funding requirement from material call risks (stochastic cash flow) | 16.9 | 14.4 | 34.2 | 32.3 |
| Funding potential from free liquidity reserves | 11.7 | 12.2 | 12.0 | 16.4 |
| Funding potential on the market | 59.0 | 49.5 | 69.6 | 64.6 |
| Surplus | 63.4 | 53.0 | 63.3 | 66.1 |

The funding requirement from the business portfolio in the 3 and 12-month forecast is negative if liquidity inflows exceed the outflows and thus result in excess liquidity. The liquidity portfolio was shaped chiefly by excess liquidity from the business portfolio throughout the year. This increased further following the expansion of the participation in the ECB's longer-term tender in March 2021, along with reduced securities. In particular, net inflows in EUR (excess liquidity) are opposed by net outflows of the foreign currencies USD and GBP (funding requirement).

The funding potential is adequate to compensate for any short-term liquidity outflows and continues to ensure significant overcollateralization on a three-month and 12-month horizon (approximately EUR 63bn in both cases). The surplus from cover registers (Deckungsregister) not required to preserve the covered bond rating is applied towards the free liquidity reserves in the twelve-month view. Funding potential in the market is approximated on the basis of historical data on the unsecured funds actually raised.



### Results of the economic stress scenarios

| | Funding requirement (3 months) | | Funding potential (3 months) | |
|---|---|---|---|---|
| **EUR billion** | **31/12/2021** | **31/12/2020** | **31/12/2021** | **31/12/2020** |
| Rating downgrade scenario | 22.2 | 21.3 | 33.5 | 33.8 |
| Financial market crisis scenario | 12.3 | 13.3 | 49.6 | 48.3 |
| Combined scenario of market crisis with downgrade | 12.9 | 13.6 | 43.7 | 43.3 |

The targeted stress resistance was met throughout 2021. The results of liquidity risk stress scenarios rating downgrade, financial market crisis, and a combination of the two, structured in accordance with the guidelines of MaRisk (BTR 3.2), show that the remaining funding potential via the market, plus the free liquidity buffer, always exceeded the potential funding requirements under stress scenarios. Sufficient overcollateralization was also available at all times in the foreign currency stress tests and in the EUR stress test for intraday liquidity.

The prescribed minimum value of 100% for the European indicator for short-term liquidity »Liquidity Coverage Ratio (LCR)« was observed on each day in 2021. At 141.1%, it was exceeded as at year-end 2021 (31 December 2020: 135.4%). The net stable funding ratio (NSFR) requirements applicable since June 2021 were also met at all times and exceeded at year-end at 108.5%.

No material negative effects on LBBW's liquidity situation in connection with the coronavirus crisis had been identified at the time of preparing this report. Deposit holdings are still stable and credit line commitments within normal ranges. The regularly implemented liquidity stress tests show that the funding requirement continues to be well covered by the assumed or existing funding potential.

### Risk management system for Pfandbrief (covered bond) operations

A differentiated limit system was put in place to monitor risks from covered bond (Pfandbrief) operations (section 27 of the German Covered Bond Act (Pfandbriefgesetz – PfandBG)). Regular stress tests are conducted with regard to NPV (net present value) overcollateralization. In the event that the fixed limits are reached, a process for then cutting the risk is implemented. The Board of Managing Directors and the Risk Committee are informed on a quarterly basis of compliance with the provisions of the PfandBG and the utilization of legal and internal limits. The statutory requirements were met at all times in 2021. The risk management system is reviewed at least annually.

## 8.2 Quantitative information of LCR (Article 451 a (2) CRR)

### LCR disclosure

#### Levels and components of LCR

In line with Annex XIII of Commission Implementing Regulation (EU) 2021/637, LBBW is required to disclose quantitative information on the components of LCR. The average liquidity coverage ratio is calculated by taking the average liquidity coverage ratios of the last twelve months before the end of each quarter. Based on LCR data collated as the end of each month, the unweighted and weighted values (simple average values over twelve month-values before the end of each quarter) look as follows.

The LCR over the entire disclosure period was consistently above the minimum ratio of 100% required for 2021.

| EUR million | Total unweighted value | | | | Total weighted value | | | |
|---|---|---|---|---|---|---|---|---|
| **Quarter ending on** | **31/12/21** | **30/09/21** | **30/06/21** | **31/03/21** | **31/12/21** | **30/09/21** | **30/06/21** | **31/03/21** |
| **Number of data points used in the calculation of averages** | **12** | **12** | **12** | **12** | **12** | **12** | **12** | **12** |
| **High-quality liquid assets** | | | | | | | | |
| Total high-quality liquid assets (HQLA) | | | | | 82,086 | 80,510 | 76,407 | 71,492 |
| **Cash outflows** | | | | | | | | |
| Retail deposits and deposits from small business customers, of which: | 22,175 | 21,704 | 21,125 | 20,650 | 1,640 | 1,616 | 1,571 | 1,528 |
| Stable deposits | 9,220 | 8,824 | 8,461 | 8,276 | 461 | 441 | 423 | 414 |
| Less stable deposits | 8,789 | 8,715 | 8,494 | 8,238 | 1,179 | 1,174 | 1,147 | 1,113 |
| Unsecured wholesale funding | 90,472 | 87,494 | 84,396 | 81,990 | 55,123 | 52,172 | 49,926 | 48,612 |
| Operational deposits (all counterparties) and deposits in networks of cooperative banks | 25,878 | 25,371 | 24,748 | 23,892 | 6,386 | 6,221 | 6,035 | 5,821 |
| Non-operational deposits (all counterpar-ties) | 52,309 | 51,118 | 49,256 | 48,199 | 36,452 | 34,946 | 33,499 | 32,892 |
| Unsecured debt | 12,285 | 11,005 | 10,392 | 9,899 | 12,285 | 11,005 | 10,392 | 9,899 |
| Secured wholesale funding | | | | | 2,508 | 2,444 | 2,115 | 2,114 |
| Additional requirements | 32,382 | 32,083 | 31,959 | 32,090 | 8,477 | 8,499 | 8,646 | 8,811 |
| Outflows related to derivative exposures and other collateral requirements | 3,919 | 4,209 | 4,571 | 4,899 | 2,933 | 3,012 | 3,138 | 3,239 |
| Outflows related to loss of funding on debt products | | | | 61 | | | | 61 |
| Credit and liquidity facilities | 28,463 | 27,874 | 27,388 | 27,130 | 5,544 | 5,487 | 5,508 | 5,511 |
| Other contractual funding obligations | 6,740 | 7,359 | 7,957 | 7,679 | 6,527 | 7,152 | 7,760 | 7,493 |
| Other contingent funding obligations | 34,800 | 34,318 | 33,410 | 32,511 | 2,541 | 2,537 | 2,493 | 2,493 |
| *TOTAL CASH OUTFLOWS* | | | | | *76,816* | *74,420* | *72,511* | *71,051* |
| **Cash inflows** | | | | | | | | |
| Secured lending (e.g. reverse repos) | 13,281 | 13,863 | 15,983 | 18,350 | 1,290 | 1,312 | 1,825 | 3,164 |
| Inflows from fully performing exposures | 14,953 | 15,223 | 16,142 | 16,667 | 9,165 | 9,480 | 10,343 | 10,913 |
| Other cash inflows | 9,075 | 8,836 | 9,231 | 9,169 | 7,673 | 7,475 | 7,898 | 7,818 |
| (Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are de-nominated in non-convertible currencies) | | | | | | | | |
| (Excess inflows from a related specialized credit institution) | | | | | | | | |
| *TOTAL CASH INFLOWS* | *37,309* | *37,922* | *41,356* | *44,186* | *18,128* | *18,267* | *20,066* | *21,895* |
| Fully exempt inflows | | | | | | | | |
| Inflows subject to 90% cap | | | | | | | | |
| Inflows subject to 75% cap | 32,038 | 32,517 | 35,848 | 38,684 | 18,129 | 18,267 | 20,066 | 21,895 |
| **Total adjusted value** | | | | | | | | |
| LIQUIDITY BUFFER | | | | | 82,086 | 80,510 | 76,407 | 71,492 |
| TOTAL NET CASH OUTFLOWS | | | | | 58,687 | 56,153 | 52,446 | 49,155 |
| LIQUIDITY COVERAGE RATIO | | | | | 140.2% | 143.7% | 146.3% | 145.5% |

Figure 15: EU LIQ1 - Quantitative information of LCR

## 8.3 Qualitative information on LCR, which complements template EU LIQ1 (Article 451 a (2) CRR)

The LCR is shaped by a diversified funding mix across various maturities (short and long), product groups (secured and unsecured), and investor groups (private customers, corporate customers, public sector, and financial customers). It offers all the usual liability products on a secured and unsecured basis in various maturity segments. In addition, the open-market transactions offered by central banks can be used if necessary.

The short-term maturities from the funding mix and potential additional liquidity outflows are countered by an adequate buffer of highly liquid assets and expected incoming payments from maturing exposures. The structural funding requirements are derived from the expected business performance (funding planning) on the basis of economic planning and complemented by short-term fine-tuning measures for the purposes of LCR management.

In the fourth quarter of 2021, the LCR remained stable in a corridor between 131% and 141% as at the reporting dates.

The high liquidity in the market, triggered among other things by the central banks' open-market transactions, is also reflected at LBBW in the form of a high liquidity buffer, significant parts of which are held as cash balances at central banks. LBBW also continues to participate in the ECB's longer-term tender (TLTRO III). In addition, LBBW has a good standing in the market and can obtain the necessary amount of unsecured funding.



As well as participating in the ECB's longer-term tender, the main sources of funding are currently deposits from private and corporate customers and investments by affiliated savings banks and German institutional investors. Potential concentrations are monitored.

In addition, the long-term funding requirement is covered by Pfandbriefe and unsecured issues, which are highly attractive to investors due to the bank's good market standing and the partial configuration as green or social bonds.

The bank's liquidity buffer comprises a strategic buffer aligned to the requirements of the business model (e.g. call risks from non-maturity deposits, loan commitments, intended maturity transformation), supplemented by buffer stocks that can be adjusted at short notice.

For the strategic buffer, the bank manages a stock of highly liquid securities that are funded structurally. In addition, short-term liquidity buffers are held in the form of cash balances at central banks or in connection with securities received via repurchase agreements and lending transactions.

LBBW enters into derivative exposures at customer request and to hedge risks from its own business portfolio (e.g. interest rate risks). In the event of adverse market conditions, a portion of these derivative exposures has to be secured with cash on the basis of collateralization agreements. LBBW calculates these outflows using the "historical look-back approach" (HLBA) as defined in Commission Delegated Regulation (EU) 2017/208. As at 31 December 2021, the average share of outflows calculated based on the HLBA amounted to around 4% of total net outflows.

LBBW manages compliance with the LCR across all currencies. At the moment, the US dollar is a significant currency in the sense of Article 415 (2) CRR.

All LBBW Group liquidity risks classified as material, including subsidiaries which are material for the liquidity risk, are managed centrally by LBBW Treasury. The impact of the subsidiaries on the LCR was generally marginal during the disclosure period.

LBBW sees no further positions that might be relevant for its liquidity profile which are not included in the figures or in the text of the present disclosure report.

## 8.4 Disclosure of net stable funding ratio (NSFR) (Article 451 a (3) CRR)

The net stable funding ratio (NSFR) as defined by Regulation (EU) No 575/2013) in conjunction with Regulation (EU) 2019/876 is a structural liquidity ratio that took effect as at 28 June 2021 to ensure that the institution has a stable funding structure. Compliance with the ratio requires that the amount of permanently available weighted liabilities and own funds – available stable funding (ASF) – at least matches the amount of the permanent funding requirement from weighted assets and off-balance sheet exposures – required stable funding (RSF).

The regulatory requirement of a minimum requirement is binding for LBBW, including the subsidiaries within the Group, from 28 June 2021.
At LBBW, disclosures on the NSFR are based on the regulatory scope of consolidation within the meaning of CRR.

The disclosure presents the figures as at the end of each quarter of the relevant disclosure period. The annual and semi-annual disclosures therefore present two quarters – the quarter as at the reference date of disclosure and the preceding quarter.

The management of the NSFR is embedded into the management of LBBW balance-sheet structure. Permanent fulfillment of the NSFR requirement is a core requirement in economic and funding planning (five-year perspective). The ratio is this a significant influencing factor on the definition of the funding requirement on the liabilities side. The aim of the funding mix strategy is to achieve balanced diversification in relation to product and investor groups. To this end, all the usual liability products are offered on a secured and unsecured basis in various maturity segments.

As well as long-term capital market issues, NSFR management is supplemented by active daily management of short-term deposits and loans of non-finance customers. When necessary or in the case of favorable opportunities, open-market transactions offered by central banks can also be used.

The decline in the ratio as at the end of 2021 is due among other things to an excess of new lending business volume over funding activities in the second half of 2021. Most of the annual funding volume was already covered in the first half of the year. Customer deposits, including from non-finance customers, were also reduced at the end of the year as part of balance sheet structuring.

The interdependent assets and liabilities included in the NSFR currently comprise promotional business in the form of pass-through and transmitted loans and derivative clearing activities for customers. For the transmitted promotional loans, LBBW recognizes both a liability to the development bank and a receivable in the same amount from the final borrower, public savings banks. Derivative clearing activities for customers are also recognized as interdependent. In total, the volume of interdependent assets and liabilities was EUR 36,836m each as at 31 December 2021 (previous period 30 June 2021: EUR 36,294m), of which EUR 34,187m (previous period 30 June 2021: EUR 33,617m) from promotional business and EUR 2,649m (previous period 30 June 2021: EUR 2,677m) from derivative clearing activities.

| 31/12/2021<br>EUR million | Unweighted value by residual maturity<br>No maturity | < 6 months | 6 months to < 1yr | ≥ 1yr | Weighted value |
|---|---|---|---|---|---|
| **Available stable funding (ASF) Items** | | | | | |
| Capital items and instruments | 14,068 | | | 5,482 | 19,550 |
| Own funds | 14,068 | | | 5,482 | 19,550 |
| Other capital instruments | | | | | |
| Retail deposits | | 22,992 | 8 | 49 | 21,402 |
| Stable deposits | | 13,064 | 2 | 39 | 12,452 |
| Less stable deposits | | 9,928 | 6 | 10 | 8,950 |
| Wholesale funding: | | 107,591 | 5,588 | 69,514 | 99,590 |
| Operational deposits | | 26,333 | 0 | 0 | 3,147 |
| Other wholesale funding | | 81,258 | 5,588 | 69,514 | 96,443 |
| Interdependent liabilities | | 2,370 | 2,315 | 32,170 | 0 |
| Other liabilities: | | 9,382 | 14 | 1,987 | 1,994 |
| NSFR derivative liabilities | | | | | |
| All other liabilities and capital instruments not included in the above categories | | 9,382 | 14 | 1,987 | 1,994 |
| *Total available stable funding (ASF)* | | | | | *142,536* |
| **Required stable funding (RSF) Items** | | | | | |
| Total high-quality liquid assets (HQLA) | | | | | 10,897 |
| Assets encumbered for a residual maturity of one year or more in a cover pool | | 390 | 814 | 16,714 | 15,230 |
| Deposits held at other financial institutions for operational purposes | | 1 | 0 | 0 | 0 |
| Performing loans and securities: | | 44,520 | 10,956 | 79,326 | 90,285 |
| Performing securities financing transactions with financial customers collateralized by Level 1 HQLA subject to 0% haircut | | 7,276 | 8 | 24 | 265 |
| Performing securities financing transactions with financial customer collateralized by other assets and loans and advances to financial institutions | | 15,545 | 4,035 | 16,306 | 19,534 |
| Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which: | | 18,430 | 4,932 | 44,343 | 55,323 |
| With a risk weight of less than or equal to 35% under the Basel II Standardized Approach for credit risk | | 698 | 92 | 1,425 | 4,724 |
| Performing residential mortgages, of which: | | 313 | 210 | 4,480 | |
| With a risk weight of less than or equal to 35% under the Basel II Standardized Approach for credit risk | | 313 | 210 | 4,480 | |
| Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products | | 2,957 | 1,769 | 14,173 | 15,163 |
| Interdependent assets | | 2,369 | 2,313 | 32,154 | 0 |
| Other assets: | | 27,179 | 62 | 3,208 | 13,036 |
| Physical traded commodities | | | | 285 | 242 |
| Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs | | 485 | 0 | 78 | 479 |
| NSFR derivative assets | | 4,010 | | | 4,010 |
| NSFR derivative liabilities before deduction of variation margin posted | | 10,716 | | | 536 |
| All other assets not included in the above categories | | 11,967 | 62 | 2,845 | 7,769 |
| Off-balance sheet items | | 29,780 | 2,836 | 32,744 | 1,873 |
| *Total RSF* | | | | | *131,322* |
| Net Stable Funding Ratio (%) | | | | | 108.5% |

Figure 16: EU LIQ2 - Disclosure of net stable funding ratio (NSFR) 31/12/2021

The disclosure of the net stable funding ratio for the previous period as of 30 September 2021 is presented below.

| 30/09/2021<br>EUR million | Unweighted value by residual maturity | | | | Weighted value |
|---|---|---|---|---|---|
| | No maturity | < 6 months | 6 months to < 1yr | ≥ 1yr | |
| **Available stable funding (ASF) Items** | | | | | |
| Capital items and instruments | 14,084 | | | 5,407 | 19,491 |
| Own funds | 14,084 | | | 5,407 | 19,491 |
| Other capital instruments | | | | | |
| Retail deposits | | 23,207 | 10 | 52 | 21,594 |
| Stable deposits | | 12,934 | 2 | 42 | 12,330 |
| Less stable deposits | | 10,274 | 8 | 11 | 9,264 |
| Wholesale funding: | | 130,750 | 6,528 | 69,964 | 104,938 |
| Operational deposits | | 26,052 | 0 | 0 | 3,063 |
| Other wholesale funding | | 104,698 | 6,528 | 69,964 | 101,875 |
| Interdependent liabilities | | 2,731 | 1,992 | 32,245 | 0 |
| Other liabilities: | | 10,919 | 2 | 2,269 | 2,269 |
| NSFR derivative liabilities | | | | | |
| All other liabilities and capital instruments not included in the above categories | | 10,919 | 2 | 2,269 | 2,269 |
| *Total available stable funding (ASF)* | | | | | *148,293* |
| **Required stable funding (RSF) Items** | | | | | |
| Total high-quality liquid assets (HQLA) | | | | | 14,252 |
| Assets encumbered for a residual maturity of one year or more in a cover pool | | 309 | 350 | 14,895 | 13,221 |
| Deposits held at other financial institutions for operational purposes | | 1 | 0 | 0 | 0 |
| Performing loans and securities: | | 46,005 | 9,826 | 76,325 | 86,094 |
| Performing securities financing transactions with financial customers collateralized by Level 1 HQLA subject to 0% haircut | | 4,453 | 403 | 14 | 351 |
| Performing securities financing transactions with financial customer collateralized by other assets and loans and advances to financial institutions | | 21,083 | 3,192 | 14,664 | 17,955 |
| Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which: | | 14,983 | 4,367 | 43,096 | 52,591 |
| With a risk weight of less than or equal to 35% under the Basel II Standardized Approach for credit risk | | 824 | 286 | 1,647 | 5,774 |
| Performing residential mortgages, of which: | | 363 | 195 | 5,568 | |
| With a risk weight of less than or equal to 35% under the Basel II Standardized Approach for credit risk | | 363 | 195 | 5,568 | |
| Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products | | 5,122 | 1,668 | 12,982 | 15,196 |
| Interdependent assets | | 2,731 | 1,992 | 32,245 | 0 |
| Other assets: | | 29,949 | 90 | 3,102 | 12,290 |
| Physical traded commodities | | | | 56 | 48 |
| Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs | | 440 | 50 | 84 | 488 |
| NSFR derivative assets | | 4,648 | | | 4,648 |
| NSFR derivative liabilities before deduction of variation margin posted | | 12,124 | | | 606 |
| All other assets not included in the above categories | | 12,737 | 40 | 2,961 | 6,500 |
| Off-balance sheet items | | 16,207 | 2,720 | 44,411 | 1,775 |
| *Total RSF* | | | | | *127,632* |
| Net Stable Funding Ratio (%) | | | | | 116.2% |

Figure 17: EU LIQ2 - Disclosure of net stable funding ratio (NSFR) 30/09/2021

# 9 Disclosure of exposures to credit risk and dilution risk and of credit quality (Article 442 CRR)

## 9.1 EU CRA - General qualitative information on credit risks (Article 435 (1) a-b, d, f CRR)

### Counterparty risk management

Management for limiting the counterparty risk is implemented as an integrated process at LBBW, and can be broken down into the three main components of risk measurement, risk monitoring and reporting as well as risk management:

**Risk measurement**



In order to measure risk, LBBW uses an extensive range of instruments involving quantitative measuring procedures. These are subject to regular and, where necessary, ad-hoc quality control and undergo development as needed.

Risk classification procedures
LBBW uses specific rating and risk classification procedures for all relevant business activities. These procedures quantify the probability of default (PD) of the individual investments. For this purpose, the counterparty risk is calculated both including and excluding the transfer risk. These procedures are maintained and updated by LBBW on its own initiative or in cooperation with Rating Service Unit GmbH & Co. KG (an associated company of the Landesbanks) or Sparkassen Rating und Risikosysteme GmbH (a subsidiary of Deutscher Sparkassen- und Giroverband – DSGV).

Most of the portfolio is measured using internal rating procedures that have been approved for the Internal Ratings Based Approach (IRBA) by the banking regulator. The rating grades are not only used for internal management purposes but also to measure the regulatory capital requirements.

Evaluating collateral
Collateral is evaluated on the basis of its market value, which is reviewed regularly and on an ad hoc basis and adjusted in the event of any change in the relevant factors. Loss given default (LGD) is estimated on the basis of the valuation of the individual items of collateral. In this respect, differentiated estimates are calculated for liquidation rates (average proceeds expected from the liquidation of collateral) and for recovery rates (proportion of the proceeds from the unsecured portion of a receivable). The estimates are based on empirical values and pool data recorded by the Bank itself and in cooperation with savings banks and other Landesbanks.

### Exposure at default

Whereas exposure is tied to a specific date (exposure at default, EaD) for reporting purposes, and potential future exposure is calculated to determine the CVaR and the utilization of internal limits, e.g. with derivatives. This is calculated for the most part on the basis of fair values and the corresponding add-ons. The add-on calculation takes account of the remaining maturity, product type and market factors (interest, currency etc.). Netting and collateral agreements are used for reducing risk. The capital charges for issuer risks held in the trading book take account of the settlement payments and actual fair value losses as a result of default (jump-to-default method). The (modified) nominals are used for issuer and reference borrower risks from securities and holdings in the non-trading book.

### Expected losses, value adjustments and credit value adjustment

The expected loss (EL) – as an indicator that depends on customer creditworthiness, an estimation of the loss at default and the expected exposure at default – provides the basis for the level of the standard risk costs. In preliminary costing at the individual transaction level, these are included in the calculation of risk-adequate loan terms. The concept of expected loss is also used in the calculation of allowances for losses on loans and advances under IFRS 9: For transactions in which creditworthiness has deteriorated significantly since conclusion, it is the EL over the entire residual term (stage 2), otherwise it is the EL for one year (stage 1). In the case of specific loan loss provisions (SLLP), the present values of the expected cash flows (including proceeds from the liquidation of collateral) are calculated and allowances for losses on loans and advances are made on the basis of uniform standards applied throughout the Group.

The market price of the counterparty risk of OTC derivatives accounted for at fair value is measured using the so-called credit value adjustment (CVA). This is included in the income statement of LBBW as a valuation adjustment. The credit ratings of the counterparty and of LBBW are taken into consideration.



### Credit value-at-risk

Credit value-at-risk (CVaR) represents the unexpected loss of a portfolio above its expected loss. A credit portfolio model that takes the defaults as well as rating migration into account is used to calculate this value. It is calculated using a Monte Carlo simulation approach and takes into consideration correlations between borrowers as well as borrower, sector and country concentrations.

CVaR is used as the parameter for economic capital used for counterparty risks in the risk-bearing capacity analysis and in LBBW's management. Like economic capital, it is defined using a confidence level of 99.9% and a time horizon of one year.

### Risk concentrations

Risk concentration is measured using the CVaR, among other methods, and is limited using the LBBW Group's free aggregate risk cover. Group Risk Controlling proposes concentration risk thresholds and the concentration limit for individual borrowers as well as at sector level; these are set by the Board of Managing Directors. The thresholds and limits are reviewed regularly and adjusted if necessary, depending on the development of the loan portfolio and the risk-bearing capacity.

### Stress tests

LBBW uses stress tests to evaluate the impact of adverse economic and political developments on key performance indicators in the lending portfolio (e.g. CVaR, RWA and allowances for losses on loans and advances). The potential effects of the simulated development are converted into negative changes to the key lending risk parameters (PD, LGD and correlations) of the transactions in the portfolio in question.

## Risk monitoring and reporting

### Individual transaction level

Risk management at the level of individual exposures is the duty of the back office divisions as part of the first line of defense. These are organized independently from the front office divisions, in line with the regulatory requirements. Clear responsibilities and appropriate experience and expertise are ensured in the back office divisions by a customer or sector-specific organizational structure. Credit decisions are made in a system of graded competencies, which are regulated in the Bank's decision-making system.

As part of risk monitoring, the risk managers responsible continuously check changes in information of relevance for credit ratings as well as compliance on the basis of systems with the limits granted. This includes monitoring any irregularities in account behavior, evaluating company news and observing macroeconomic and sector trends. A market data-based system is also used for listed companies.

A system is in place for the early detection of risks, comprising procedural regulations and system generated signals, whose goal it is to detect any deterioration in credit ratings at an early stage.

The early detection of any deterioration in credit ratings allows appropriate countermeasures, e.g. additional collateral or pre-emptive restructuring, to be taken in consultation with the customer. Depending on the level of risk, high-risk, problem assets are classified as cases requiring monitoring, intensified support, restructuring or liquidation and are dealt with by the back office divisions responsible. LBBW aims to minimize losses through successful restructuring activities, in line with the Bank's own interests and those of its customers.

#### Portfolio level

Counterparty risk is monitored as part of the second line of defense at the portfolio level in the Group Risk Controlling division, which, from an organizational point of view, is separate from the front and back office divisions. The utilization of the economic capital limit and the exposure and CVaR limits set for sector risks is documented each month in the overall risk report. High limit utilizations are shown at an early stage using a traffic light system. Compliance with country limits is monitored on a daily basis using the Bank's global limit system.



An ad hoc reporting process is implemented for limit overdraft and extraordinary events for specific reporting to the decision-makers in charge.

The most important periodic reports are as follows:

- The overall risk report presented monthly in the Risk Committee, which includes details about the risk situation at the portfolio level, compliance with the material limits and size classes and risk concentration. Portfolio analyses additionally report on the risk situation of individual sectors, for example. Each quarter, these also contain detailed information such as on key exposures and rating migration.
- The quarterly segment risk report, featuring information on portfolio development taking into account the specifics of each segment.
- The half-yearly in-depth sector report with detailed information on the sector situation, portfolio development and important customers in each sector.

### Risk management

Counterparty risks are managed, in particular, through the requirements of the credit risk strategy, through the economic capital allocation to sub-portfolios with the aid of the CVaR, and by avoiding and reducing concentration risks at the level of sectors, countries and individual counterparties.

#### Individual transaction level

As a rule, the upper limits on the individual transaction level taking the concentration limit into account are set individually by the respective authorized person responsible for the front office or back office divisions. This upper limit is taken into account for all risk-relevant transactions by a customer or group of connected clients. A material part of managing individual transactions involves monitoring compliance with the quantitative and qualitative requirements defined in the credit risk strategy. This determines the underlying terms and conditions for LBBW's lending business on the basis of the business strategy and in the light of the Group risk strategy. Particular attention is paid to avoiding concentration risks.

From an economic point of view, the question of whether a transaction will produce an adequate profit on a risk-adjusted basis is a key consideration before entering into business; for this reason, preliminary costing of all individual transactions is compulsory. In addition to the historical interest rate and the bank levy, the components in the preliminary costing comprise cover for expected loss (risk margin), interest on equity to be held in case of unexpected losses (capital margin) and cover for liquidity and processing costs. The results form the basis of business management at customer level.

### Sub-portfolio level

The risk management measures differ depending on the respective sub-portfolio level:

Country limits are determined by the Board of Managing Directors, based on the proposals of the Country Limit Committee. In the case of a limit overdraft a ban on business is imposed. If the country credit rating deteriorates, limits are reduced and/or suspended.

Sector limits are determined by the Board of Managing Directors on the basis of risk-bearing capacity. They are set on a sector-specific basis below absolute concentration limits. The limit system is based on a risk-oriented sector key designed specifically for this purpose, which combines sector segments that have high economic dependencies along the value chains. The limitation triggers controlling measures such as hedging transactions to reduce risk or a ban on new business etc. if certain thresholds are exceeded.

At the business area or sub-business area level, risks are limited through measures to ensure adherence to the portfolio guidelines of the credit risk strategy with regard to upper limits, rating structures and the portfolio quality, among others.

### Total portfolio level

In the management of the Group's credit portfolio, the limit in particular for the economic capital for counterparty risks based on the CVaR is allocated to the sectors. As well as risk parameters (in particular avoiding concentration risks), appropriate consideration is also given to LBBW's strategic targets for developing the lending portfolio. Suitable measures are taken in the event of high limit utilization. In addition, the results of the stress tests provide indications of potentially dangerous risk situations, which may require measures to be taken.

For further disclosures pursuant to Article 435 CRR on credit risks, please refer to *section 3.1 Institution's risk management approach* in this report.

## 9.2 EU CRB - Additional disclosure in connection with the credit quality of assets (Article 442 a-b CRR)

## Non-performing exposures and loans

### Overview

#### Definitions

An exposure is considered a *non-performing exposure* if it is unlikely that the obligor will meet its commitments without realizing the collateral (unlikely to pay) or if the key exposure is more than 90 days past due. It should also be noted that LBBW states that former non-performing exposures with forbearance measures are to be classified as non-performing in the event of a 30 day delay or a new forbearance measure within the probationary period.
For the purposes of identifying non-performing exposures, the ECB's guidance on non-performing loans dated March 2017 published »UTP indicators« (unlikely to pay). These are based not so much on quantitative criteria as on events, which ultimately result in a classification as non-performing.
A UTP indicator requires that a case-by-case assessment is conducted as to whether it is a case of default - this means that it does not necessary lead to the result »default«. The following UTP indicators are used:

- Early warning criteria that result in classification as »intensive support«.
- Massive and permanent lack of ability to service debts (e.g. permanent loss of salary in the case of private customers).
- The sources of the borrower's recurring income are no longer available to meet the installment payment obligations.
- There are legitimate concerns regarding the borrower's ability to generate stable and sufficient cash flows in the future.
- The borrower's overall level of debt has increased significantly or there is a reasonable expectation that the overall level of debt will deteriorate.
- The borrower breached the terms of a loan agreement, where these breaches are to be considered material in terms of the credit rating and result in doubts regarding full debt servicing.
- The bank has requested (additional) collateral (including a warranty or guarantee) because the credit rating has deteriorated.
- For natural persons: Default of a company wholly owned by a single natural person, where this natural person has issued a personal guarantee to the bank for all of the company's obligations.
- No impairment loss is recognized because the exposure is collateralized in full.
- Sale of a financial asset at a considerable discount due to a deterioration in the obligor's credit rating.
- In the case of lending fraud, if there is no other cause of default.
- If the loan agreement explicitly allows the obligor, under certain circumstances, to amend the schedule or suspend or postpone payments and the obligor is acting within its rights granted in the agreement, the reasons for the change must be analyzed.
- If the repayment of an obligation is suspended because a law allows this option or because of other legal restrictions, the reasons for exercising the option to suspend this repayment should be analyzed where possible.
- Where external databases are used (e.g. credit register, macroeconomic indicators or public sources of information), potential indications of "unlikely to pay" include:
  - The credit register records significant delays in payments to other creditors.
  - A crisis in the sector in which the obligor operates, combined with a weak positioning of the obligor in this sector.
  - Disappearance of an active market for a financial asset due to the obligor encountering financial difficulties.

- A bank receives information that a third party (in particular another bank) has initiated bankruptcy or compa-rable proceedings to protect the obligor.
- If the repayment plan changes as a result of the obligor's financial difficulties or the obligor's payment obligation
  decreases by a maximum of 1%, the following criteria must be checked:
  - Large planned payments at the end of the new repayment plan.
  - Irregular repayment plan with substantially lower payments at the start of the new repayment plan.
  - Substantial grace period at the beginning of the repayment plan.
  - Multiple crisis-led restructurings on the part of the obligor.
- Default of the superordinated company.
- When a default at another member of the LBBW Group becomes known.

An exposure shall be deemed to be defaulted in the sense of the regulatory definition in Article 178 CRR in conjunction with EBA (GL) 2016/07 when at least one of the following events has taken place:

- There has been a default in payment/overdraft of > 90 days
  The entirety of liabilities are 90 days past due if these have been significantly overdrawn for more than 90 consecutive calendar days. The liabilities to be checked as to whether they are 90 days past due comprise all liabilities from the borrower's legal relationships to the bank. The total of all of an obligor's liabilities that are past due is initially calculated at account level, followed by an aggregation at the customer level. An overdraft is when the loan drawn on a day exceeds the underlying liability. An overdraft is considered material if it accounts for more than 1% of the total amount of all of the bank's risk exposures to the borrower recognized on the balance sheet, subject to a minimum of EUR 100 (retail business) or EUR 500 (non-retail).
- There is unlikeliness to pay (doubts about obligor's creditworthiness)
  Unlikely to pay is when the bank believes that the obligor is very unlikely to meet its loan commitments in full.
- There is unlikeliness to pay due to transfer
  The defaulting of obligors with a joint liability results in the default of individual obligors who have not already defaulted. In addition, if all individual obligors default, this results in the default of obligors with a joint liability who have not already defaulted.
- The exposure has been rescheduled/restructured
  The aim of crisis-led, unavoidable and loss-making restructuring or rescheduling is to bring about a cure of the customer or individual exposures.
- There has been a sale of the credit obligation
  Under a sale of a credit obligation, it is sold at a considerable economic loss due to the credit rating. The reason for the sale is the prospect that payment obligations will not be met.
- It has been called/repaid
  The purpose of the bank calling the loan agreement and repaying the receivable is to settle the receivable, if necessary by sale or liquidation. Calling generally initiates the settlement phase. This also includes bullet loans after maturity, where liquidation is initiated.
- The obligor has filed for bankruptcy
  Obligors file for bankruptcy or bankruptcy proceedings are instigated within the meaning of collective enforcement under the control of a state authority to ensure that all creditors' claims are equally satisfied regarding their outstanding receivables.
- The exposure has been fully written off
  Uncollectible exposures, in particular significant direct write-downs, are written down.
- Impairment is recognized
  A partial write-down is carried out or impairment is recognized as a loan loss provision for potential future losses from the credit exposure due to the credit rating if it is to be assumed that an exposure or part of an exposure is uncollectible.

A loan is considered *forborne* if it is classified as a forborne exposure (FBE). This applies when the following conditions are met:

- The obligor faces or is about to face financial difficulties, and
- The bank makes concessions towards the obligor which are justified by the financial difficulties.

An exposure is deemed to be *restructured* if the aim of this crisis-led, unavoidable and loss-making restructuring/rescheduling is to bring about a cure of the customer or individual exposures. The following concessions/forbearance measures result in a restructuring:

- Changes in contractual terms and conditions or full or partial rescheduling that would not have been awarded to the obligor if not for financial difficulties
- The contractual terms and conditions are more favorable than for other obligors with a similar risk profile in the institution
- Utilization of options to amend the contractual terms and conditions by the obligor, if the institution agrees to the application of these clauses and concludes that the obligor is in financial difficulties
- Rescheduling: Recourse to debt contracts to ensure the full or partial repayment of other debt contracts that the obligor cannot fulfill

Concessions by the bank that are justified by the obligor's financial difficulties can, as a UTP indicator, lead to a credit default within the regulatory definition and represent objective evidence of impairment. Forborne risk exposures can be classified both as performing exposures and non-performing exposures.
A risk exposure is considered *impaired* when there is objective evidence of impairment and when a stage 3 impairment loss has been recognized in accordance with the accounting provisions in place at LBBW (IFRS). A more in-depth explanation of the provisions and methods and a detailed description of what constitutes objective evidence of impairment under IFRS 9 are provided in the next section »Credit risk adjustments«.
Transactions which are not impaired and are reported as being past due by more than 90 days at individual transaction level are mostly significant exposures for which there are objective indications for impairment, but for which an individual valuation does not lead to any provision. The estimated expected cash flows as part of this valuation are in line with and/or exceed the carrying amount, hence no impairment is required (e.g. if there is sufficient collateral).

## Credit risk adjustments

### Methods of loan loss provisioning

LBBW has been applying the IFRS 9 (Financial Instruments) standard, in the version adopted by the European Union, since 1 January 2018.
The IFRS 9 impairment methods cover only those financial instruments recognized in the statement of financial position at amortized cost (financial assets measured at amortized cost) and financial assets measured at fair value through other comprehensive income. These can be loans, receivables or securities, provided these are considered debt instruments. The provisions also apply to lease receivables and off-balance-sheet transactions such as sureties, financial guarantees and loan commitments, where these are not measured at fair value through profit or loss (FVR).
They do not apply to financial instruments that do not meet the cash flow criteria and equity instruments that must be measured at fair value through profit or loss (FVR) under IFRS 9 or financial instruments that are voluntarily designated for measurement at fair value through profit or loss (FVO).
The introduction of IFRS 9 replaced the incurred loss model with an expected loss model. Under this model, financial instruments are allocated to one of three loan loss provision stages:

- Stage 1: Impairment losses included at the amount of the expected losses resulting from potential loss events in the next twelve months.
  At the beginning of the transaction, the financial instruments are generally allocated to stage 1.
- Stage 2: Impairment losses equal to the expected losses over the entire remaining term of the financial instrument.
  If the financial instrument's default risk has significantly increased since it was recognized, the financial instrument is allocated or transferred to stage 2.
- Stage 3: Impairment losses of financial instruments with objective evidence of impairment, where the amount of the impairment loss is calculated as the difference between the financial instrument's gross carrying amount and the present value of the estimated cash flows. To calculate anticipated future cash flows, various probability-weighted scenarios are used to estimate expected proceeds from the financial instrument (payments of principal and interest) and any payments from the liquidation of collateral on the basis of their amount and accrual date. The procedure for financial assets that are not significant is the same as for stage 2 assets (stage 3 based on parameters).

### Provisions for stage allocation

Assessing whether an impairment loss is measured on the basis of the expected loss over twelve months (stage 1) or over the remaining term of a financial instrument (stage 2) is based on three criteria (transfer criteria):

- Quantitative transfer criterion: First, the expected probability of default at the end of the reporting period is calculated using the initial rating and expected migrations specific to the segment. If the current risk assessment is significantly worse than the expected value at the end of the reporting period, the financial asset is transferred.
- »De minimis threshold« criterion: A change in the probability of default by a maximum of 10 basis points in comparison to the initial rating is considered low. In these cases, the impairment loss is always measured using the expected loss over twelve months. This is relevant only to financial instruments with an initial rating of up to three, as a one-notch downgrade for instruments with a rating of four or higher causes the probability of default to deteriorate by more than 10 basis points.
- »Warning signal« criterion: In the event of certain warning signals, the impairment loss of a receivable is always measured using the expected credit loss over the remaining term. These include internal warnings (e.g. under observance or seizure), 30 day delay, intensive support or forbearance measures.

If the »minimum threshold" and »warning signal« criteria are both met, priority is given to the warning signal.

Securities are exempt from the above criteria; stages are allocated on the basis of the current rating. If this falls under »investment grade", it is allocated to stage 1. In all other cases, the securities are allocated to stage 2 and the impairment loss measured using the expected loss over the remaining term. The definition of »investment grade« is based on international standards.

Financial assets for which there are already objective indications of impairment at the time of acquisition constitute another exception. These are known as »Purchased or originated credit-impaired (POCI) financial instruments«. They may be loans/receivables or securities acquired from third parties or as part of the original issue of a new financial instrument. The latter may arise, for example, as part of amending the contract if this amendment is so material that the previous financial instrument is disposed of and a new financial instrument is acquired. In this case, impairment loss is always measured using the life-time expected credit losses of the financial instrument, even when recovery is expected or actually occurs. There is no stage transfer for these instruments.

Current ratings, for which the probability of default is over a twelve-month period, are used for the quantitative aspects of the transfer criterion. As shown by analysis in the context of the development of the transfer criterion, this is suitable for measuring the probability of default over the remaining term.

A financial instrument that was not impaired upon acquisition but for which there is objective evidence of impairment must be allocated to stage 3.

**The following events are considered objective evidence of impairment:**

- Material financial difficulties of the obligor
- Breach of contract by the obligor, e.g. default in payment
- Concessions by the bank due to financial difficulties experienced by the obligor that would not have been granted if not for the financial difficulties
- Insolvency or restructuring of the obligor's funds is likely
- Financial difficulties experienced by the obligor cause the loss of an active market for the financial instrument
- A financial instrument is acquired or issued at significantly below its nominal value due to loan losses

At LBBW, the definition for accounting purposes is based on the regulatory definition of default. An exposure shall be deemed to be defaulted in the sense of the regulatory definition in Article 178 CRR when at least one of the following events has taken place:

- There has been a default in payment/overdraft of > 90 days
- There is unlikeliness to pay (doubts about obligor's creditworthiness)
- There is unlikeliness to pay due to transfer
- Impairment is recognized
- The exposure has been rescheduled/restructured
- There has been a sale of the credit obligation
- It has been called/repaid
- The obligor has filed for bankruptcy
- The exposure has been fully written off



If the conditions for measuring the impairment loss over the remaining term of a financial instrument (stages 2 and 3) are no longer met, an impairment loss is measured on the basis of the expected loss over twelve months (stage 1).

### Determining the impairment loss

For financial assets allocated to stages 1 and 2 or measured on the basis of parameters under stage 3, the expected credit loss is calculated based on the probability of default (PD), the estimated loss given default (LGD) and the expected exposure at default (EaD). These parameters are standardized at twelve months for stage 1 financial instruments. For calculating the expected loss over the entire term, the parameters are standardized at the remaining term of the financial asset.

Regardless of the remaining term, expected credit losses (calculated as the product of the three parameters already described) are discounted to the end of the reporting period using the effective interest rate of the financial instrument or an approximation of this rate. This does not apply to significant financial assets which already show credit-impairment at initial recognition. In this case, the effective interest rate is adjusted by taking into account the life-time expected credit losses, with the result that no further allowances for losses on loans and securities are reported on initial recognition. The credit-adjusted effective interest rate resulting from this is used for subsequent measurement.

### Description of parameters:

- PD (»Probability of default«)
  Specific rating and risk classification procedures are used for all relevant business activities. These procedures quantify the probability of default of the individual investments, which is initially standardized to twelve months. In addition, multi-year probabilities of default are determined on the basis of many years of internal rating histories. Historical, current and forward-looking information is considered when determining customer creditworthiness, provided this demonstrably improves the forecast quality. In addition, the regulatory rating for the bank's core areas of business corporate customers and real estate financing in Germany is also adjusted for expected economic effects using macroeconomic models.
- LGD (»Loss given default«)
  The loss given default is determined largely by the likelihood of recovery and the level of collateralization for the underlying asset. The level of collateralization is the ratio of projected realization revenue for the collateral and the expected exposure at default. There are specific forecasts for different types of collateral and customer groups. The estimates of the model inputs are based on pool data gathered by the Bank itself and in cooperation with savings banks and other Landesbanks, in which case it has been ascertained that these data are representative for LBBW. The LGD is initially standardized at twelve months. In addition, multi-year loss rates for defaults are determined using collateral value models and EaD forecasts for each potential default date for the obligor. Similar to the probability of default, forward-looking information is also considered.
- EaD (»exposure at default«)
  The expected exposure at default (EaD) is calculated using different models depending on the properties of the underlying financial instrument. The EaD of a fully paid out, non-revolving financial instrument is equal to the mean exposure in the year of default and is calculated taking into account contractual cash flows. For non-revolving financial instruments that have not yet been fully paid out at the measurement date, the expected date of full payment (full disbursement) is determined using models featuring customer and transaction-specific properties as risk factors. Payments are estimated by way of linear interpolation until the date of full disbursement and are therefore included in the EaD estimate. A separate category of models have been developed for revolving commitments. These models forecast the expected use of commitments for any time in the future until the end of the contract in question. If this is not explicitly stipulated, the notice period is used to determine the term. A performance-based term that extends beyond the notice period is estimated on the basis of historic data only for overdrafts and credit cards. Model inputs include structural transaction and customer properties, the duration until default and the past drawdown pattern of the credit facility. The models are estimated on internal data using different types of regression models. Sureties that are not fully utilized in the event of default are a special case. The amount at risk for these transactions is calculated by means of a credit conversion factor (CCF).

A stage 3 impairment loss is determined individually for significant receivables in contrast to stage 3 (parameter-based). For this, the bank used a discounted cash-flow method. The impairment requirement is calculated as the difference between the carrying amount of the asset and the net present value of the sum of all expected future cash flows (including proceeds from the sale of collateral), which are discounted by the original effective interest rate determined at the date of acquisition. Cash flows estimated to determine the need for allowances for losses on loans and advances are to be calculated using various scenarios (going concern excluding or adjusted for debt capital and gone concern) and analyst estimates weighted by probability.

### Depreciation, amortization and write-downs
A financial instrument is to be written down directly in the event of an actual or only partial default or loss. If no surrogate takes the place of the defaulted receivable, it is considered uncollectible. The receivable is derecognized if no recovery is expected. This is the case, for example, with:

- insolvency, when no further proceeds from the liquidation of collateral or an insolvency ratio are expected,
- terminated exposures where the residual receivables cannot be settled,
- full or partial debt waiver,
- sale of receivable at a loss and
- private customers who pay small installments on a high outstanding receivable after disposing of the collateral because it is assumed that the customers will not be able to repay the claim fully within the two-year period.

Exposures that are still subject to enforcement activity after being written down are serviced centrally. The objective is to collect extraordinary income from these receivables.

### Recovery and probation period
After all reasons for default cease to apply, recovery is not automatic. Instead, there is a transition into a probationary period. The purpose of this probationary period is to ensure that the obligor's recovery is stable. During the probationary period, the obligor remains in defaulted status, including retention of the default rating grade. The obligor is deemed to be recovered only after a minimum period and successful verification of a stable economic recovery. The length of the probationary period depends on the reason for the default in that specific case. The period is at least 366 days if the reason for default was restructuring or at least 92 days for all other reasons for default.

### Reversal of impairment losses
A financial instrument is deemed to be impaired when there is objective evidence of impairment. If there is a reduction in the impairment requirement or if objective evidence of impairment for a receivable ceases to exist, the existing allowance for losses on loans and advances must be reversed through profit or loss. However, the reversal of the impairment loss must not exceed the carrying amount that the receivable would have had if it had not been impaired.

### Sensitivity analysis of changes in material assumptions
There were no changes to material assumptions in impairment methods last year.

The gross carrying amount of unimpaired receivables more than 90 days past due came to EUR 17m at the end of 2021. Impairment is not required here due to overcollateralization and/or other firmly expected incoming payments.

## 9.3 Performing and non-performing exposures and related provisions (Article 442 c, e CRR)

| | Gross carrying amount/nominal amount | | | | | |
|---|---|---|---|---|---|---|
| | Performing exposures | | | Non-performing exposures | | |
| EUR million | | of which: stage 1 | of which: stage 2 | | of which: stage 2 | of which: stage 3 |
| Cash balances at central banks and other demand deposits | 41,138 | 41,131 | 7 | 0 | 0 | 0 |
| *Loans and advances* | *164,869* | *134,321* | *28,673* | *1,101* | *2* | *1,075* |
| Central banks | 1,007 | 1,007 | 0 | 0 | 0 | 0 |
| General governments | 14,430 | 12,292 | 660 | 0 | 0 | 0 |
| Credit institutions | 40,980 | 38,691 | 2,237 | 18 | 0 | 18 |
| Other financial corporations | 20,032 | 17,566 | 2,164 | 9 | 0 | 9 |
| Non-financial corporations | 75,914 | 54,619 | 21,262 | 1,011 | 0 | 989 |
| Of which: SMEs | 15,756 | 11,571 | 4,182 | 163 | 0 | 158 |
| Households | 12,507 | 10,147 | 2,350 | 63 | 2 | 58 |
| *Debt securities* | *30,869* | *30,711* | *99* | *6* | *0* | *6* |
| Central banks | 460 | 460 | 0 | 0 | 0 | 0 |
| General governments | 4,427 | 4,313 | 92 | 0 | 0 | 0 |
| Credit institutions | 23,165 | 23,150 | 0 | 0 | 0 | 0 |
| Other financial corporations | 2,438 | 2,416 | 0 | 0 | 0 | 0 |
| Non-financial corporations | 378 | 371 | 7 | 6 | 0 | 6 |
| *Off-balance sheet exposures* | *74,154* | *58,461* | *7,540* | *324* | *0* | *212* |
| Central banks | 0 | 0 | 0 | 0 | 0 | 0 |
| General governments | 2,823 | 2,658 | 23 | 0 | 0 | 0 |
| Credit institutions | 12,353 | 11,646 | 20 | 0 | 0 | 0 |
| Other financial corporations | 6,744 | 5,421 | 356 | 0 | 0 | 0 |
| Non-financial corporations | 48,589 | 35,375 | 6,873 | 324 | 0 | 211 |
| Households | 3,645 | 3,361 | 268 | 1 | 0 | 0 |
| *Total* | *311,030* | *264,624* | *36,319* | *1,431* | *2* | *1,293* |

Figure 18: EU CR1 - Performing and non-performing exposures and related provisions

| | Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions | | | | | | Accumulated partial write-off | Collaterals and financial guarantees received | |
|---|---|---|---|---|---|---|---|---|---|
| | Performing exposures - Accumulated impairment and provisions | | | Non-performing exposures – Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions | | | | On performing exposures | On non-performing exposures |
| | | of which: stage 1 | of which: stage 2 | | of which: stage 2 | of which: stage 3 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| | *-803* | *-88* | *-715* | *-522* | *0* | *-518* | *-221* | *47,644* | *322* |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | -5 | -1 | -4 | 0 | 0 | 0 | 0 | 493 | 0 |
| | -16 | -4 | -12 | -17 | 0 | -17 | 0 | 590 | 0 |
| | -22 | -5 | -16 | -3 | 0 | -3 | -4 | 5,116 | 6 |
| | -722 | -70 | -652 | -477 | 0 | -473 | -197 | 33,860 | 293 |
| | -55 | -14 | -41 | -66 | 0 | -61 | -35 | 11,908 | 67 |
| | -39 | -7 | -31 | -26 | 0 | -25 | -20 | 7,585 | 23 |
| | *-4* | *-3* | *-1* | *-6* | *0* | *-6* | *0* | *0* | *0* |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | -2 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | -6 | 0 | -6 | 0 | 0 | 0 |
| | *-106* | *-15* | *-92* | *-141* | *0* | *-93* | | *1,347* | *9* |
| | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | | 336 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | 0 |
| | -1 | 0 | 0 | 0 | 0 | 0 | | 193 | 0 |
| | -102 | -13 | -89 | -141 | 0 | -93 | | 800 | 9 |
| | -3 | 0 | -3 | 0 | 0 | 0 | | 17 | 0 |
| | *-914* | *-106* | *-808* | *-669* | *0* | *-617* | *-221* | *48,992* | *330* |

## 9.4 Residual maturity of exposures (Article 442 g CRR)

The following table shows net exposure values by maturity. Net value is the gross carrying amount less allowances/impairments.

| | Net exposure value | | | | | |
|---|---|---|---|---|---|---|
| EUR million | On demand | <= 1 year | > 1 year <= 5 years | > 5 years | No stated maturity | Total |
| *Loans and advances* | *3,959* | *45,628* | *62,489* | *52,569* | *0* | *164,644* |
| *Debt securities* | *0* | *4,879* | *18,350* | *7,635* | *0* | *30,864* |
| *Total* | *3,959* | *50,507* | *80,839* | *60,204* | *0* | *195,509* |

Figure 19: EU CR1-A - Maturity of exposures

## 9.5 Changes in the stock of non-performing loans and advances (Article 442 g CRR)

The following table shows the stock of non-performing loans and advances as at 31 December 2021 in accordance with FINREP.

The difference between the disclosed non-performing values and the values as if the definition of defaulted in accordance with Article 178 CRR was applied was immaterial as at 31 December 2021.

| EUR million | Gross carrying amount |
|---|---|
| *Initial stock of non-performing loans and advances* | *1,162* |
| Inflows to non-performing portfolios | 11 |
| Outflows from non-performing portfolios | -73 |
| Outflows due to write-offs | -4 |
| Outflow due to other situations | -68 |
| *Final stock of non-performing loans and advances* | *1,101* |

Figure 20: EU CR2 - Changes in the stock of non-performing loans and advances

Disclosure of template EU CR2a - Changes in the stock of non-performing loans and advances and related net accumulated recoveries is not relevant for LBBW, as LBBW's NPL ratio is below 5%.

# 9.6 Credit quality of forborne exposures (Article 442 c CRR)

| | Gross carrying amount/nominal amount of exposures with forbearance measures | | | | Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions | | Collateral received and financial guarantees received on forborne exposures | |
|---|---|---|---|---|---|---|---|---|
| | | Non-performing forborne | | | | | | |
| EUR million | Performing forborne | | Of which defaulted | Of which impaired | On performing forborne exposures | On non-performing forborne exposures | | Of which: Collateral and financial guarantees received on non-performing exposures with forbearance measures |
| *Cash balances at central banks and other demand deposits* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *Loans and advances* | *1,118* | *497* | *495* | *492* | *-10* | *-210* | *981* | *173* |
| Central banks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| General governments | 17 | 0 | 0 | 0 | -1 | 0 | 10 | 0 |
| Credit institutions | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other financial corporations | 25 | 6 | 6 | 6 | 0 | -1 | 31 | 6 |
| Non-financial corporations | 1,070 | 480 | 479 | 476 | -9 | -206 | 931 | 161 |
| Households | 6 | 11 | 10 | 10 | 0 | -3 | 9 | 7 |
| *Debt securities* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| Loan commitments given | 137 | 35 | 35 | 35 | -11 | -18 | 1 | 1 |
| *Total* | *1,254* | *532* | *529* | *527* | *-21* | *-228* | *982* | *175* |

Figure 21: EU CQ1: Credit quality of forborne exposures

Disclosure of template EU CQ2 - Quality of forbearance is not relevant for LBBW, as LBBW's NPL ratio is below 5%.

# 9.7 Credit quality of performing and non-performing exposures by past due days (Article 442 d CRR)

| EUR million | Gross carrying amount/nominal amount | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Performing exposures | | | Non-performing exposures | | | | | | | | |
| | | Not past due or Past due ≤ 30 days | Past due > 30 days ≤ 90 days | | Unlikely to pay that are not past due or past due <= 90 days | Past due > 90 days ≤ 180 days | Past due > 180 days ≤ 1 year | Past due > 1 year ≤ 2 years | Past due > 2 years ≤ 5 years | Past due > 5 years ≤ 7 years | Past due > 7 years | Of which de-faulted |
| *Cash balances at central banks and other demand deposits* | *41,138* | *41,138* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *Loans and advances* | *164,869* | *164,761* | *108* | *1,101* | *734* | *45* | *98* | *63* | *88* | *12* | *61* | *1,099* |
| Central banks | 1,007 | 1,007 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| General governments | 14,430 | 14,429 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Credit institutions | 40,980 | 40,975 | 4 | 18 | 0 | 0 | 0 | 0 | 17 | 0 | 1 | 18 |
| Other financial corporations | 20,032 | 20,003 | 28 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| Non-financial corporations | 75,914 | 75,845 | 69 | 1,011 | 701 | 42 | 95 | 60 | 62 | 9 | 42 | 1,011 |
| Of which SMEs | 15,756 | 15,746 | 10 | 163 | 68 | 28 | 11 | 15 | 29 | 3 | 8 | 163 |
| Households | 12,507 | 12,501 | 5 | 63 | 25 | 3 | 3 | 3 | 9 | 2 | 18 | 61 |
| *Debt securities* | *30,869* | *30,869* | *0* | *6* | *0* | *0* | *0* | *0* | *6* | *0* | *0* | *6* |
| Central banks | 460 | 460 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| General governments | 4,427 | 4,427 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Credit institutions | 23,165 | 23,165 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other financial corporations | 2,438 | 2,438 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-financial corporations | 378 | 378 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 |
| *Off-balance sheet exposures* | *74,154* | | | *324* | | | | | | | | *324* |
| Central banks | 0 | | | 0 | | | | | | | | 0 |
| General governments | 2,823 | | | 0 | | | | | | | | 0 |
| Credit institutions | 12,353 | | | 0 | | | | | | | | 0 |
| Other financial corporations | 6,744 | | | 0 | | | | | | | | 0 |
| Non-financial corporations | 48,589 | | | 324 | | | | | | | | 324 |
| Households | 3,645 | | | 1 | | | | | | | | 1 |
| *Total* | *311,030* | *236,768* | *108* | *1,431* | *734* | *45* | *98* | *63* | *94* | *12* | *61* | *1,430* |

Figure 22: EU CQ3 - Credit quality of performing and non-performing exposures by past due days

## 9.8 Quality of non-performing exposures by geography (Article 442 c, e CRR)

The following table breaks down exposure by country. The 15 largest countries in terms of »gross carrying amounts of on balance sheet exposures« and the 10 largest countries in terms of »nominal amounts of off balance sheet exposures« are classified as significant. The countries shown represent more than 90% of the total gross carrying amounts of on balance sheet exposures and more than 90% of the nominal amounts of off balance sheet exposures. The other countries as well as supranational organizations are shown under »Others/supranational organizations«.

Disclosure of columns b (Gross carrying/nominal amount - of which: non-performing) and d (Gross carrying/nominal amount - of which: subject to impairment) of the following template EU CQ4 - Quality of non-performing exposures by geography is not relevant for LBBW, as LBBW’s NPL ratio is below 5%.

| EUR million | Gross carrying/nominal amount | of which: non-performing and defaulted | Accumulated impairment | Provisions on off-balance sheet commitments and financial guarantees given | Accumulated negative changes in fair value due to credit risk on non-performing exposures |
|---|---|---|---|---|---|
| *On balance sheet exposures* | *196,845* | *1,105* | *-1,331* | | *-5* |
| Germany | 99,431 | 873 | -1,139 | | -5 |
| United Kingdom | 22,079 | 0 | -14 | | |
| USA | 21,099 | 82 | -63 | | |
| France | 7,139 | 1 | -4 | | |
| Luxembourg | 5,559 | 0 | -12 | | |
| Canada | 5,124 | 0 | -5 | | |
| Austria | 3,449 | 13 | -4 | | |
| Netherlands | 3,265 | 8 | -5 | | |
| Norway | 2,527 | 0 | 0 | | |
| Singapore | 2,105 | 0 | -1 | | |
| Australia | 1,900 | | -2 | | |
| Sweden | 1,887 | | -2 | | |
| Republic of Korea | 1,875 | | -3 | | |
| Denmark | 1,541 | | -1 | | |
| Spain | 1,403 | 13 | -4 | | |
| Others/supranational organizations | 16,461 | 116 | -72 | | 0 |
| *Off-balance sheet exposures* | *74,479* | *324* | | *-247* | |
| Germany | 51,795 | 300 | | -226 | |
| France | 7,066 | 0 | | 0 | |
| Ireland | 3,078 | | | 0 | |
| Switzerland | 1,898 | 0 | | -1 | |
| Austria | 1,732 | 12 | | -10 | |
| Luxembourg | 1,567 | | | -1 | |
| USA | 1,509 | 3 | | -2 | |
| Netherlands | 978 | 0 | | 0 | |
| United Kingdom | 440 | | | -3 | |
| Mexico | 435 | 2 | | 0 | |
| Others/supranational organizations | 3,981 | 7 | | -3 | |
| *Total* | *271,323* | *1,430* | *-1,331* | *-247* | *-5* |

Figure 23: EU CQ4 - Quality of non-performing exposures by geography

# 9.9 Credit quality of loans and advances to non-financial corporations by industry (Article 442 c, e CRR)

In the following table, the loans and advances to non-financial corporations are grouped by industry using the NACE code on the basis of the principal activity of the business partner.

Disclosure of columns b (Gross carrying amount - of which: non-performing) and d (Gross carrying - of which: loans and advances subject to impairment) of the following template EU CQ5 - Credit quality of loans and advances to non-financial corporations by industry is not relevant for LBBW, as LBBW's NPL ratio is below 5%.

| **EUR million**<br>**Industry sector** | **Gross carrying amount** | **of which: non-performing and defaulted** | **Accumulated impairment** | **Accumulated negative changes in fair value due to credit risk on non-performing exposures** |
|---|---|---|---|---|
| Agriculture, forestry and fishing | 99 | 1 | -1 | 0 |
| Mining and quarrying | 234 | 0 | -1 | 0 |
| Manufacturing | 14,903 | 487 | -627 | -5 |
| Electricity, gas, steam and air conditioning supply | 5,653 | 37 | -44 | 0 |
| Water supply | 743 | 0 | -1 | 0 |
| Construction | 1,397 | 29 | -18 | 0 |
| Wholesale and retail trade | 5,532 | 128 | -101 | 0 |
| Transport and storage | 2,657 | 24 | -42 | 0 |
| Accommodation and food service activities | 44 | 0 | -1 | 0 |
| Information and communication | 2,664 | 6 | -15 | 0 |
| Real estate activities | 0 | 0 | 0 | 0 |
| Financial and insurance activities | 27,960 | 105 | -122 | 0 |
| Professional, scientific and technical activities | 8,118 | 127 | -112 | 0 |
| Administrative and support service activities | 3,721 | 54 | -97 | 0 |
| Public administration and defense, compulsory social security | 0 | 0 | 0 | 0 |
| Education | 183 | 0 | -1 | 0 |
| Human health services and social work activities | 965 | 3 | -3 | 0 |
| Arts, entertainment and recreation | 218 | 2 | -2 | 0 |
| Other services | 1,835 | 4 | -7 | 0 |
| *Total* | *76,925* | *1,008* | *-1,194* | *-5* |

Figure 24: EU CQ5 - Credit quality of loans and advances to non-financial corporations by industry

Disclosure of template EU CQ6 - Collateral valuation - loans and advances is not relevant for LBBW, as LBBW's NPL ratio is below 5%. Disclosure of template EU CQ7 - Collateral obtained by taking possession and execution processes is not relevant for LBBW, as LBBW currently has no such collateral. Disclosure of template EU CQ8 - Collateral obtained by taking possession and execution processes – vintage breakdown is not relevant for LBBW, as LBBW's NPL ratio is below 5%.

# 10 Disclosure of the use of credit risk mitigation techniques (Article 453 a-f CRR)

## 10.1 Qualitative disclosure requirements in connection with credit risk mitigation techniques (Article 453 a-e CRR)

### Main types of collateral

**Lending business**

Registered liens, guarantees, financial assets and credit derivatives are recognized as risk-mitigating.

- Real estate secured by liens in Germany: These are residential real estate properties as well as office, retail and warehousing real estate.
- Real estate secured by liens abroad (France, Netherlands, United Kingdom of Great Britain (excluding Northern Ireland) and selected provinces of Canada and states of the USA): These are residential real estate properties as well as office, retail and warehousing real estate.
- Airplane registered liens included in public aircraft registers.
- Guarantees/warranties from domestic and foreign local authorities, banks and corporates, as well as guarantees mainly from government export credit insurers. These are generally guarantors with an investment-grade rating. Valuation are carried out strictly by Risk Management by way of creditworthiness checks and the assignment of a rating. Appropriate limits are set, depending on economic capacity. Guarantees/warranties taken over are included in the respective limit.
- Financial collateral: This includes
  - pledging of balances with banks, building and loan associations, and insurance companies
  - assignment of entitlements from endowment and capital-yield pension policies, provided they have the option of one-off payment
  - pledging of deposits with a daily revaluation based on closing prices of recognized stock exchanges.

## Capital Markets Business

In addition to traditional collateral in lending business, LBBW also utilizes various hedging instruments to mitigate risk in trading and capital markets business for regulatory purposes. As at 31 December 2021, no credit derivatives were used in the non-trading book as part of the credit risk mitigation techniques. The following types of collateral are primarily used:

- Financial collateral (securities, cash collateral)
- Eligible guarantees
- Netting agreements for derivatives plus collateral agreements (in accordance with chapter 14, Counterparty credit risk)

The main hedging instruments used by LBBW are also employed for regulatory purposes as they satisfy the requirements of eligible credit risk mitigation techniques. The LBBW subsidiaries do not use any credit risk mitigation techniques going beyond those of LBBW (Bank).

## Credit derivatives

Credit derivatives can be eligible as unfunded credit protection and be recognized as an eligible form of credit risk mitigation. The relevant credit derivatives include the following pursuant to Article 204 (1) CRR:

- Credit default swaps
- Total return swaps
- Credit linked notes (CLN) to the extent of their cash funding
- Instruments that may be composed of such credit derivatives or that are economically effectively similar

CRR gives a comprehensive list of all eligible guarantors allowed to provide guarantees as unfunded credit protection. These rules are taken into account when selecting a guarantor. Likewise, CRR requirements are complied with if they are relevant to the respective issue. The process for recognizing a credit derivative as credit protection is documented in the relevant internal rules. Legal efficacy is ensured at all times; at the same time, the underlying legal conditions are subject to ongoing observation. The guarantors (counterparties) and their default risk/creditworthiness are monitored. There are defined procedures to ensure that the risk transfer of the credit derivative is effective. As at the present reporting date, LBBW does not recognize any credit derivatives as credit risk mitigating. A disclosure pursuant to Article 453 (d) CRR is therefore not necessary.

## Netting

At LBBW, risk mitigation measures in connection with derivative counterparty risk exposures are applied by means of on- and off-balance sheet contractual netting and collateralization agreements and the use of central counterparties (e.g. LCH Limited).

# Principles for assessing collateral

The procedures for measuring and managing the eligible collateral are set out in the Bank's rules. The internal processes and systems ensure that collateral is only used for weighting if it meets all CRR requirements. If a significant positive correlation between the value of an item of collateral and the borrower providing the collateral is established, then collateral in question is not included. In the case of standard collateral located in Germany, the model contracts issued by Deutscher Sparkassen- und Giroverband are mostly used to mitigate legal risks. In addition, the Legal department has drafted contract templates which are used by the divisions after approval for individual cases. Legal efficacy is ensured at all times; at the same time, the underlying legal conditions are subject to ongoing observation.

The real estate property is initially valued and real estate valuations are reviewed and monitored on the basis of set methods:

- Small loans in accordance with Section 24 BelWertV (Regulation on the Determination of Mortgage Lending Value - Beleihungswertermittlungsverordnung) (property located in Germany may be used as collateral if the loan amount to be secured by the property including all previous encumbrances does not exceed EUR 400,000: The collateral is measured using a computer-aided program (LORA) which holds data on a property's location, characteristics and equipment. The market value is calculated based on normal purchase prices, taking into account property location and characteristics, as mentioned above. At the same time, a lower mortgage lending value is calculated which can be achieved on a sustained basis even in the event of a change in market conditions. In addition, the property is usually inspected.

- Residential real estate properties outside the scope of the small loans limit and commercial properties in Germany: valuation is carried out by a qualified valuer in accordance with Section 6 BelWertV. As part of the valuation, the market and mortgage lending values are calculated using separate valuation methods.

- Foreign real estate: Reports are commissioned here from external experts with local market knowledge and these are checked by OE Real Estate Valuation. On the basis of the country-specific report, the mortgage lending value is determined pursuant to Section 25 BelWertV by the appraisers of LBBW's internal Real Estate Valuation unit.

- Monitoring real estate markets: LBBW uses vdpResearch's granular market fluctuation concept at postcode level to monitor the domestic real estate market in order to identify the real estate properties that have breached the tolerance limit of negative market fluctuation, which then require a special review. LBBW uses the internal market watch concept to monitor real estate markets outside Germany. Foreign real estate is also reviewed and monitored in accordance with the provisions under the CRR.

- Review of real estate valuations due to anomalies from monitoring real estate markets: Property valuations are reviewed where appropriate, if events come to notice which could have an impact on the valuation (e.g. extensive flooding) or where the market fluctuation concept shows a decline in market value over and above the limits (10% for properties for commercial use; 20% for properties for residential use).

- The market and mortgage lending values are reviewed every three years if the limit set out in Article 208 (3b) CRR is exceeded.

## Management of concentration risks in the credit and collateral portfolio

In measuring the risk arising from collateral, LBBW distinguishes between collateral in lending business and collateral in capital markets business.

Concentrations of collateral for OTC derivatives are avoided by taking in mainly cash collateral (approx. 95%) in EUR (95%) and USD (5%) and first-class sovereign bonds, country bonds and corporate bonds (primarily EU). Risks are also limited by evaluating all derivatives transactions to be collateralized and securities collateral on a daily basis, by applying contractually agreed haircuts and by avoiding wrong-way risks.

# 10.2 CRM techniques overview: Disclosure of the use of credit risk mitigation techniques (Article 453 a-f CRR)

The following table shows secured and unsecured exposures for exposures not including counterparty credit risk, as well as the collateral, financial guarantees and derivatives used for credit risk mitigation.

| EUR million<br>Exposure class | Unsecured carrying amount | Secured carrying amount | Of which secured by collateral | Of which secured by financial guarantees | Of which secured by credit derivatives |
|---|---|---|---|---|---|
| *Loans and advances* | *159,142* | *47,966* | *38,779* | *9,187* | *0* |
| *Debt securities* | *30,875* | *0* | *0* | *0* | |
| *Total* | *190,017* | *47,966* | *38,779* | *9,187* | *0* |
| Of which non-performing exposures | 785 | 322 | 168 | 154 | 0 |
| Of which defaulted | 785 | 320 | | | |

Figure 25: EU CR3 – CRM techniques overview: Disclosure of the use of credit risk mitigation techniques

The change in the unsecured carrying amounts as against the previous period is primarily due to the decline in on-demand or current receivables.

# 11 Disclosure of the use of the standardized approach (Articles 444, 453 g-i CRR)

## 11.1 Qualitative disclosure requirements in connection with the standardized approach (Article 444 a-d CRR)

External credit rating assessments from the following ratings agencies are applied to calculate regulatory capital requirements under the credit risk standardized approach:

- Standard & Poor's Ratings Services
- Moody's Investors Service
- Fitch Ratings Ltd.

These are applied on a standardized basis for all relevant CRSA exposure classes.



Where a credit assessment exists for the item constituting an exposure in CRSA, it is used to determine the risk weight to be assigned to the item (Article 139 (1) CRR). Where no such rating exists, the risk is weighted using the credit assessment for a comparable exposure or using a general credit assessment for the issuer (Article 139 (2) CRR).

Comparable exposures are exposures which must be met by the same obligor of the CRSA exposure and for which a credit assessment exists for a specific issuing program.

At LBBW, possible further (comparable) exposures to the same obligor with an issuer or issue credit assessment are calculated automatically using customer-related information. The reporting software uses predefined selection criteria to assign an external rating to the exposure.

In all other cases, the exposures are treated as unrated.

LBBW uses the allocation prescribed by the EBA pursuant to CRR when mapping the credit assessments of external credit assessment institutions with the credit quality steps under the Standardized Approach.

## 11.2 Standardized approach – Credit risk exposure and CRM effects (Articles 444 e, 453 g-i CRR)

The following table shows exposures to be reported before and after credit conversion factor and credit risk mitigation as well as RWA and RWA density. RWA density is the ratio of risk-weighted assets to exposures after taking into account credit conversion factors and credit risk mitigation.

| EUR million<br>Exposure class | Exposures before CCF and before CRM<br>On-balance sheet exposures | <br>Off-balance sheet exposures | Exposures post CCF and post CRM<br>On-balance sheet exposures | <br>Off-balance sheet exposures | RWAs and RWA density<br>RWAs | <br>RWA density (%) |
|---|---|---|---|---|---|---|
| Central governments or central banks | 7 | 0 | 348 | | | |
| Regional government or local authorities | 48 | 111 | 976 | 24 | 0 | 0.03 |
| Public sector entities | 418 | 904 | 53 | 323 | 70 | 18.76 |
| Multilateral development banks | | | | 82 | | |
| International organizations | | | | | | |
| Institutions | 30,337 | 4,594 | 30,910 | 2,247 | 147 | 0.44 |
| Corporates | 7,873 | 1,945 | 6,239 | 245 | 4,189 | 64.61 |
| Retail | 6,321 | 3,368 | 5,979 | 342 | 4,266 | 67.48 |
| Secured by mortgages on immovable property | 4,079 | 16 | 4,079 | 11 | 1,415 | 34.59 |
| Exposures in default | 90 | 3 | 81 | 1 | 107 | 129.12 |
| Exposures associated with particularly high risk | 1 | 15 | 1 | 7 | 13 | 150.00 |
| Covered bonds | 15 | | 15 | | | |
| Institutions and corporates with a short-term credit assessment | | 0 | | | | |
| Collective investment undertakings | 58 | | 58 | | 53 | 92.72 |
| Equity | | | | | | |
| Other items | 76 | | 76 | | 57 | 75.22 |
| *Total* | *49,324* | *10,956* | *48,816* | *3,282* | *10,318* | *19.80* |

Figure 26: EU CR4 – standardized approach – Credit risk exposure and CRM effects

# 11.3 Standardized approach (Article 444 e CRR)

| **EUR million** | **Risk weight** | | | | | | |
|---|---|---|---|---|---|---|---|
| **Exposure classes** | **0%** | **2%** | **4%** | **10%** | **20%** | **35%** | **50%** |
| Central governments or central banks | 348 | | | | | | |
| Regional government or local authorities | 999 | | | | 1 | | |
| Public sector entities | 23 | | | | 352 | | |
| Multilateral development banks | 82 | | | | | | |
| International organizations | | | | | | | |
| Institutions | 32,543 | | | | 570 | | 40 |
| Corporates | 651 | | | | 923 | 142 | 944 |
| Retail | | | | | | | |
| Secured by mortgages on immovable property | | | | | | 3,952 | 138 |
| Exposures in default | | | | | | | |
| Exposures associated with particularly high risk | | | | | | | |
| Covered bonds | 15 | | | | | | |
| Institutions and corporates with a short-term credit assessment | | | | | | | |
| Unit or shares in collective investment undertakings | 0 | | | | | | |
| Equity | | | | | | | |
| Other items | 19 | | | | | | |
| *Total* | *34,681* | | | | *1,846* | *4,094* | *1,123* |

Figure 27: EU CR5 – standardized approach

| | Risk weight | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 70% | 75% | 100% | 150% | 250% | 370% | 1250% | Other | Total | Unrated |
| | | | | | | | | | 348 | 187 |
| | | | | | | | | | 1,000 | 990 |
| | | | 0 | | | | | | 375 | 23 |
| | | | | | | | | | 82 | 82 |
| | | | | | | | | | | |
| | | | 3 | | | | 1 | | 33,157 | 33,062 |
| | 226 | | 3,597 | 0 | | | 1 | | 6,483 | 3,663 |
| | | 6,321 | | | | | | | 6,321 | 5,257 |
| | | | | | | | | | 4,090 | 4,090 |
| | | | 34 | 48 | | | | | 83 | 58 |
| | | | | 9 | | | | | 9 | 9 |
| | | | | | | | | | 15 | 15 |
| | | | | | | | | | | |
| | | | | | | | | 57 | 58 | 20 |
| | | | | | | | | | | |
| | | | 57 | | | | | | 76 | 14 |
| | *226* | *6,321* | *3,692* | *57* | | | *2* | *57* | *52,098* | *47,471* |

# 12 Disclosure of the use of the IRB approach to credit risk (Articles 438, 452, 453 g-j CRR)

The following section shows credit risk exposures reported under the IRB approach, excluding counterparty credit risks.

A distinction between F-IRB and A-IRB is not currently relevant for LBBW, as LBBW exclusively applies F-IRB at present.

## 12.1 Qualitative disclosure requirements in connection with the IRB approach (Article 452 a-f CRR)

**Permission to use the IRB approach (Article 452 a CRR)**

Since 1 January 2008, LBBW has been permitted by BaFin to apply the basic IRB approach to both the Bank and the entire LBBW Group. As of this date, regulatory capital backing is based on the following rating systems in line with the IRB approach:

- Banks
- Country and transfer risks
- Insurance companies
- Project finance
- Corporates
- International real estate finance
- Sparkassen-ImmobiliengeschäftsRating
- DSGV-Haftungsverbund
- Sparkassen-StandardRating
- Leasing
- Leveraged finance
- Aircraft finance
- International administrative authorities
- Funds
- Fixed risk weight approach for specialized lending (slotting criteria)

The CRSA is used for all other portfolios of LBBW (Bank) and all other companies included in the regulatory scope of consolidation of the LBBW Group with the exception of the equity investment portfolio. The IRB approach is applied to the investment portfolios of all subsidiaries. If these portfolios had not received permission for permanent partial use of the CRSA in accordance with Article 150 CRR, an application for such was made in the reporting year to the ECB, the banking authority responsible for LBBW.

With the existing IRB cover, the materially significant portfolios are treated under the IRB approach. There are no plans for an additional or further implementation of the IRB approach, so Article 148 (1) sentence 2 and Article 148 (2) CRR do not apply.

### Description of the internal rating procedures

As a general rule, LBBW's internal rating procedures can be divided into two categories, regardless of their actual use in the IRBA:

### Scorecard-based rating procedures

A scorecard procedure is a standardized measurement method. These procedures involve the measurement of quantitative and qualitative factors in the light of liability relationships. Finally, transferals and warning signals are included in the rating result.

### Simulation-based rating procedures

In contrast to a scorecard-based rating procedure, which estimates the probability of default on the basis of the current status of factors, a simulation-based rating generates scenarios for the future net cash flows of, for example, a special-purpose vehicle (SPV). This takes account of the entire term and structure of the exposure. In addition, the simulation also includes macroeconomic scenarios (e.g. inclusion of interest and exchange rates) where relevant.

The following table describes the various rating procedures in detail.

| Business line | Subgroup | Rating/assessment procedures | Methodology |
|---|---|---|---|
| Private and investment customers | Employed natural persons | Sparkassen KundenScoring (SKS) | Scorecard-based rating procedure |
| | Private customers with main cash flow from renting and leasing | Non-accounting customers in Sparkassen ImmobiliengeschäftsRating | Simulation-based rating procedure |
| Corporate Customers | Basic customers | Sparkassen StandardRating plus customer compact rating (CCR) | Scorecard-based rating procedure |
| | Business customers | Sparkassen StandardRating plus customer compact rating (CCR) | Scorecard-based rating procedure |
| | Corporate Customers | Sparkassen StandardRating plus customer compact rating (CCR) | Scorecard-based rating procedure |
| | Start-ups | Sparkassen StandardRating plus customer compact rating (CCR) | Scorecard-based rating procedure |
| | Leasing customers | Scoring of leasing customers Rating of leasing customers | Scorecard-based rating procedure |
| | Corporate customers/key accounts | Rating for corporates | Scorecard-based rating procedure |
| | Non-profit organizations | Basic RCP (risk classification procedure) | Expert-based procedure |
| Project and specialized lending exposures | National commercial real estate | Sparkassen ImmobiliengeschäftsRating | Simulation-based rating procedure |
| | International commercial real estate | Rating for international commercial real estate (ICRE) | Simulation-based rating procedure |
| | | Where applicable slotting criteria approach | Slotting criteria |
| | Open-end real estate funds | Sparkassen ImmobiliengeschäftsRating | Scorecard-based rating procedure |
| | Aircraft finance | Airlines: rating for corporates | Scorecard-based rating procedure |
| | | SPC: rating for aircraft finance | Simulation-based rating procedure |
| | | Where applicable slotting criteria approach | Slotting criteria |
| | Other project finance | Rating for project finance | Simulation-based rating procedure |

| | | | |
|---|---|---|---|
| | | Where applicable slotting criteria approach | Slotting criteria |
| | SPC real estate leasing | Rating for leasing refinancing | Simulation-based rating procedure |
| | Leveraged finance | Rating for leveraged finance | Scorecard-based rating procedure |
| Wholesale | Banks | Rating for banks | Scorecard-based rating procedure |
| | | Rating for DSGV-Haftungsverbund | Simulation-based rating procedure |
| | Insurance companies | Rating for insurance companies | Scorecard-based rating procedure |
| | Leasing companies | Rating for leasing companies | Scorecard-based rating procedure |
| | | | |
| | | | |
| | Other securitization transactions | Internal assessment if external rating is to hand: RCP for ABS | Expert-based procedure |
| | National (German) administrative authorities/public-sector loans | Rating inheritance | n/a |
| | International administrative authorities | Rating for international administrative authorities | Scorecard-based rating procedure |
| | Municipal corporations | Sparkassen StandardRating | Scorecard-based rating procedure |
| | | Corporates rating | Scorecard-based rating procedure |
| | | Basic RCP | Expert-based procedure |
| | Sovereigns & transfer risks | Rating for country and transfer risks | Scorecard-based rating procedure |
| | Funds | Rating procedure for funds | Scorecard-based rating procedure |
| Corporate Items | Strategic equity investments | Suitable rating in each case (bank equity investments rated with bank rating etc.) in the absence of any reason to dispense with a rating | Dependent on procedure |
| | | Otherwise basic RCP | Expert-based procedure |

All rating procedures result in a one-year probability of default in local currency (local currency PD). All rating methods yield a one-year local-currency PD. Any transfer risk is taken into account in a separate foreign currency (FC) rating. These PDs are transferred to a rating class using the master scale applied uniformly within Sparkassen-Finanzgruppe. The master scale comprises a total of 18 rating classes; of these, the first class is broken down into a further eight sub-classes and the last class before the default classes into a maximum of three sub-classes, depending on the rating procedure. Ratings 15(B) and 15(C) are currently used only for the following rating methodologies: Sparkassen KundenScoring, Sparkassen KundenKompaktRating, Sparkassen StandardRating, Sparkassen ImmobiliengeschäftsRating, leveraged finance rating, and scoring for leasing customers. Ratings 16 to 18 indicate default.

| Ratings | LBBW rating master scale | Probability of default (%) |
|---|---|---|
| Investment grade | 1(AAAA) | 0.00 |
| | 1(AAA) | 0.01 |
| | 1(AA+) | 0.02 |
| | 1(AA) | 0.03 |
| | 1(AA-) | 0.04 |
| | 1(A+) | 0.05 |
| | 1(A) | 0.07 |
| | 1(A-) | 0.09 |
| | 2 | 0.12 |
| | 3 | 0.17 |
| | 4 | 0.26 |
| | 5 | 0.39 |
| Speculative grade | 6 | 0.59 |
| | 7 | 0.88 |
| | 8 | 1.32 |
| | 9 | 1.98 |
| | 10 | 2.96 |
| | 11 | 4.44 |
| | 12 | 6.67 |
| | 13 | 10.00 |
| | 14 | 15.00 |
| | 15 | 20.00 |
| | 15B | 30.00 |
| | 15C | 45.00 |
| Default classes | 16 | 100.00 |
| | 17 | 100.00 |
| | 18 | 100.00 |

## Further use of internal estimates

LBBW's internal rating procedures are important instruments in the credit process and in credit risk management. The rating results are incorporated in the lending process as a component of the credit application and the basis for calculating competency levels. In addition, the ratings are used as parameters in the credit risk strategy and for determining the level of attention required.

The ratings form the basis for integrated bank management consisting of portfolio management, pricing, capital allocation, stress-testing and risk-bearing capacity and are used as input for the calculation of allowances for losses on loans and advances under IFRS.

**Control mechanisms and functions for rating systems (Article 452 c) – e) CRR)**

Within LBBW, the units or functions below are responsible for the IRB rating systems. They are independent of each other through organizational separation and separately accountable for the performance of their regulatory tasks.

- Credit risk control unit
- Validation unit
- Risk Management
- Internal Audit

Within LBBW, responsibility for the design and development of the rating systems lies with the Long-Term Risk department, which plays the role of the credit risk control unit stipulated by Article 190 CRR and is responsible in particular for the design, selection, implementation, oversight and performance of the rating systems.

The credit risk control unit reports to senior management (within the meaning of Article 189 CRR) no less than half-yearly on the performance of the internal rating procedures and processes. The forecasting quality is measured by a comparison of the model forecasts with defaults which have occurred (backtesting). Key criteria are calibration (is the expected portfolio default rate (mean PD) consistent with the actual defaults?) and precision (does the rating method correctly separate good from bad customers?). Key findings from the rating process validation (ongoing rating controlling process and current local checks carried out by the credit risk control unit) are presented as part of the report on the performance of the rating processes. In addition, the credit risk control unit informs senior management annually of ratings-based analyses of the credit risk profile in accordance with Article 189 (3) CRR. Reporting must include, as a minimum, the »risk profiles by grade«, migration across grades and a comparison of realized default rates per grade with expected default rates.



With the exception of the rating for leveraged finance, the rating procedures used by LBBW were developed in joint projects, whose joint activities were placed on an independent legal and organizational foundation through the establishment of Sparkassen Rating und Risikosysteme GmbH, Berlin (SR) and RSU Rating Service Unit GmbH & Co. KG, Munich (RSU). SR is responsible for processes for national companies and business clients, private customers and commercial real estate financing. All other jointly developed procedures are regularly reviewed and, if necessary, adjusted by RSU with the assistance of LBBW's employees.

The rating systems of LBBW are subject to a regular review process by the credit risk control unit, the central elements of which are conducted under the guidance of RSU or SR (this activity has been outsourced in line with Section 25b of the German Banking Act and disclosed accordingly). Data is derived from the RSU data pool (Landesbanks' pool data) and the SR data pool (data pooled by the Landesbanks and savings banks).

The core element of the review process is the annual review and further development of the rating procedures. The results are submitted to a working group comprising methodology experts from all member institutions. The review involves confirming, adjusting or optimizing the rating procedure and its parameter estimates as necessary. Before introducing modified procedures, LBBW performs a test to ensure that they are representative. In turn, this ensures that the rating procedures can also be applied to the LBBW portfolio without restriction. Senior management is informed of the results of the pool review in the case of every rating process. It decides on whether model revisions can be put into practice. In addition, the correct use of rating systems is analyzed and evaluated extensively by a rating controlling process at LBBW, which also initiates and monitors any adjustments that may be required. Reports to that effect are sent on a quarterly basis to senior management and the management tiers below them of all relevant units of the Bank.

LBBW's validation unit assesses the performance of the rating procedures in accordance with Article 185 CRR in an independent process separate from the credit risk control unit's review process. The activities of the validation unit are performed within the Strategy and Reporting department, so the validation unit is organizationally independent of the credit risk control unit. The validation unit reports the validation results to the senior management and to the management body or one of its committees appointed for this purpose on a quarterly basis.

Risk Management is responsible for the application of the rating procedures, i.e. the integrity of assignment in accordance with Article 173 CRR.

The review, validation and further development of the rating procedures are checked by the respective Internal Audit units as independent units at RSU, SR and LBBW. In the case of LBBW, Internal Audit also reviews the rating systems and their operations at least once a year in accordance with Article 191 CRR. The review includes checking compliance with all minimum requirements in accordance with Articles 142 to 191 CRR. This includes, among other things, a review of the correct application of the rating procedures, the efficacy of the internal control system and an assessment of the written policy.

**Process of allocating items or borrowers by exposure class (Article 452 f) CRR)**

The exposure classes are determined electronically at a system level downstream from the operational booking systems. As a rule, each transaction included in an IRBA portfolio is allocated to an exposure class normally on the basis of the rating procedure applied. If a clear allocation using the rating procedure is not possible, exposure classes are distinguished on the basis of additional information, such as customer group allocation or transaction-specific information such as collateral.

The following section describes the rating procedures used for the individual exposure classes and the area of applicability.

**Central governments and central banks exposure class**

Country and transfer risks are measured using a special rating procedure at LBBW. The key aspects entail the economic situation, the political environment as well as the domestic and foreign trade situation of the country in question. The rating procedure for country and transfer risks is used to classify exposures which are allocated to the IRBA exposure class »Central governments and central banks« in accordance with Article 147 (3) CRR and Articles 115 (2), 115 (4), 116 (4), 117 (2) and 118 CRR.

The rating methodology currently in use was developed at pool level by RSU in cooperation with the Landesbanks. It was developed following a statistical approach (mainly comparison with external ratings, plus factoring in internal default history). Expert assessments were also taken into account in order to ensure the economic plausibility of the model results.

**Banks exposure class**

The rating procedure for banks is applied to all obligors that are allocated to the IRBA exposure class »Banks« under Article 147 (4) CRR and in the light of Article 4 (1) sentences 1, 2, 3, Article 115 (2) and (4), Article 116 (4), Article 117 and Article 119 (5) CRR. The purpose of the rating procedure for banks is to measure counterparty risks of banks worldwide. In terms of content, their use is limited to banks that mostly perform typical banking transactions (material interpretation of the term "bank"). Thus, bank holdings, building and loan associations, state finance agencies, financial and finance companies and financial service providers should also be rated with the banks module, regardless of their legal form, assuming they mostly perform typical banking transactions. Similarly, institutions which do not hold a banking permit but primarily engage de facto in quasi-banking business are rated with this procedure. Furthermore, only entities that are subject to regulation and therefore operate in a supervised environment are covered by this rating.

In accordance with Article 107 (3) CRR, non-EU investment firms, credit institutions, exchanges and clearing houses are treated as exposures to an institution only if the requirements applied to that entity are at least equivalent to those applied in the EU. If their requirements are not equivalent, they are treated as corporates.

**Corporates exposure class**

The rating systems for corporate clients classify obligors assigned to IRBA exposure class »corporates« in accordance with Article 147 (7) CRR. The corporates rating is applied to a substantial part of the portfolio. Large domestic customers with consolidated sales of more than EUR 100m and all international corporate customers are assessed using the "corporates" rating. Domestic borrowers with sales of less than EUR 100m are rated using the Sparkassen StandardRating methodology and are included in the »Corporates« exposure class. Customers are also assigned to the ratings procedure of the »Corporates« exposure class, e.g. customers assessed with the rating procedure for insurance companies. The purpose of the rating procedure for insurance companies is to measure their counterparty risk. For this purpose, »Insurance companies« also include companies that generate most of their income from typical insurance transactions, which also includes bancassurance providers.

Transactions to which the rating procedure for funds is applied are also assigned to the »Corporates« exposure class.

**Corporates exposure class: specialized lending exposures**

The rating systems for specialized lending exposures are applied to obligors which are also assigned to the »Specialized lending exposures« IRBA exposure class in accordance with Article 147 (8) CRR. They form a subclass of the »Corporates« exposure class.

Ratings for project finance are normally based on the cash flow generated or the user/beneficiary of the results of the project. Compared with other types of specialized lending exposures, project finance is distinguished by the fact that net cash is generated from a narrowly defined activity rather than from several parallel business models. The simulation-based rating process is based on an economic model which reflects cause-and-effect correlations. Cash flows, the value of the item being financed, factors specific to the transaction as well as macroeconomic factors are used as major risk drivers in the simulation. The results of the simulation are transformed, calibrated and adjusted using qualitative factors.

Real estate lending business where the loan is serviced solely from income in the form of rental, lease or sales proceeds arising from the financed item is also assigned to the specialized lending exposures subclass. The rating procedure developed for this is based on the total international commercial real estate finance business if the property being financed is located abroad. The simulation-based rating process is based on an economic model which reflects cause-and-effect correlations. Cash flows, the value of the item being financed, factors specific to the transaction as well as macroeconomic factors are used as major risk drivers in the simulation. The results of the simulation are transformed, calibrated and adjusted using qualitative factors.

The rating procedure for aircraft finance is applied to finance for special-purpose vehicles (SPVs) and to direct loans to airlines in which there is a direct link to the financed asset (direct asset-linked loan, "virtual SPVs"). All financing coming within the scope of the rating procedure for aircraft finance is assigned to the specialized lending exposures exposure class. The simulation-based rating process is based on an economic model which reflects cause-and-effect correlations. Cash flows are not the main source of risk in the case of aircraft finance. Instead, the value of the aircraft, the default probability of the airlines and factors specific to the transaction as well as macroeconomic factors are used as major risk drivers in the simulation.

**Corporates/specialized lending exposures exposure class: SME check**

Under Article 147 (5) (a) (ii) CRR, the customer's (consolidated) annual sales are used as a size indicator (SME threshold).

Corporates are classified as SMEs if they have annual sales of EUR 50m or less.

**Equity investment exposure class**

Equity investments are handled by a special organizational unit. Depending on the type of equity investment, the same rating procedures can be used as for the exposure classes stated above. System allocations and product numbers ensure that they can be clearly identified and assigned to the aforementioned exposure classes or to the »Equity investments« exposure class in accordance with Article 147 (6) CRR.

**Retail business exposure class**

LBBW exposure positions which are classified as retail business are not currently allocated using the IRB approach.

## 12.2 IRB approach – Scope of the use of IRB and SA approaches (Article 452 a-f CRR)



| | Exposure value as defined in Article 166 CRR for exposures subject to IRB approach | Total exposure value for exposures subject to the Standardized approach and to the IRB approach | Percentage of total exposure value subject to the permanent partial use of the SA (%) | Percentage of total exposure value subject to a roll-out plan (%) | Percentage of total exposure value subject to IRB Approach (%) |
|---|---|---|---|---|---|
| Central governments or central banks | 59,332 | 64,758 | | 91.62 | |
| *Of which Regional governments or local authorities* | | 42 | | | |
| *Of which Public sector entities* | | 912 | | | |
| Institutions | 56,578 | 96,683 | 32.81 | 58.52 | |
| Corporates | 109,525 | 119,902 | 0.54 | 91.35 | |
| *Of which Corporates - Specialized lending, excluding slotting approach* | | 21,761 | | | |
| *Of which Corporates - Specialized lending under slotting approach* | | 21,831 | | | |
| Retail | | 9,730 | | | |
| *of which Retail – Secured by real estate SMEs* | | 362 | | | |
| *of which Retail – Secured by real estate non-SMEs* | | 3,809 | | | |
| *of which Retail – Qualifying revolving* | | | | | |
| *of which Retail – Other SMEs* | | 1,664 | | | |
| *of which Retail – Other non-SMEs* | | 3,896 | | | |
| Equity | 866 | 1,189 | | 72.77 | |
| Other non-credit obligation assets | 1,265 | 1,594 | | 79.34 | |
| ***Total*** | *227,565* | *293,857* | *10.14* | *71.28* | |

Figure 28: EU CR6-A – IRB approach – Scope of the use of IRB and SA approaches

For the application of the IRB approach in accordance with Article 148 CRR, LBBW determined the IRB coverage ratio up to 31 December 2020 in accordance with Section 9 et seqq. of the German Solvency

Regulation. In the reporting year, the determination of the IRB coverage ratio was switched to the system in accordance with Section 2 under »General topics« in the ECB guide to internal models. With the existing IRB cover, the materially significant portfolios are treated under the IRB approach. There are no plans for an additional or further implementation of the IRB approach.

The difference between the first and second columns in Figure 28 is primarily because 33% of the institutions' total exposure value is subject to permanent partial use of the standardized approach.

## 12.3 IRB approach – Credit risk exposures by exposure class and PD range (Article 452 g CRR)

The following table shows IRB credit risk exposures by exposure class and PD ranges set by the regulator. RWA density is the ratio of risk-weighted assets to exposures after taking into account credit conversion factors and credit risk mitigation.

The column »Number of obligors« shows the number of obligors of individual PDs listed in the table. The column »Density of risk-weighted exposure amount« refers to the ratio of risk-weighted assets to exposures post credit conversion factors and credit risk mitigation.

| F-IRB EUR million PD scale | On-balance sheet exposures | Off-balance sheet exposures pre-CCF | Exposure weighted average CCF | Exposure post CCF and post CRM | Exposure weighted average PD (%) | Number of obligors | Exposure weighted average LGD (%) | Exposure weighted average maturity (years) | Risk-weighted exposure amount after SME supporting factor | Density of risk-weighted exposure amount | Expected loss amount | Value adjustments and provisions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Exposure class Central governments and central banks** | | | | | | | | | | | | |
| **0.00 to <0.15** | 57,573 | 1,721 | 0.40 | 58,262 | 0.00 | 2,066 | 45.05 | 3 | 687 | 0.01 | 1 | 0 |
| 0.00 to <0.10 | 56,938 | 1,721 | 0.40 | 57,627 | 0.00 | 2,065 | 45.05 | 3 | 465 | 0.01 | 0 | 0 |
| 0.10 to <0.15 | 635 | | | 635 | 0.12 | 1 | 45.00 | 3 | 222 | 0.35 | 0 | 0 |
| **0.15 to <0.25** | 188 | | | 188 | 0.17 | 2 | 45.00 | 3 | 80 | 0.43 | 0 | 0 |
| **0.25 to <0.50** | 61 | | | 61 | 0.39 | 1 | 45.00 | 3 | 40 | 0.66 | 0 | 0 |
| **0.50 to <0.75** | 130 | 25 | | 130 | 0.59 | 2 | 45.00 | 3 | 86 | 0.66 | 0 | -1 |
| **0.75 to <2.50** | 0 | | | 0 | 1.98 | 1 | 45.00 | 3 | 0 | 1.21 | 0 | 0 |
| 0.75 to <1.75 | | | | | | | | | | | | |
| 1.75 to <2.5 | 0 | | | 0 | 1.98 | 1 | 45.00 | 3 | 0 | 1.21 | 0 | 0 |
| **2.50 to <10.00** | 87 | 52 | 0 | 114 | 5.40 | 5 | 45.00 | 3 | 11 | 0.09 | 0 | 0 |
| 2.5 to <5 | 58 | 24 | 0 | 64 | 4.44 | 3 | 45.00 | 3 | 11 | 0.16 | 0 | 0 |
| 5 to <10 | 28 | 27 | 0 | 49 | 6.67 | 2 | 45.00 | 3 | 0 | 0.00 | 0 | 0 |
| **10.00 to <100.00** | | 503 | | 0 | 10.00 | 3 | 45.00 | 3 | 0 | 2.05 | 0 | |
| 10 to <20 | | 503 | | 0 | 10.00 | 3 | 45.00 | 3 | 0 | 2.05 | 0 | |
| 20 to <30 | | | | | | | | | | | | |
| 30.00 to <100.00 | | | | | | | | | | | | |
| **100.00 (Default)** | | | | | | | | | | | | |
| *Subtotal* | *58,039* | *2,300* | *0.31* | *58,755* | *0.02* | *2,080* | *45.05* | *3* | *903* | *0.02* | *1* | *-2* |
| **Exposure class Institutions** | | | | | | | | | | | | |
| **0.00 to <0.15** | 19,913 | 1,025 | 0.60 | 20,529 | 0.07 | 216 | 26.33 | 3 | 3,671 | 0.18 | 4 | -1 |
| 0.00 to <0.10 | 16,677 | 979 | 0.61 | 17,271 | 0.06 | 176 | 26.07 | 3 | 2,808 | 0.16 | 3 | -1 |
| 0.10 to <0.15 | 3,236 | 46 | 0.46 | 3,258 | 0.13 | 40 | 27.67 | 3 | 863 | 0.26 | 1 | 0 |
| **0.15 to <0.25** | 2,402 | 440 | 0.51 | 2,625 | 0.18 | 66 | 25.06 | 3 | 606 | 0.23 | 1 | 0 |
| **0.25 to <0.50** | 209 | 76 | 0.35 | 235 | 0.36 | 18 | 45.00 | 3 | 157 | 0.67 | 0 | 0 |
| **0.50 to <0.75** | 13 | 7 | 0.37 | 16 | 0.55 | 8 | 45.00 | 3 | 15 | 0.97 | 0 | 0 |
| **0.75 to <2.50** | 100 | 57 | 0.30 | 117 | 1.21 | 21 | 45.00 | 3 | 142 | 1.21 | 1 | 0 |
| 0.75 to <1.75 | 94 | 57 | 0.30 | 111 | 1.17 | 16 | 45.00 | 3 | 138 | 1.25 | 1 | 0 |
| 1.75 to <2.5 | 7 | | | 7 | 1.86 | 5 | 45.00 | 3 | 4 | 0.65 | 0 | 0 |

| F-IRB EUR million PD scale | On-balance sheet exposures | Off-balance sheet exposures pre-CCF | Exposure weighted average CCF | Exposure post CCF and post CRM | Exposure weighted average PD (%) | Number of obligors | Exposure weighted average LGD (%) | Exposure weighted average maturity (years) | Risk-weighted exposure amount after SME supporting factor | Density of risk-weighted exposure amount | Expected loss amount | Value adjustments and provisions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2.50 to <10.00** | 0 | 1 | 0.20 | 1 | 2.77 | 5 | 45.00 | 3 | 1 | 1.57 | 0 | 0 |
| 2.5 to <5 | 0 | 1 | 0.20 | 1 | 2.77 | 5 | 45.00 | 3 | 1 | 1.57 | 0 | 0 |
| 5 to <10 | | | | | | | | | | | | |
| **10.00 to <100.00** | 49 | 69 | 0.06 | 53 | 14.15 | 13 | 45.00 | 3 | 18 | 0.34 | 1 | -1 |
| 10 to <20 | 48 | 69 | 0.06 | 53 | 14.00 | 11 | 45.00 | 3 | 17 | 0.32 | 0 | -1 |
| 20 to <30 | 1 | 0 | 0.20 | 1 | 28.00 | 2 | 45.00 | 3 | 2 | 2.67 | 0 | 0 |
| 30.00 to <100.00 | | | | | | | | | | | | |
| **100.00 (Default)** | 1 | | | 1 | 100.00 | 2 | 45.00 | 3 | | | 0 | -1 |
| *Subtotal* | *22,688* | *1,677* | *0.53* | *23,577* | *0.13* | *349* | 26.52 | 3 | 4,611 | 0.20 | 7 | -3 |

| F-IRB<br>EUR million<br>PD scale | On-bal-ance sheet ex-posures | Off-bal-ance sheet ex-posures pre-CCF | Exposure weighted average CCF | Exposure post CCF and post CRM | Exposure weighted average PD (%) | Number of obli-gors | Exposure weighted average LGD (%) | Exposure weighted average maturity (years) | Risk-weighted exposure amount after SME support-ing factor | Density of risk-weighted exposure amount | Expected loss amount | Value ad-justments and provi-sions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Exposure class Corporates – SMEs** | | | | | | | | | | | | |
| **0.00 to <0.15** | 4,516 | 1,765 | 0.22 | 4,900 | 0.07 | 3,222 | 39.34 | 3 | 735 | 0.15 | 1 | -1 |
| 0.00 to <0.10 | 3,660 | 1,488 | 0.21 | 3,976 | 0.06 | 2,553 | 39.25 | 3 | 547 | 0.14 | 1 | -1 |
| 0.10 to <0.15 | 856 | 277 | 0.25 | 924 | 0.12 | 669 | 39.74 | 3 | 189 | 0.20 | 0 | 0 |
| **0.15 to <0.25** | 1,162 | 279 | 0.29 | 1,239 | 0.17 | 851 | 39.57 | 3 | 304 | 0.25 | 1 | -1 |
| **0.25 to <0.50** | 2,217 | 856 | 0.27 | 2,427 | 0.32 | 1,742 | 39.90 | 2 | 820 | 0.34 | 3 | -2 |
| **0.50 to <0.75** | 993 | 386 | 0.39 | 1,141 | 0.57 | 736 | 38.82 | 2 | 521 | 0.46 | 3 | -2 |
| **0.75 to <2.50** | 1,573 | 438 | 0.26 | 1,684 | 1.03 | 1,327 | 32.97 | 2 | 921 | 0.55 | 6 | -6 |
| 0.75 to <1.75 | 1,237 | 377 | 0.27 | 1,339 | 0.82 | 1,088 | 32.89 | 2 | 719 | 0.54 | 4 | -5 |
| 1.75 to <2.5 | 337 | 61 | 0.17 | 346 | 1.82 | 239 | 33.32 | 2 | 203 | 0.59 | 2 | -1 |
| **2.50 to <10.00** | 386 | 125 | 0.27 | 419 | 4.01 | 409 | 39.54 | 2 | 254 | 0.61 | 4 | -6 |
| 2.5 to <5 | 303 | 84 | 0.24 | 322 | 3.24 | 334 | 39.06 | 2 | 205 | 0.64 | 3 | -5 |
| 5 to <10 | 83 | 41 | 0.33 | 97 | 6.57 | 75 | 41.12 | 2 | 49 | 0.51 | 1 | -2 |
| **10.00 to <100.00** | 209 | 39 | 0.51 | 226 | 14.16 | 187 | 41.38 | 2 | 147 | 0.65 | 6 | -3 |
| 10 to <20 | 164 | 29 | 0.63 | 180 | 12.58 | 87 | 42.77 | 2 | 111 | 0.62 | 4 | -2 |
| 20 to <30 | 39 | 7 | 0.10 | 40 | 18.32 | 67 | 37.34 | 2 | 28 | 0.70 | 1 | -1 |
| 30.00 to <100.00 | 6 | 3 | 0.33 | 7 | 31.44 | 33 | 28.52 | 2 | 7 | 1.05 | 1 | 0 |
| **100.00 (De-fault)** | 120 | 40 | 0.50 | 141 | 100.00 | 119 | 44.64 | 3 | | | 47 | -44 |
| *Subtotal* | *11,177* | *3,928* | *0.26* | *12,177* | *1.86* | *8,593* | *38.65* | *2* | *3,703* | *0.30* | *71* | *-65* |
| **Exposure class Corporates – Specialized lending** | | | | | | | | | | | | |
| **0.00 to <0.15** | 8,318 | 1,068 | 0.73 | 9,095 | 0.09 | 347 | 40.27 | 3 | 2,116 | 0.23 | 3 | -4 |
| 0.00 to <0.10 | 4,725 | 324 | 0.70 | 4,947 | 0.05 | 237 | 40.50 | 3 | 880 | 0.18 | 1 | -1 |
| 0.10 to <0.15 | 3,593 | 744 | 0.75 | 4,148 | 0.13 | 111 | 40.00 | 3 | 1,236 | 0.30 | 2 | -3 |
| **0.15 to <0.25** | 2,666 | 280 | 0.72 | 2,866 | 0.19 | 84 | 39.97 | 3 | 1,060 | 0.37 | 2 | -3 |
| **0.25 to <0.50** | 4,544 | 655 | 0.73 | 5,022 | 0.33 | 122 | 36.45 | 2 | 2,490 | 0.50 | 7 | -8 |
| **0.50 to <0.75** | 1,687 | 362 | 0.69 | 1,936 | 0.66 | 50 | 40.79 | 2 | 1,435 | 0.74 | 5 | -1 |
| **0.75 to <2.50** | 1,840 | 367 | 0.73 | 2,108 | 1.16 | 68 | 33.20 | 2 | 1,870 | 0.89 | 10 | -26 |
| 0.75 to <1.75 | 1,071 | 292 | 0.72 | 1,283 | 1.13 | 53 | 40.74 | 2 | 1,138 | 0.89 | 6 | -3 |
| 1.75 to <2.5 | 768 | 74 | 0.77 | 825 | 1.20 | 15 | 21.47 | 1 | 732 | 0.89 | 4 | -23 |

| F-IRB EUR million PD scale | On-balance sheet exposures | Off-balance sheet exposures pre-CCF | Exposure weighted average CCF | Exposure post CCF and post CRM | Exposure weighted average PD (%) | Number of obligors | Exposure weighted average LGD (%) | Exposure weighted average maturity (years) | Risk-weighted exposure amount after SME supporting factor | Density of risk-weighted exposure amount | Expected loss amount | Value adjustments and provisions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2.50 to <10.00** | 371 | 10 | 0.74 | 378 | 4.59 | 10 | 40.26 | 2 | 519 | 1.37 | 7 | -6 |
| 2.5 to <5 | 247 | 10 | 0.74 | 254 | 3.22 | 7 | 43.63 | 3 | 342 | 1.35 | 4 | -6 |
| 5 to <10 | 124 | | | 124 | 7.38 | 3 | 33.36 | 2 | 177 | 1.43 | 3 | 0 |
| **10.00 to <100.00** | 338 | 5 | 0.75 | 343 | 14.72 | 10 | 39.74 | 2 | 507 | 1.48 | 16 | -5 |
| 10 to <20 | 224 | 5 | 0.75 | 228 | 10.11 | 7 | 40.96 | 2 | 259 | 1.14 | 6 | -5 |
| 20 to <30 | 115 | | | 115 | 23.87 | 4 | 37.30 | 2 | 248 | 2.16 | 10 | 0 |
| 30.00 to <100.00 | | | | | | | | | | | | |
| **100.00 (Default)** | 110 | | | 110 | 100.00 | 2 | 41.50 | 3 | | | 45 | -13 |
| *Subtotal* | *19,874* | *2,748* | *0.72* | *21,857* | *1.12* | *693* | *38.72* | *2* | *9,997* | *0.46* | *96* | *-66* |
| **Exposure class Corporates – Other** | | | | | | | | | | | | |
| **0.00 to <0.15** | 22,950 | 20,833 | 0.40 | 31,169 | 0.08 | 1,937 | 40.95 | 3 | 7,835 | 0.25 | 11 | -4 |
| 0.00 to <0.10 | 17,540 | 13,541 | 0.37 | 22,601 | 0.06 | 1,150 | 40.09 | 3 | 4,848 | 0.21 | 6 | -2 |
| 0.10 to <0.15 | 5,410 | 7,292 | 0.43 | 8,568 | 0.13 | 782 | 43.22 | 3 | 2,987 | 0.35 | 5 | -2 |
| **0.15 to <0.25** | 9,503 | 7,925 | 0.45 | 13,074 | 0.19 | 940 | 44.30 | 3 | 5,746 | 0.44 | 11 | -7 |
| **0.25 to <0.50** | 9,677 | 8,471 | 0.44 | 13,347 | 0.33 | 1,461 | 41.99 | 2 | 7,600 | 0.57 | 18 | -16 |
| **0.50 to <0.75** | 1,540 | 1,257 | 0.44 | 2,093 | 0.63 | 376 | 44.09 | 2 | 1,442 | 0.69 | 5 | -8 |
| **0.75 to <2.50** | 3,632 | 3,531 | 0.53 | 5,520 | 1.40 | 707 | 44.24 | 2 | 5,002 | 0.91 | 28 | -30 |
| 0.75 to <1.75 | 2,671 | 2,881 | 0.54 | 4,233 | 1.18 | 526 | 44.24 | 2 | 3,782 | 0.89 | 19 | -20 |
| 1.75 to <2.5 | 961 | 650 | 0.50 | 1,288 | 2.11 | 179 | 44.22 | 2 | 1,220 | 0.95 | 9 | -11 |
| **2.50 to <10.00** | 1,338 | 1,038 | 0.48 | 1,834 | 5.14 | 287 | 43.65 | 2 | 1,653 | 0.90 | 22 | -21 |
| 2.5 to <5 | 855 | 771 | 0.52 | 1,255 | 3.74 | 190 | 43.24 | 2 | 1,184 | 0.94 | 14 | -13 |
| 5 to <10 | 483 | 267 | 0.36 | 579 | 8.19 | 97 | 44.56 | 2 | 469 | 0.81 | 8 | -8 |
| **10.00 to <100.00** | 903 | 374 | 0.37 | 1,035 | 14.65 | 192 | 41.46 | 2 | 1,026 | 0.99 | 34 | -27 |
| 10 to <20 | 600 | 279 | 0.44 | 718 | 11.58 | 99 | 44.09 | 2 | 412 | 0.57 | 10 | -5 |
| 20 to <30 | 296 | 95 | 0.16 | 311 | 21.43 | 38 | 35.71 | 2 | 607 | 1.95 | 23 | -22 |
| 30.00 to <100.00 | 7 | 1 | 0.24 | 7 | 28.33 | 55 | 27.28 | 2 | 7 | 1.08 | 0 | 0 |
| **100.00 (Default)** | 734 | 296 | 0.43 | 860 | 100.00 | 236 | 41.93 | 3 | 0 | 0.00 | 316 | -237 |
| *Subtotal* | *50,276* | *43,725* | *0.43* | *68,932* | *1.87* | *6,136* | *42.24* | *2* | *30,305* | *0.44* | *444* | *-350* |
| *Total (all exposures classes)* | *162,055* | *54,377* | *0.43* | *185,298* | *0.97* | *17,851* | *40.48* | *2* | *49,519* | *0.27* | *620* | *- 486* |

Figure 29: EU CR6-B – IRB approach – Credit risk exposures by exposure class and PD range

A decrease in cash balances at central banks led to an decrease in exposures reported under the IRB exposure class »central governments and central banks« as against the previous period. The increase in the exposure class »Corporates – Other« resulted mainly from higher business volume.

## 12.4 IRB approach – Effect on the risk-weighted exposure amounts of credit derivatives used as CRM techniques (Article 453 g, j CRR)

The following section shows credit risk exposures reported under the IRB approach, excluding counterparty credit risks.

The following table shows the effect on RWAs of credit derivatives used for credit risk mitigation. Since LBBW has not used any credit derivatives for credit risk mitigation, both columns are identical.

| EUR million<br>Exposure class | Pre-credit derivatives risk-weighted exposure amount | Actual risk-weighted exposure amount |
|---|---|---|
| *Exposures under F-IRB* | *51,844* | *51,844* |
| Central governments and central banks | 3,189 | 3,189 |
| Institutions | 4,667 | 4,667 |
| Corporates | 43,987 | 43,987 |
| Of which Corporates – SMEs | 3,694 | 3,694 |
| Of which Corporates – Specialized lending | 10,030 | 10,030 |
| *Exposures under A-IRB* | *0* | *0* |
| Central governments and central banks | 0 | 0 |
| Institutions | 0 | 0 |
| Corporates | 0 | 0 |
| Of which Corporates – SMEs | 0 | 0 |
| Of which Corporates – Specialized lending | 0 | 0 |
| Retail | 0 | 0 |
| of which Retail – SMEs - Secured by immovable property collateral | 0 | 0 |
| of which Retail – non-SMEs - Secured by immovable property collateral | 0 | 0 |
| of which Retail – Qualifying revolving | 0 | 0 |
| of which Retail – SMEs - Other | 0 | 0 |
| of which Retail – Non-SMEs - Other | 0 | 0 |
| *Total (including F-IRB exposures and A-IRB exposures)* | *51,844* | *51,844* |

Figure 30: EU CR7: IRB approach – Effect on the risk-weighted exposure amounts of credit derivatives used as CRM techniques

# 12.5 IRB approach – Disclosure of the extent of the use of CRM techniques (Article 453 g, j CRR)

Disclosure of the following template EU CR7A - Changes in the stock of non-performing loans and advances and related net accumulated recoveries for A-IRB is not relevant for LBBW, as LBBW is not an A-IRB institution.

| | Total exposures EUR million | Credit risk mitigation techniques | | | | | |
|---|---|---|---|---|---|---|---|
| | | Funded credit Protection (FCP) | | | | | |
| F-IRB | | Part of exposures covered by Financial Collaterals (%) | Part of exposures covered by Other eligible collaterals (%) | Part of exposures covered by Immovable property Collaterals (%) | Part of exposures covered by Receivables (%) | Part of exposures covered by Other physical collateral (%) | Part of exposures covered by Other funded credit protection (%) |
| Central governments and central banks | 64,021 | | | | | | |
| Institutions | 24,028 | 0.08 | | | | | |
| Corporates | 98,824 | 1.09 | 20.77 | 20.11 | | 0.66 | 0.04 |
| Of which Corporates – SMEs | 11,568 | 1.7 | 41.85 | 41.67 | | 0.19 | 0.26 |
| Of which Corporates – Specialized lending | 21,578 | 0.23 | 45.33 | 43.52 | | 1.81 | 0.02 |
| Of which Corporates – Other | 65,678 | 1.27 | 8.99 | 8.62 | | 0.37 | 0.01 |
| *Total* | *186,873* | *0.59* | *10.99* | *10.63* | | *0.35* | *0.02* |

Figure 31: EU CR7-A – IRB approach – Disclosure of the extent of the use of credit risk mitigation techniques

| Credit risk mitigation techniques | | | | | Credit risk Mitigation methods in the calculation of RWEAs EUR million | |
|---|---|---|---|---|---|---|
| Funded credit Protection (FCP) | | | Unfunded credit Protection (UFCP) | | | |
| **Part of exposures covered by Cash on deposit (%)** | **Part of exposures covered by Life insurance policies (%)** | **Part of exposures covered by Instruments held by a third party (%)** | **Part of exposures covered by guarantees (%)** | **Part of exposures covered by credit derivatives (%)** | RWEA without substitution effects (reduction effects only) | RWEA with substitution effects (both reduction and substitution effects) |
| | | | 0.22 | | | 3,189 |
| | | | 1.36 | | | 4,667 |
| | | | 5.63 | | | 43,987 |
| | | | 6.02 | | | 3,694 |
| | | | 1.62 | | | 10,030 |
| | | | 6.88 | | | 30,263 |
| | | | *3.23* | | | *51,844* |

## 12.6 RWEA flow statements of credit risk exposures under the IRB approach (Article 438 h CRR)

The following table shows the development of RWEAs of risk exposures under the IRB approach between 30 September 2021 and 31 December 2021.

| EUR million | Risk-weighted exposure amount |
|---|---|
| *Risk-weighted exposure amount as at the end of the previous reporting period* | *53,738* |
| Asset size (+/-) | 1,846 |
| Asset quality (+/-) | -217 |
| Model updates (+/-) | 3 |
| Methodology and policy (+/-) | |
| Acquisitions and disposals (+/-) | |
| Foreign exchange movements (+/-) | 228 |
| Other (+/-) | -64 |
| *Risk-weighted exposure amount as at the end of the reporting period* | *55,534* |

Figure 32: EU CR8 – RWEA flow statements of credit risk exposures under the IRB approach

The decline in RWEA is primarily attributable to the »Asset size« item. The »Asset size« item shows the organic change in the journal, including new business and outstanding receivables.



The »Asset quality« item shows the changes in the measured quality of the investments resulting from changes to the obligor risk such as changes to the ratings or similar effects. The »Model updates« item shows changes resulting from implementing models, changes to the scope of the model and model improvements. The »Methodology and policy« item shows changes caused by adjustments to calculation methods resulting from changes to regulatory policies. The »Acquisitions and disposals« item shows changes to the size of the book resulting from acquisitions or disposals of companies. The »Foreign exchange movements« item shows changes arising from fluctuating exchange rates. The »Other« item shows all further changes which cannot be explicitly allocated to one of the exposures listed.

# 12.7 IRB approach – Back-testing of PD per exposure class (Article 452 h CRR)

| Exposure class | PD scale | Number of obligors at the end of the year | | Observed average default rate (%) | Exposure weighted average PD (%) | Average PD (%) | Average historical annual default rate (%) |
|---|---|---|---|---|---|---|---|
| | | | of which: number of obligors which defaulted during the year | | | | |
| Central governments and central banks | 0.00 to <0.15 | 2,095 | | | 0.00 | | |
| | 0.00 to <0.10 | 2,094 | | | 0.00 | | |
| | 0.10 to <0.15 | 1 | | | 0.12 | 0.24 | |
| | 0.15 to <0.25 | 1 | | | 0.17 | 0.09 | |
| | 0.25 to <0.50 | 2 | | | 0.39 | 0.65 | |
| | 0.50 to <0.75 | 2 | | | 0.59 | 0.89 | |
| | 0.75 to <2.50 | 4 | | | 1.98 | 5.94 | |
| | 0.75 to <1.75 | 3 | | | | | |
| | 1.75 to <2.5 | 1 | | | 1.98 | 1.98 | |
| | 2.50 to <10.00 | 3 | | | 5.40 | 3.56 | |
| | 2.5 to <5 | 1 | | | 4.44 | 1.48 | |
| | 5 to <10 | 2 | | | 6.67 | 6.67 | |
| | 10.00 to <100.00 | | | | 10.00 | | |
| | 10 to <20 | | | | 10.00 | | 10.00 |
| | 20 to <30 | | | | | | |
| | 30.00 to <100.00 | | | | | | |
| | 100.00 (Default) | | | | | | |

| Exposure class | PD scale | Number of obligors at the end of the year | of which: number of obligors which defaulted during the year | Observed average default rate (%) | Exposure weighted average PD (%) | Average PD (%) | Average historical annual default rate (%) |
|---|---|---|---|---|---|---|---|
| Institutions | 0.00 to <0.15 | 288 | | | 0.07 | 0.12 | |
| | 0.00 to <0.10 | 237 | | | 0.06 | 0.10 | |
| | 0.10 to <0.15 | 51 | | | 0.13 | 0.18 | |
| | 0.15 to <0.25 | 28 | | | 0.18 | 0.09 | |
| | 0.25 to <0.50 | 44 | | | 0.36 | 0.79 | 0.48 |
| | 0.50 to <0.75 | 14 | | | 0.55 | 1.25 | |
| | 0.75 to <2.50 | 14 | | | 1.21 | 0.72 | |
| | 0.75 to <1.75 | 13 | | | 1.17 | 0.83 | |
| | 1.75 to <2.5 | 1 | | | 1.86 | 0.40 | |
| | 2.50 to <10.00 | 6 | | | 2.77 | 4.14 | |
| | 2.5 to <5 | 6 | | | 2.77 | 4.14 | |
| | 5 to <10 | | | | | - | |
| | 10.00 to <100.00 | 10 | | | 14.15 | 10.00 | |
| | 10 to <20 | 9 | | | 14.00 | 8.18 | |
| | 20 to <30 | 1 | | | 28.00 | 20.00 | |
| | 30.00 to <100.00 | | | | | - | |
| | 100.00 (Default) | 2 | | | 100.00 | 100.00 | |

| Exposure class | PD scale | Number of obligors at the end of the year | | Observed average default rate (%) | Exposure weighted average PD (%) | Average PD (%) | Average historical annual default rate (%) |
|---|---|---|---|---|---|---|---|
| | | | of which: number of obligors which defaulted during the year | | | | |
| Corporates – SMEs | 0.00 to <0.15 | 3,196 | 1 | 0.03 | 0.07 | 0.08 | 0.01 |
| | 0.00 to <0.10 | 2,450 | 1 | 0.04 | 0.06 | 0.06 | 0.01 |
| | 0.10 to <0.15 | 746 | | | 0.12 | 0.14 | 0.03 |
| | 0.15 to <0.25 | 745 | | | 0.17 | 0.16 | 0.03 |
| | 0.25 to <0.50 | 1,754 | | | 0.32 | 0.35 | 0.08 |
| | 0.50 to <0.75 | 843 | | | 0.57 | 0.72 | 0.23 |
| | 0.75 to <2.50 | 1,388 | 4 | 0.29 | 1.03 | 1.44 | 0.80 |
| | 0.75 to <1.75 | 1,086 | 3 | 0.28 | 0.82 | 1.17 | 0.53 |
| | 1.75 to <2.5 | 302 | 1 | 0.33 | 1.82 | 2.69 | 1.65 |
| | 2.50 to <10.00 | 381 | 12 | 3.15 | 4.01 | 4.17 | 4.56 |
| | 2.5 to <5 | 317 | 2 | 0.63 | 3.24 | 3.68 | 2.83 |
| | 5 to <10 | 64 | 10 | 15.63 | 6.57 | 6.33 | 8.65 |
| | 10.00 to <100.00 | 223 | 7 | 3.14 | 14.16 | 24.25 | 6.05 |
| | 10 to <20 | 121 | 3 | 2.48 | 12.58 | 16.51 | 5.49 |
| | 20 to <30 | 64 | 2 | 3.13 | 18.32 | 20.51 | 18.24 |
| | 30.00 to <100.00 | 38 | 2 | 5.26 | 31.44 | 52.27 | 4.03 |
| | 100.00 (Default) | 150 | | | 100.00 | 100.00 | |

| Exposure class | PD scale | Number of obligors at the end of the year | | Observed average default rate (%) | Exposure weighted average PD (%) | Average PD (%) | Average historical annual default rate (%) |
|---|---|---|---|---|---|---|---|
| | | | of which: number of obligors which defaulted during the year | | | | |
| Corporates – specialized lending | 0.00 to <0.15 | 335 | | | 0.09 | 0.07 | |
| | 0.00 to <0.10 | 249 | | | 0.05 | 0.06 | |
| | 0.10 to <0.15 | 86 | | | 0.13 | 0.10 | |
| | 0.15 to <0.25 | 104 | | | 0.19 | 0.23 | 0.45 |
| | 0.25 to <0.50 | 130 | | | 0.33 | 0.35 | |
| | 0.50 to <0.75 | 38 | | | 0.66 | 0.44 | 0.24 |
| | 0.75 to <2.50 | 76 | | | 1.16 | 1.40 | 0.53 |
| | 0.75 to <1.75 | 62 | | | 1.13 | 1.23 | |
| | 1.75 to <2.5 | 14 | | | 1.20 | 1.99 | 2.89 |
| | 2.50 to <10.00 | 14 | 3 | 21.43 | 4.59 | 5.28 | 15.89 |
| | 2.5 to <5 | 12 | | | 3.22 | 5.50 | 1.54 |
| | 5 to <10 | 2 | 3 | 150.00 | 7.38 | 4.78 | 16.67 |
| | 10.00 to <100.00 | 19 | 3 | 15.79 | 14.72 | 28.52 | 34.61 |
| | 10 to <20 | 12 | 3 | 25.00 | 10.11 | 20.74 | 24.48 |
| | 20 to <30 | 8 | | | 23.87 | 39.38 | |
| | 30.00 to <100.00 | | | | | - | |
| | 100.00 (Default) | 1 | | | 100.00 | 100.00 | |

| Exposure class | PD scale | Number of obligors at the end of the year | of which: number of obligors which defaulted during the year | Observed average default rate (%) | Exposure weighted average PD (%) | Average PD (%) | Average historical annual default rate (%) |
|---|---|---|---|---|---|---|---|
| Corporates – Other | 0.00 to <0.15 | 1,646 | | | 0.08 | 0.10 | 0.01 |
| | 0.00 to <0.10 | 1,001 | | | 0.06 | 0.08 | 0.01 |
| | 0.10 to <0.15 | 645 | | | 0.13 | 0.13 | |
| | 0.15 to <0.25 | 948 | | | 0.19 | 0.23 | 0.02 |
| | 0.25 to <0.50 | 1,569 | 2 | 0.13 | 0.33 | 0.45 | 0.19 |
| | 0.50 to <0.75 | 461 | | | 0.63 | 0.96 | 0.38 |
| | 0.75 to <2.50 | 914 | | | 1.40 | 2.24 | 1.65 |
| | 0.75 to <1.75 | 689 | | | 1.18 | 1.90 | 1.41 |
| | 1.75 to <2.5 | 225 | | | 2.11 | 3.26 | 1.89 |
| | 2.50 to <10.00 | 343 | 27 | 7.87 | 5.14 | 5.98 | 5.94 |
| | 2.5 to <5 | 283 | 15 | 5.30 | 3.74 | 6.47 | 4.23 |
| | 5 to <10 | 60 | 12 | 20.00 | 8.19 | 5.03 | 7.23 |
| | 10.00 to <100.00 | 198 | 3 | 1.52 | 14.65 | 23.22 | 18.67 |
| | 10 to <20 | 98 | 2 | 2.04 | 11.58 | 14.05 | 4.83 |
| | 20 to <30 | 65 | 1 | 1.54 | 21.43 | 39.26 | 9.65 |
| | 30.00 to <100.00 | 35 | | | 28.33 | 28.64 | 20.00 |
| | 100.00 (Default) | 272 | | | 100.00 | 100.00 | |

Figure 33: EU CR9 - IRB approach – Back-testing of PD per exposure class

As at 31 December 2021, LBBW has 4,236 obligors with short-term contracts, of which most obligors are in the exposure class »Corporates – Other«. The long-run average default rate is calculated on the basis of one-year observation periods without overlap.

Disclosure of template EU CR9.1 is not relevant, as LBBW does not apply point (f) of Article 180 (1).

# 13 Disclosure of specialized lending and equity exposure under the simple risk weight approach (Article 438 e CRR)

## 13.1 Specialized lending: Project finance (Slotting approach) (Article 438 e CRR)

| EUR million | Specialized lending : Project finance (Slotting approach) | | | | | | |
|---|---|---|---|---|---|---|---|
| **Regulatory categories** | **Remaining maturity** | **On-balance sheet exposure** | **Off-balance sheet exposure** | **Risk weight** | **Exposure value** | **Risk-weighted exposure amount** | **Expected loss amount** |
| Category 1 | Less than 2.5 years | | 3 | 50% | 1 | 1 | |
| | Equal to or more than 2.5 years | | 0 | 70% | 0 | 0 | 0 |
| Category 2 | Less than 2.5 years | | | 70% | | | |
| | Equal to or more than 2.5 years | 3 | | 90% | 3 | 2 | 0 |
| Category 3 | Less than 2.5 years | 0 | 0 | 115% | 0 | 0 | 0 |
| | Equal to or more than 2.5 years | 3 | | 115% | 3 | 3 | 0 |
| Category 4 | Less than 2.5 years | | | 250% | | | |
| | Equal to or more than 2.5 years | | | 250% | | | |
| Category 5 | Less than 2.5 years | | | - | | | |
| | Equal to or more than 2.5 years | | | - | | | |
| *Total* | *Less than 2.5 years* | *0* | *3* | | *2* | *1* | *0* |
| | *Equal to or more than 2.5 years* | *6* | *0* | | *7* | *5* | *0* |

Figure 34: EU CR10.1 - Specialized lending : Project finance (Slotting approach)

## 13.2 Specialized lending: Income-producing real estate and high volatility commercial real estate (Slotting approach) (Article 438 e CRR)

| EUR million | Specialized lending : Income-producing real estate and high volatility commercial real estate (Slotting approach) | | | | | | |
|---|---|---|---|---|---|---|---|
| Regulatory categories | Remaining maturity | On-balance sheet exposure | Off-balance sheet exposure | Risk weight | Exposure value | Risk-weighted exposure amount | Expected loss amount |
| Category 1 | Less than 2.5 years | | | 50% | | | |
| | Equal to or more than 2.5 years | 9 | | 70% | 9 | 6 | 0 |
| Category 2 | Less than 2.5 years | | | 70% | | | |
| | Equal to or more than 2.5 years | | | 90% | | | |
| Category 3 | Less than 2.5 years | | | 115% | | | |
| | Equal to or more than 2.5 years | 9 | | 115% | 9 | 10 | 0 |
| Category 4 | Less than 2.5 years | | | 250% | | | |
| | Equal to or more than 2.5 years | 8 | | 250% | 8 | 19 | 1 |
| Category 5 | Less than 2.5 years | | | - | | | |
| | Equal to or more than 2.5 years | | | - | | | |
| *Total* | *Less than 2.5 years* | | | | | | |
| | *Equal to or more than 2.5 years* | *25* | | | *25* | *35* | *1* |

Figure 35: EU CR10.2 - Specialized lending: Income-producing real estate and high volatility commercial real estate (Slotting approach)

## 13.3 Specialized lending: Object finance (Slotting approach) (Article 438 e CRR)

| EUR million | | Specialized lending : Object finance (Slotting approach) | | | | | |
|---|---|---|---|---|---|---|---|
| **Regulatory categories** | **Remaining maturity** | **On-balance sheet exposure** | **Off-balance sheet exposure** | **Risk weight** | **Exposure value** | **Risk-weighted exposure amount** | **Expected loss amount** |
| Category 1 | Less than 2.5 years | | | 50% | | | |
| | Equal to or more than 2.5 years | | | 70% | | | |
| Category 2 | Less than 2.5 years | 15 | 0 | 70% | 15 | 10 | 0 |
| | Equal to or more than 2.5 years | 18 | 3 | 90% | 20 | 18 | 0 |
| Category 3 | Less than 2.5 years | | | 115% | | | |
| | Equal to or more than 2.5 years | | | 115% | | | |
| Category 4 | Less than 2.5 years | | | 250% | | | |
| | Equal to or more than 2.5 years | | | 250% | | | |
| Category 5 | Less than 2.5 years | | | - | | | |
| | Equal to or more than 2.5 years | | | - | | | |
| *Total* | *Less than 2.5 years* | *15* | *0* | | *15* | *10* | *0* |
| | *Equal to or more than 2.5 years* | *18* | *3* | | *20* | *18* | *0* |

Figure 36: EU CR10.3 - Specialized lending: Object finance (Slotting approach)

Template EU CR10.4 - Specialized lending: Commodities finance (Slotting approach) is not presented as it is a zero report as at 31 December 2021.

## 13.4 Equity exposures under the simple risk-weighted approach (Article 438 e CRR)

| | Equity exposures under the simple risk-weighted approach | | | | | |
|---|---|---|---|---|---|---|
| **Categories** | **On-balance sheet exposure** | **Off-balance sheet exposure** | **Risk weight** | **Exposure value** | **Risk-weighted exposure amount** | **Expected loss amount** |
| Private equity exposures | 722 | 55 | 190% | 777 | 1,476 | 6 |
| Exchange-traded equity exposures | 18 | | 290% | 18 | 53 | 0 |
| Other equity exposures | 0 | | 370% | 0 | 0 | 0 |
| *Total* | *740* | *55* | | *795* | *1,529* | *6* |

Figure 37: EU CR10.5 - Equity exposures under the simple risk-weighted approach

# 14 Disclosure of exposures to counterparty credit risk (Article 438 h, 439 CRR)

## 14.1 Qualitative disclosure of exposures to counterparty credit risk (Article 439 a-d CRR)

### Overview

According to the Recitals of Regulation (EU) No. 575/2013 of the European Parliaments and of the Council of 26 June 2013 (CRR), there is a need to impose stricter prudential requirements since the financial crisis highlighted that institutions greatly underestimated the level of counterparty credit risk associated with OTC derivatives. For this reason, the G20 Summit in September 2009 called for more derivatives to be cleared through a central counterparty and for contracts that could not be cleared centrally to be subject to higher own funds requirements.

Accordingly, in the Basel III reforms, the Basel Committee on Banking Supervision has structured the own funds requirements in respect of counterparty credit risk in such a way that derivatives cleared through central counterparties get a preferential capitalization treatment through lower own funds backing against derivatives that are not cleared centrally, which means that there is an incentive for institutions to aim for central counterparty clearance.

In addition, institutions are expected to hold additional own funds to cover the credit valuation adjustment (CVA) risk of OTC derivatives, the CVA charge.

### Counterparty credit risk

Counterparty credit risk (CCR) is the risk that the counterparty may default on amount owed in a derivative transaction as a result of no longer being able to meet its financial obligations. The amount of the counterparty credit risk depends on the exposure value at reporting date.

### Regulatory definition of risk exposure value at LBBW

According to Article 4 (1) no. 50c CRR, »financial instruments« are derivative financial instruments within the meaning of the CRR. Accordingly, pursuant to Article 92 (3) (f) CRR, the risk weighted exposure amounts for the counterparty credit risk for transactions listed in Annex II are part of the total risk exposure amount. Annex II of the CRR includes a comprehensive list of transactions which have to be classified as derivatives. These are sub-divided into three categories, »Interest-rate contracts«. »Foreign-exchange contracts and contracts concerning gold« and »Contracts of a nature similar«. In accordance with both Article 111 (2) CRR and Article 166 (5) CRR, the exposure value of derivative instruments listed in Annex II shall be determined in accordance with the methods described in Section 3, Title II, Chapter 6 of the CCR. LBBW determines the exposure value in accordance with Article 274 CRR (standardized approach for counterparty credit risk). Here, the exposure value is sum of current replacement costs and potential future exposure value multiplied by the alpha factor 1.4.

### Capital allocation on the basis of economic capital

LBBW has defined limits at the customer level for derivatives. Capital is allocated on the basis of economic capital. However, separate limits are not defined for derivatives. Limits are defined with the generally applicable processes for limiting counterparty risks (see section 3.1 Institution's risk management approach (Article 435 (1) CRR) for further information).

### Risk mitigation measures

At LBBW, in accordance with Article 295 et seqq. CRR, risk mitigation measures in connection with derivative counterparty credit risks are the signing of recognized contractual netting and collateralization agreements and the use of central counterparties. In this, LBBW complies with the requirements pursuant to Articles 296 and 297 CRR, which allow for the recognition by competent authorities of the netting agreements.

The procedure for entering into and managing contractual netting and collateralization agreements for OTC derivatives is set out in the bank's internal rules, especially in the guideline on collateral and wrong-way risks and in the internal credit guidelines. The guideline on collateral and wrong-way risk is binding for all relevant areas of LBBW in that it concerns the general handling of collateral in respect of counterparty credit risk. This framework is in part specified in the various department's work instructions. In the application of these agreements, LBBW aims to use standardized contracts (e.g. Deutscher Rahmenvertrag, ISDA Master Agreement) with the relevant hedging annexes. It also takes into account the rules laid down in the European Market Infrastructure Regulation, EMIR.

Wrong-way risks (WWRs) can occur with derivatives transactions when the exposure amount from the derivative is positively correlated with the likelihood of default by the counterparty. An effective reduction of WWRs can be achieved e.g. by limiting the exposure. LBBW achieves this by concluding the bulk of its OTC derivatives business through central counterparties (CCPs) or, in bilateral transactions, by using hedging arrangements and accepting cash collateral which provide for low thresholds for additional margins and a daily valuation of customer portfolios.

In brokerage business with Sparkassen, derivatives concluded bilaterally are guaranteed by the Sparkassen.



### Impact of potential LBBW rating downgrade on the collateral amount to be provided arising from bilaterally secured derivative positions

In the majority of cases, the agreements entered into do not provide for any increase in collateral in the event of an LBBW rating downgrade. However, some counterparties stipulate an incremental increase in collateral in the event of a downgrade of LBBW's rating. As at 31 December 2021, the additional funding obligation amounted to around EUR 12m in the event of a downgrade of LBBW by at least three notches in relation to LBBW's long-term rating.

### Allowances for losses on loans and advances

Credit risks of derivative transactions are included in a Credit Value Adjustment (CVA). This involves adjusting the fair value of a derivative by the value of the counterparty risk.

## 14.2 Analysis of CCR exposure by approach (Article 439 f-g, k, m CRR)

The methods used to calculate the regulatory requirements pursuant to the CRR are shown in the following table. LBBW uses SA-CCR (for derivatives) and the financial collateral comprehensive method (for SFTs) to calculate RWAs.

| EUR million | Replace ment cost (RC) | Potential future exposure (PFE) | EEPE | Alpha used for computing regulatory exposure value | Exposur e value pre-CRM | Exposur e value post-CRM | Expos ure value | RWEA |
|---|---|---|---|---|---|---|---|---|
| EU - Original Exposure Method (for derivatives) | | | | 1.4 | | | | |
| EU - Simplified SA-CCR (for derivatives) | | | | 1.4 | | | | |
| SA-CCR (for derivatives) | 5,673 | 4,633 | | 1.4 | 21,026 | 14,428 | 14,383 | 2,658 |
| IMM (for derivatives and SFTs) | | | | 1.4 | | | | |
| Of which securities financing transactions netting sets | | | | | | | | |
| Of which derivatives and long settlement transactions netting sets | | | | | | | | |
| Of which from contractual cross-product netting sets | | | | | | | | |
| Financial collateral simple method (for SFTs) | | | | | | | | |
| Financial collateral comprehensive method (for SFTs) | | | | | 30,737 | 29,590 | 29,590 | 1,209 |
| VaR for SFTs | | | | | | | | |
| *Total* | | | | | *51,762* | *44,018* | *43,973* | *3,867* |

Figure 38: EU CCR1 – Analysis of CCR exposure by approach

The effective expected positive exposure is not shown because it is not relevant for LBBW.

## 14.3 Transactions subject to own funds requirements for CVA risk (Article 439 h CRR)



The following table shows the RWAs for the credit valuation adjustment (CVA) capital charge by approach.

| EUR million | Exposure value | RWEA |
|---|---|---|
| Total transactions subject to the Advanced method | 0 | 0 |
| (i) VaR component (including the 3× multiplier) | | 0 |
| (ii) stressed VaR component (including the 3× multiplier) | | 0 |
| Transactions subject to the Standardized method | 2,510 | 1,213 |
| Transactions subject to the Alternative approach (Based on the Original Exposure Method) | 0 | 0 |
| *Total transactions subject to own funds requirements for CVA risk* | *2,510* | *1,213* |

Figure 39: EU CCR2 - Transactions subject to own funds requirements for CVA risk

## 14.4 Standardized approach – CCR exposures by regulatory exposure class and risk weights (Article 439 l CRR)

The following table shows the counterparty credit risk exposures reported in the CRSA by exposure class and risk weight.

| EUR million | Risk weight | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Exposure classes** | **0%** | **2%** | **4%** | **10%** | **20%** | **50%** | **70%** | **75%** | **100%** | **150%** | **Other** | **Total exposure value** |
| Central governments or central banks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Regional government or local authorities | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| Public sector entities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multilateral development banks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| International organizations | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Institutions | 3,075 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,075 |
| Corporates | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 95 | 19 | 0 | 117 |
| Retail | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| Institutions and corporates with a short-term credit assessment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other items | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Total exposure value* | *3,102* | *0* | *0* | *0* | *1* | *0* | *2* | *5* | *95* | *19* | *0* | *3,224* |

Figure 40: EU CCR3 – Standardized approach – CCR exposures by regulatory exposure class and risk weights



## 14.5 IRB approach – CCR exposures by exposure class and PD scale (Article 439 l CRR)

The following table provides all relevant parameters used for the calculation of counterparty credit risk capital requirements in the IRB approach. The presentation is by exposure class and by fixed PD ranges, as set by the regulator. The column »Number of obligors« shows the number of obligors of individual PDs listed in the table. The column »Density of risk-weighted exposure amount« refers to the ratio of risk-weighted assets to exposures post credit conversion factors and credit risk mitigation.

| EUR million /PD scale | Exposure value | Exposure weighted average PD (%) | Number of obligors | Exposure weighted average LGD (%) | Exposure weighted average maturity (years) | RWEA | Density of risk weighted exposure amount |
|---|---|---|---|---|---|---|---|
| **Exposure class Central governments and central banks** | | | | | | | |
| **0.00 to <0.15** | 6,608 | 0.00 | 127 | 38.37 | 2 | 0 | 0.00 |
| **0.15 to <0.25** | 0 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 |
| **0.25 to <0.50** | 0 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 |
| **0.50 to <0.75** | 0 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 |
| **0.75 to <2.50** | 0 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 |
| **2.50 to <10.00** | 0 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 |
| **10.00 to <100.00** | 0 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 |
| **100.00 (Default)** | 0 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 |
| *Subtotal* | *6,608* | *0.00* | *127* | *38.37* | *2* | *0* | *0.00* |
| **Exposure class Institutions** | | | | | | | |
| **0.00 to <0.15** | 24,243 | 0.10 | 147 | 12.09 | 1 | 1,531 | 6.32 |
| **0.15 to <0.25** | 1,120 | 0.19 | 49 | 15.91 | 1 | 201 | 17.90 |
| **0.25 to <0.50** | 299 | 0.36 | 6 | 15.30 | 1 | 42 | 14.04 |
| **0.50 to <0.75** | 48 | 0.55 | 4 | 18.10 | 1 | 14 | 30.42 |
| **0.75 to <2.50** | 171 | 1.06 | 9 | 0.95 | 1 | 4 | 2.25 |
| **2.50 to <10.00** | 74 | 2.77 | 3 | 4.89 | 1 | 10 | 13.07 |
| **10.00 to <100.00** | 0 | 14.00 | 1 | 45.00 | 3 | 0 | 229.93 |
| **100.00 (Default)** | 0 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 |
| *Subtotal* | *25,955* | *0.12* | *219* | *12.21* | *1* | *1,802* | *6.94* |
| **Exposure class Corporates** | | | | | | | |
| **0.00 to <0.15** | 9,098 | 0.20 | 698 | 103.01 | 6 | 859 | 49.89 |
| **0.15 to <0.25** | 1,757 | 0.53 | 265 | 111.92 | 6 | 326 | 86.93 |
| **0.25 to <0.50** | 852 | 0.98 | 385 | 133.86 | 7 | 467 | 153.30 |
| **0.50 to <0.75** | 217 | 1.94 | 106 | 135.00 | 8 | 177 | 221.86 |
| **0.75 to <2.50** | 288 | 3.97 | 196 | 135.00 | 7 | 292 | 282.41 |
| **2.50 to <10.00** | 486 | 14.88 | 65 | 97.32 | 6 | 127 | 257.97 |
| **10.00 to <100.00** | 66 | 49.19 | 19 | 114.49 | 8 | 103 | 362.59 |
| **100.00 (Default)** | 15 | 300.00 | 15 | 135.00 | 8 | 0 | 0.00 |
| *Subtotal* | *12,781* | *2.87* | *1,749* | *106.63* | *6* | *2,350* | *106.78* |
| *Total (all CCR relevant exposure classes)* | *45,344* | *0.26* | *2,095* | *17.66* | *1.00* | *4,152* | *9.16* |

Figure 41: EU CCR4 – IRB approach – CCR exposures by exposure class and PD scale

## 14.6 Composition of collateral for CCR exposures (Article 439 e CRR)

The following table gives a breakdown of all types of collateral posted or received by banks to reduce counterparty credit risk. »Segregated« means collateral that is held in a bankruptcy-remote manner within the meaning of Article 300 CRR. »Unsegregated« refers to collateral that is not held in a bankruptcy-remote manner.

| | Collateral used in derivative transactions | | | | Collateral used in SFTs | | | |
|---|---|---|---|---|---|---|---|---|
| | Fair value of collateral received | | Fair value of posted collateral | | Fair value of collateral received | | Fair value of posted collateral | |
| **EUR million** | **Segregated** | **Unsegregated** | **Segregated** | **Unsegregated** | **Segregated** | **Unsegregated** | **Segregated** | **Unsegregated** |
| Cash – domestic currency | | 7,377 | | 5,709 | | 0 | | 0 |
| Cash – other currencies | | 540 | | 169 | | 0 | | 0 |
| Domestic sovereign debt | | 0 | | 0 | | 2,147 | | 0 |
| Other sovereign debt | | 82 | | 0 | | 12,993 | | 0 |
| Government agency debt | | 10 | | 0 | | 440 | | 0 |
| Corporate bonds | | 0 | | 0 | | 1,480 | | 4,067 |
| Equity securities | | 0 | | 0 | | 6,812 | | 315 |
| Other collateral | | 0 | | 0 | | 1,100 | | 14,966 |
| *Total* | | *8,008* | | *5,879* | | *24,971* | | *19,348* |

Figure 42: EU CCR5 - Composition of collateral for CCR exposures

## 14.7 Credit derivatives exposures (Article 439 j CRR)

The following table sets out the notional amounts and fair values of the credit derivatives bought and sold for the Bank's own credit portfolio and for the trading portfolio by type of credit derivative (based on notional value). Credit derivatives from brokering activities were not used by LBBW in 2021.

| **EUR million** | **Protection bought** | **Protection sold** |
|---|---|---|
| **Notionals** | | |
| Single-name credit default swaps | 5,663 | 4,393 |
| Index credit default swaps | 0 | 0 |
| Total return swaps | 1,734 | 0 |
| Credit options | 0 | 0 |
| Other credit derivatives | 629 | 526 |
| *Total notionals* | *8,027* | *4,919* |
| *Fair values* | | |
| *Positive fair value (asset)* | *33* | *96* |
| *Negative fair value (liability)* | *-479* | *-16* |

Figure 43: EU CCR6 - Credit derivatives exposures

The above table (EU CCR6) divides credit derivatives by protection bought and protection sold. Fair values are shown separately as positive and negative values. There is no distinction between types of credit derivative.

Disclosure of table EU CCR7 - RWEA flow statements of CCR exposures under the IMM is not relevant for LBBW, as there is no internal model for counterparty credit risks.

## 14.8 Exposures to CCPs (Article 439 i CRR)

The following table shows exposures to central counterparties (CCPs), broken down by qualifying and non-qualifying CCPs and by exposure class.

| EUR million | Exposure value | RWEA |
|---|---|---|
| *Exposures to QCCPs (total)* | | *131* |
| Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which | 1,705 | 34 |
| (i) OTC derivatives | 268 | 5 |
| (ii) Exchange-traded derivatives | | |
| (iii) SFTs | 1,436 | 29 |
| (iv) Netting sets where cross-product netting has been approved | | |
| Segregated initial margin | 1,231 | |
| Non-segregated initial margin | | |
| Prefunded default fund contributions | 340 | 97 |
| Unfunded default fund contributions | | |
| *Exposures to non-QCCPs (total)* | | |
| Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which | | |
| (i) OTC derivatives | | |
| (ii) Exchange-traded derivatives | | |
| (iii) SFTs | | |
| (iv) Netting sets where cross-product netting has been approved | | |
| Segregated initial margin | | |
| Non-segregated initial margin | | |
| Prefunded default fund contributions | | |
| Unfunded default fund contributions | | |

Figure 44: EU CCR8 - Exposures to CCPs

# 15 Disclosure of exposures to securitization positions (Article 449 CRR)

LBBW is the originator of a synthetic securitization for the first time in the 2021 reporting year. The securitization covers loans to companies in LBBW's non-trading book that remain on the balance sheet of the originator due to the synthetic structure. The significant risk is transferred by way of a financial guarantee granted by the European Investment Fund (EIF) to the mezzanine tranche. The significant risk transfer is based on Article 245 (2)(a) CRR, as the total risk-weighted exposure amount of the mezzanine tranche is placed in the market. This reduces LBBW's RWA. The efficiency of the transaction is substantiated by new business enabled by the reduced own funds requirements of the securitized portfolio.

LBBW meets the risk retention obligation by holding an originator share of at least 5% of the nominal value of each securitized exposure in accordance with Article 6 (3) b) of the Securitization Regulation. The remaining exposure after deduction of the risk retention is tranched in line with the securitization structure. The total risk-weighted exposure amount of the mezzanine tranche is placed in the market.

The securitized exposures are assigned exclusively to the IRB, so the internal ratings-based approach (SEC-IRBA) applies to the calculation of risk-weighted exposure amounts.



## 15.1 Qualitative disclosure requirements in connection with securitization positions (Article 449 a-i CRR)

LBBW holds securitization positions in its function as an originator, investor and a sponsor.

**Investor positions**
LBBW invested in no additional securitization transactions in the 2021 reporting year. Investor position risk is regularly monitored on the basis of the investor reports.

External ratings are generally available for investor positions held by LBBW, which lead to the application of the ratings-based approach (SEC-ERBA). Independently of the type of securitized exposures and securitization positions, LBBW takes into account the ratings of the recognized rating agencies Standard & Poor's Ratings Services, Moody's Investors Service or Fitch Ratings Ltd. The securitization positions mostly have a good to first-class rating. There is no external rating for three investor positions and so these exposures are treated in accordance with the SEC-SA approach.

**Sponsor positions**
LBBW acts as a sponsor and/or arranger of securitization programs as part of customer transactions, offering customers innovative, capital-market-oriented financing alternatives.

In its role as sponsor and/or arranger of customer transactions, LBBW continued to support upper SMEs with new financing solutions in 2021. The aim is to harness cross-selling potential with existing customers and to use this form of finance selectively for attracting new customers that meet the target customer definition formulated for corporate customer business. The objective of this is to achieve sustainable success for customers and the bank.

LBBW supports its corporate customers within the context of asset securitization by way of the WEINBERG ABCP program. It concentrates on the securitization of first-class, SME and real-economy receivable portfolios, with a focus on trade and lease receivables. In hidden transactions, participating companies benefit from capital market funding, off-balance solutions, funding diversification and, in some cases, improved processes in accounts receivable management.

As part of its securitization programs, LBBW provides the appropriate »Weinberg Funding Ltd., Jersey« and »Weinberg Capital DAC, Dublin« special-purpose vehicles with liquidity facilities as well as swap lines if necessary in addition to its role as a service provider. The liquidity lines are carried in the non-trading book. LBBW also acts as collateral trustee for these SPVs.

In its function as service provider, LBBW is exclusively responsible for the structuring, administration and coordination of customer transactions. It also manages the bank accounts which the SPVs hold at LBBW. Alongside two other banks, LBBW also acts as a dealer for the euro commercial paper of the Weinberg program.

The accepted liquidity risks are recorded on a daily basis by LBBW's Liquidity Risk Controlling. Corresponding work instructions have been issued to mitigate operational risks (particularly those arising from the function as Weinberg administrator). Risk from liquidity lines is assessed by the relevant front and back offices at least once annually for trading receivables and for interest-bearing receivables. The back office informs the front office of any irregularities in the course of the transaction. Moreover, the front office informs the back office immediately of any changes in the ratings of the parties involved as they become known. The back office incorporates the information in the next rating review. Likewise, the front office notifies the back office immediately of any termination events reported by the company (for example, covenant breaches) or if there are imminent signs of a termination event (possible early indications given during conversations). The front office decides whether or not to support a waiver request from the company. Waiver requests are reviewed and processed by the back office with regard to their risk content. In this connection, proposals for the following steps to be taken are drawn up in consultation with the front office.

With a few exceptions, all securitization positions for which LBBW reports risk-weighted securitization values as a sponsor are rated using the Internal Assessment Approach (SEC-IAA). All transactions rated using the SEC-IAA use the risk weighting tables under Article 263 CRR or for STS transactions under Article 264 CRR (both SEC-ERBA approach).

As part of the EU Securitization Regulation, LBBW – as sponsor of the Weinberg ABCP program – assumed the function of the reporting unit for all transactions in its ABCP program. The relevant transparency requirements under Article 7 of the Securitization Regulation were met. In addition, all transactions were evaluated with regard to their lending criteria in connection with Article 5 (2) and Article 9 of the Securitization Regulation. The provision of supporting liquidity lines meets the risk retention requirements in accordance with Article 6 of the Securitization Regulation.

In 2021, LBBW declared that a total of 4 additional transactions in its Weinberg program met STS requirements. For all STS transactions, correspondingly lower capital weightings under Article 243(1) in conjunction with Article 264 CRR are applied to the liquidity lines provided.

The commercial papers issued by the »Weinberg« multiseller conduit can be either euro commercial papers (issued by Weinberg Capital DAC, Dublin) or, since 2011, US commercial papers (issued by Weinberg Capital DAC, Dublin, with co-issuer Weinberg Capital LLC, Delaware). However, the conduits continued not to avail of the option of issuing US commercial paper in 2021. The commercial papers are rated by Moody's Investors Service and Fitch Ratings Ltd. The Weinberg ABCP program does not meet the STS requirements under Article 23 (2) of the Securitization Regulation.

Apart from the Weinberg program (including the associated constructs/SPVs) no other special-purpose vehicles are advised or managed by LBBW as a sponsor or originator.

## Originator positions

LBBW held a synthetic originator position in the 2021 reporting year.

## Resecuritizations

LBBW did not hold any resecuritization positions during the 2021 reporting year.

## Presentation of the procedures for determining exposure values

Under the internal credit risk strategy, new securitization positions may be transacted with the Bank's core customers up to a certain limit provided that a detailed analysis of the risk profile is performed and documented in the light of the transaction drivers which are liable to exert a direct or indirect effect on the risk profile of the securitization position.

The investor positions are recognized as SEC-ERBA / SEC-SA securitization positions.

The Bank normally uses the ratings based approach in the investor portfolio for SEC-ERBA securitization positions and the derived credit rating assessment only sporadically.

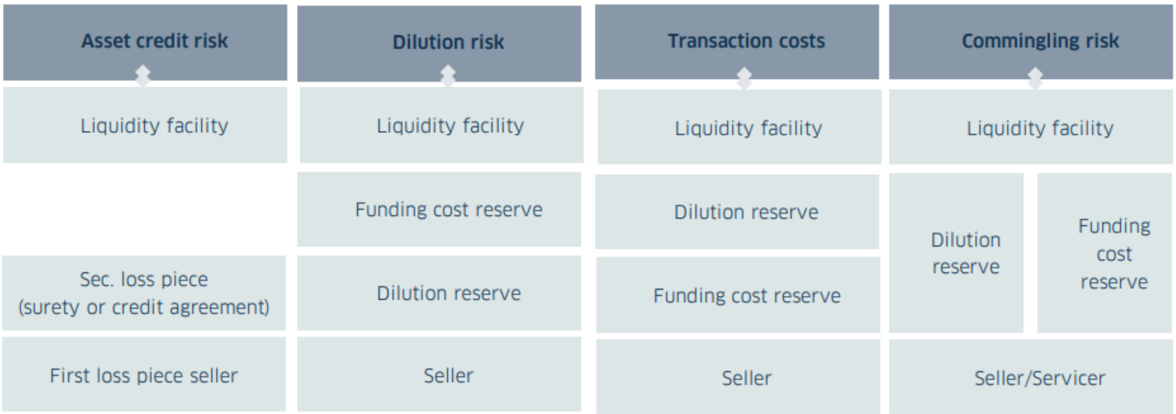
The majority of investments are classified as high quality and granular and normally have at least one rating from a recognized rating agency. If no external rating is available, the Bank applies the SEC-SA approach.



The liquidity lines and swaps (sponsor positions) provided as part of the ABCP (asset-backed commercial paper) program are weighted using the Internal Assessment Approach (SEC-IAA). To this end, LBBW developed and rolled out corresponding models for measuring trading and interest-bearing receivables in 2008. The SEC-IAA is generally based on publicly available models of the rating agencies.

The IAA module for the securitization of trading receivables takes into account the asset credit risk (credit rating risks) and the seller risk as counterparty risk. The latter includes the dilution and the commingling risk as further sub-categories. In addition, the IAA module covers the transaction risk that emerges if a seller is no longer able to bear the transaction costs incurred (e.g. SPV costs, funding costs). This is typically the case in the event of a premature winding-down of the transaction following the seller's insolvency. The module for interest-bearing receivables is essentially based on the assumption that there are no open residual value risks. As with trading receivables, a distinction is made with interest-bearing receivables between the risks of the asset pool (asset credit risk) and seller risks (in addition to the dilution risk, commingling risk and transaction/funding costs risk including interest rate risk). If there is an excess spread, a prepayment risk may result. The prepayment risk is the risk that the future excess spread of this receivable is no longer available as a credit enhancement due to an early termination of the contract underlying the interest-bearing receivable.

The chart below shows the allocation of potential losses, broken down into the four main types of risk, to the individual credit enhancement components:




The IAA module is used for assessing the risk of the liquidity lines (rating review/rating renewal) for trading receivables and for interest-bearing receivables by the relevant front and back office divisions.

The internal rating procedure is validated on an annual basis. This is overseen by an organizational unit within Group Risk Control. The validation results are submitted to the front and back offices that manage the ABCP program or the securitization positions that are assessed with the IAA modules. The validation results are accepted by an area head committee.

If LBBW purchases commercial papers (CP) under its own ABCP program, this is classified as an overlapping position under Article 248 (2) CRR. This means that the risk exposures are backed by the risk weightings of the securitization liquidity facilities provided by LBBW under Article 248 (3) CRR.

## List of securitization special purpose entities (SSPEs) in accordance with Article 449 d CRR

| Name | Type of exposure | Type of SSPE |
|---|---|---|
| Weinberg Capital DAC | Liquidity lines, swap lines | SSPE sponsored by the institution (sponsor position) |
| Weinberg Funding Ltd. | None | SSPE sponsored by the institution (sponsor position) |

LBBW provides no securitization-related services for SSPEs, except for the SSPEs sponsored by the institution (sponsor positions).

No support has been provided in accordance with point (e) of Article 449 (implicit support, Article 248 CRR). There are also no plans to do so in the future.

# Securitization positions in the trading book

LBBW did not hold any trading-book securitization positions in 2021. Furthermore, LBBW does not have any retained or assumed re-securitization positions from this.

# Accounting and valuation methods for securitizations

LBBW essentially held the role of investor, sponsor and/or arranger, service provider (structuring, administration, coordination, account maintenance), securities trustee or bank providing liquidity in securitization transactions for special-purpose vehicles.

As at 31 December 2021, EUR 1.5bn (loan receivables from companies based in Germany) is available for a synthetic securitization transaction.

### Consolidation rules

Under IFRS 10, a special-purpose vehicle is assumed to be controlled by LBBW or one of its subsidiaries if the role that it plays with respect to the special-purpose vehicle cumulatively satisfies the following three conditions:

- LBBW has direct or indirect decision-making authority to determine key business activities for the economic success of an enterprise.
- It is subject to variable returns from these companies that can be either positive or negative.
- It can use its decision-making authority to influence the amount of the company's variable returns.



The consolidation of special-purpose vehicles is not dependent on the amount of the capital investment or the percentage of voting rights. The accounting scope of consolidation under IFRS may deviate from the regulatory group under CRR due to differing statutory conditions for consolidation.

The following special-purpose vehicles in connection with securitization transactions were included in the IFRS consolidated financial statements as at 31 December 2021:

- Weinberg Capital DAC, Dublin
- Weinberg Funding Ltd., Jersey

All the assets and liabilities held by these SPVs are included in LBBW's consolidated financial statements.

If the link between LBBW and a special-purpose vehicle does not result in the latter being included in the IFRS consolidated financial statements, only the relationship to the special-purpose vehicle is reflected in the income statement.

### LBBW as investor

The securitization products acquired by the LBBW Group as an investor are allocated to the non-trading book for regulatory purposes.

In accordance with IFRS 9, the products were allocated to »measured at amortized cost« or »mandatorily measured at fair value through profit or loss« at the time of acquisition in line with their documented business model and the cash flow criterion and were measured as shown below:

Financial assets measured at amortized cost:

This balance sheet item includes financial assets belonging to portfolios with the business model »Hold« that meet the requirement of a simple loan agreement. The item comprises exclusively non-derivative debt instruments such as accounts receivable and securities. This financial asset is measured at amortized cost.

Interest income (positive and negative) and fees similar to interest from these financial assets are recognized in the statement of profit or loss under »Net interest income and current income from equity instruments«. Expenses and income from allowances for losses on loans and advances, as well as gains and losses from selling these financial assets, can be found in the statement of profit or loss under the item »Net income from financial assets measured at amortized cost«.

Financial assets mandatorily measured at fair value through profit or loss:

Financial assets that neither meet the requirements of a simple loan agreement nor belong to a portfolio with the »Sell« business model are recognized in this balance sheet item. A subsequent remeasurement at fair value[1] through profit or loss takes into account all fluctuations in fair value directly in the statement of profit or loss. Fair value is defined in accordance with IFRS 13 as the price at which an asset or liability could be exchanged at the measurement date in an orderly transaction between market participants.

Interest income (positive and negative) from these financial assets and distributions from equity instruments are recognized in the statement of profit or loss under »Net interest income and current income from equity instruments«. Changes to fair value and gains and losses from selling these financial instruments can be found in the statement of profit or loss under the item »Net gains/losses from financial instruments measured at fair value through profit or loss«.



**LBBW as sponsor, arranger, service provider or collateral trustee**

If LBBW acts solely as sponsor, arranger, service provider or collateral trustee in customer transactions, this does not result in assets requiring disclosure in the balance sheet.

**LBBW as bank granting liquidity**

If LBBW makes liquidity facilities available, they must be categorized as loans under »measured at amortized cost« (IFRS) upon utilization.

Upon utilization, swaps are recognized as derivatives under IFRS and allocated to the category »Financial assets mandatorily measured at fair value through profit or loss«.

## 15.2 Securitization exposures in the non-trading book (Article 449 j CRR)

The following table (template EU-SEC1) shows LBBW's non-trading book positions in its role as sponsor, broken down by the underlying exposure class. Total amounts are split into traditional and synthetic securitizations, as well as into STS securitizations and non-STS securitizations. LBBW did not transact any securitization positions without the transfer of receivables in the reporting year.

As part of the traditional securitizations, LBBW acts as sponsor in the Weinberg ABCP program. The volume of the corresponding ABCP transactions is shown in table EU SEC1 under »Institution acts as sponsor« / »Traditional«.

| | Institution acts as originator | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Traditional | | | | Synthetic | | Subtotal | |
| | STS | | Non-STS | | | | | |
| EUR million | | of which SRT | | of which SRT | | of which SRT | | |
| **Total exposures** | | | | | **1,397** | **1,397** | **1,397** | |
| *Retail (total)* | | | | | | | | |
| Residential mortgage | | | | | | | | |
| Credit card | | | | | | | | |
| Other retail exposures | | | | | | | | |
| Re-securitization | | | | | | | | |
| *Wholesale (total)* | | | | | *1,397* | *1,397* | *1,397* | |
| Loans to corporates | | | | | 1,397 | 1,397 | 1,397 | |
| Commercial mortgage | | | | | | | | |
| Lease and receivables | | | | | | | | |
| Other wholesale | | | | | | | | |
| Re-securitization | | | | | | | | |

Figure 45: EU-SEC1 - Securitization exposures in the non-trading book

| | Institution acts as sponsor | | | | Institution acts as investor | | | |
|---|---|---|---|---|---|---|---|---|
| | Traditional | | | Subtotal | Traditional | | | Subtotal |
| | STS | Non-STS | Synthetic | | STS | Non-STS | Synthetic | |
| | **2,158** | **632** | | **2,790** | **1,078** | | | **1,078** |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | *2,158* | *632* | | *2,790* | *1,078* | | | *1,078* |
| | | | | | 406 | | | 406 |
| | | | | | | | | |
| | 2,158 | 632 | | 2,790 | 673 | | | 673 |
| | | | | | | | | |
| | | | | | | | | |

Disclosure of template EU SEC2 - Securitization exposures in the trading book is not relevant for LBBW, as LBBW currently has no trading book exposures in its portfolio.

Furthermore, LBBW does not have any retained or assumed re-securitization positions from this.

## 15.3 Securitization exposures in the non-trading book and associated regulatory capital requirements - institution acting as originator or as sponsor (Article 449 k CRR)

| | Exposure values (by RW bands/deductions) | | | | | | Exposure values (by regulatory approach) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EUR million | ≤20% RW | | >20% to 50% RW | >50% to 100% RW | >100% to <1250% RW | 1250%/ deductions | SEC-IRBA | SEC-ERBA (including IAA) | SEC-SA | 1250%/ deductions | |
| **Total exposures** | **1,854** | | **2,143** | **181** | **8** | **37** | **1,361** | **2,447** | **343** | **37** | |
| **Traditional transactions** | **457** | | **2,143** | **181** | **8** | | | **2,447** | **343** | | |
| Securitization | 457 | | 2,143 | 181 | 8 | | | 2,447 | 343 | | |
| Retail underlying | | | | | | | | | | | |
| Of which STS | | | | | | | | | | | |
| Wholesale | 457 | | 2,143 | 181 | 8 | | | 2,447 | 343 | | |
| Of which STS | 332 | | 1,775 | 51 | | | | 1,951 | 207 | | |
| Re-securitization | | | | | | | | | | | |
| **Synthetic transactions** | **1,361** | | | | | **37** | **1,361** | | | **37** | |
| Securitization | 1,361 | | | | | 37 | 1,361 | | | 37 | |
| Retail underlying | | | | | | | | | | | |
| Wholesale | 1,361 | | | | | 37 | 1,361 | | | 37 | |
| Re-securitization | | | | | | | | | | | |

Figure 46: EU-SEC3 - Securitization exposures in the non-trading book and associated regulatory capital requirements – insti tution acting as originator or as sponsor

| | RWEA (by regulatory approach) | | | | Capital charge after cap | | | |
|---|---|---|---|---|---|---|---|---|
| | SEC-IRBA | SEC-ERBA (including IAA) | SEC-SA | 1250%/ deductions | SEC-IRBA | SEC-ERBA (including IAA) | SEC-SA | 1250%/ deductions |
| | **248** | **837** | **88** | | **20** | **67** | **6** | |
| | | **837** | **88** | | | **67** | **7** | |
| | | 837 | 88 | | | 67 | 7 | |
| | | | | | | | | |
| | | | | | | | | |
| | | 837 | 88 | | | 67 | 7 | |
| | | 634 | 21 | | | 51 | 2 | |
| | | | | | | | | |
| | **248** | | | | **20** | | | |
| | 248 | | | | 20 | | | |
| | | | | | | | | |
| | 248 | | | | 20 | | | |
| | | | | | | | | |

# 15.4 Securitization exposures in the non-trading book and associated regulatory capital requirements - institution acting as investor (Article 449 k CRR)

| | Exposure values (by RW bands/deductions) | | | | | Exposure values (by regulatory approach) | | | |
|---|---|---|---|---|---|---|---|---|---|
| **EUR million** | **≤20% RW** | **>20% to 50% RW** | **>50% to 100% RW** | **>100% to <1250% RW** | **1250%/ deductions** | **SEC-IRBA** | **SEC-ERBA (including IAA)** | **SEC-SA** | **1250%/ deductions** |
| **Total exposures** | **1,068** | **10** | | | | | **341** | **737** | |
| Traditional transactions | 1,068 | 10 | | | | | 341 | 737 | |
| Securitization | 1,068 | 10 | | | | | 341 | 737 | |
| Retail underlying | | | | | | | | | |
| Of which STS | | | | | | | | | |
| Wholesale | 1,068 | 10 | | | | | 341 | 737 | |
| Of which STS | 1,068 | 10 | | | | | 341 | 737 | |
| Re-securitization | | | | | | | | | |
| **Synthetic transactions** | | | | | | | | | |
| Securitization | | | | | | | | | |
| Retail underlying | | | | | | | | | |
| Wholesale | | | | | | | | | |
| Re-securitization | | | | | | | | | |

Figure 47: EU-SEC4 - Securitization exposures in the non-trading book and associated regulatory capital requirements - institution acting as investor

| | RWEA (by regulatory approach) | | | | Capital charge after cap | | | |
|---|---|---|---|---|---|---|---|---|
| | SEC-IRBA | SEC-ERBA (including IAA) | SEC-SA | 1250%/ deductions | SEC-IRBA | SEC-ERBA (including IAA) | SEC-SA | 1250%/ deductions |
| | | **36** | **110** | | | **3** | **9** | |
| | | 36 | 110 | | | 3 | 9 | |
| | | 36 | 110 | | | 3 | 9 | |
| | | | | | | | | |
| | | | | | | | | |
| | | 36 | 110 | | | 3 | 9 | |
| | | 36 | 110 | | | 3 | 9 | |
| | | | | | | | | |
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# 15.5 Exposures securitized by the institution - Exposures in default and specific credit risk adjustments (Article 449 l CRR)

| EUR million | Exposures securitized by the institution - Institution acts as originator or as sponsor | | |
|---|---|---|---|
| | Total outstanding nominal amount | | Total amount of specific credit risk adjustments made during the period |
| | | Of which exposures in default | |
| **Total exposures** | **4,270** | **6** | **0** |
| **Retail (total)** | | | |
| residential mortgage | | | |
| credit card | | | |
| other retail exposures | | | |
| re-securitization | | | |
| **Wholesale (total)** | **4,270** | **6** | **0** |
| loans to corporates | 1,480 | | |
| commercial mortgage | | | |
| lease and receivables | 2,790 | 6 | 0 |
| other wholesale | | | |
| re-securitization | | | |

Figure 48: EU-SEC5 - Exposures securitized by the institution - Exposures in default and specific credit risk adjustments

# 16 Disclosure of the use of the standardized approach and of the internal models for market risk (Articles 435, 445 and 455 CRR)

### Definitions

LBBW defines market price risks as potential losses resulting from unfavorable changes in market prices or factors influencing prices. Market price risks are split into the categories equity, interest rates and exchange rates/commodities. The following types of market price risk arise from LBBW's business activities.

### Equity risk

The equity risk results from changes in share and/or index prices as well as from share or index volatilities.

### Interest rate risk

The interest rate risk is based on changes in market interest rates, yield spreads, credit spreads or even interest rate volatility.

### FX/commodity risk

In the LBBW Group, the currency/commodity risks are summarized and reported under foreign exchange risk.

## 16.1 Qualitative disclosure requirements in connection with market risk (Article 435 (1) a-d CRR)

### Market price risk management

LBBW's market price risk strategy documents the strategic goals for the specific types of risk. It describes the activities exposed to market price risks and the underlying strategies for all of LBBW's relevant organizational units, branches and subsidiaries. Moreover, the market price risk strategy addresses the deliberate and controlled approach to these risks to strategically leverage the opportunities which they hold. Accordingly, it fleshes out the Bank's business strategy with regard to market price risks. It is duly specified in greater detail in organizational policies (e.g. work instructions, manuals, portfolio profiles). In addition, the guidelines on risk management form the key strategic principles and rules of conduct for evaluating risks and opportunities within the LBBW Group and thus form the basis for a uniform, company-wide understanding of corporate objectives in connection with risk management. The top management aim of the front office divisions is to generate IFRS result. Risk management includes all measures used for a systematic recognition, analysis, valuation, monitoring, control and avoidance/mitigation of risk.

In the case of market price risks, risk monitoring and reporting is conducted by the Traded Risk unit which is part of the Group Risk Control division (Risk Control). Risk Control operates independently of trading, thus ensuring a separation of functions. Risk Control is answerable directly to the member of the Board of Managing Directors with responsibility for risk management and compliance.

LBBW's market risk positions are marked to the market on a daily basis by Risk Control. This is used as a basis for calculating business performance. Market price risks are quantified using a value-at-risk approach, which is supplemented by sensitivity measurements and stress tests. The risk ratios are addressed by means of corresponding portfolio limits which are used to cap the market price risks. A daily report featuring an overview of earnings performance and risk development is prepared in Risk Control.

An overall risk report is prepared each month with detailed information about earnings performance, risk development, risk concentration, economic capital and the monitoring of the economic capital limit.

The integrated bank management is supplemented by weekly stressed value-at-risk calculations. This is based on an observation period which covers a significant financial stress period. This observation period is determined at least once a year for the CRR portfolio relevant for prudential disclosures containing all the trading book positions of LBBW (Bank) excluding non-transparent investment funds. A stressed value-at-risk is also calculated for the LBBW Group. This figure is also incorporated in the scenarios applying across all risk categories and is thus relevant for risk-bearing capacity.

## 16.2 Market risk under the standardized approach (Article 445 CRR)



LBBW calculates the capital requirements for market price risks for general interest rate and equity risk including option price risks using the Internal Model Method. Specific risks along with currency and commodity risks are calculated using the Standardized Approach.

| EUR million | RWEAs |
|---|---|
| **Outright products** | |
| Interest rate risk (general and specific) | 2,731 |
| Equity risk (general and specific) | 162 |
| Foreign exchange risk | 610 |
| Commodity risk | 152 |
| **Options** | |
| Simplified approach | |
| Delta-plus approach | 20 |
| Scenario approach | |
| *Securitization (specific risk)* | |
| *Total* | *3,675* |

Figure 49: EU MR1 - Market risk under the standardized approach

## 16.3 Qualitative disclosure requirements of institutions that use internal market risk models (Article 455 a-c, f CRR)

### Internal model in accordance with CRR

LBBW calculates value-at-risk (VaR) daily and stressed VaR weekly from market price risks with a confidence level of 99% and a ten-day holding period by using the square root of time for scaling up to ten days. A parameter of 99% and one-day holding period are used for bank internal management. Both VaR and stressed VaR are calculated using a procedure based on a Monte Carlo simulation. Here market-induced movements in the value of complex transactions are also taken into account, mostly with full revaluation. Market data time series for the preceding 250 days are weighted equally in covariance estimates. The aforementioned stressed VaR is also used to calculate the capital requirement.

The relevant stressed VaR period is currently the period from 31 August 2008 up to 31 August 2009 and includes the worst-case period for LBBW's CRR portfolio.

LBBW's market price risk model is also uniformly used for all sub-portfolios and for the Group's subsidiaries that are integrated in Group-wide standardized management based on the value-at-risk risk indicator.

In the risk-calculation simulation, the deviation of the risk factors is calculated using the following models: equity prices, FX rates and interest-rate volatility using log yields, CDS spreads and interest rates using absolute yields and equity/FX volatilities using relative yields.

Interest rate risks describe potentially negative developments in market interest rates. In addition to parallel shifts and turns in yield curves, basic risks arising from movements in the relevant fixed-income markets relative to each other are also included in risk calculations.

Credit spread risks from securities and Schuldschein loans are measured on the basis of the general and specific issuer risk. This risk category includes trading book transactions that are sensitive to creditworthiness. For the purpose of measuring general risk, these instruments are allocated to rating- and sector-dependent yield curves on a risk basis, as well as CDS spreads to reflect issuer-specific risks. Own discount curves are also used for government bonds and bonds issued by German federal states.

Reference borrowers are allocated to CDS sector curves for credit spread risks from credit derivatives. The allocated CDS sector curves are deflected for the general interest rate risk.

Interest rate and credit spread risks account for the most significant share of LBBW's market price risk. Equity risks are less significant.

### Stress tests

Stress testing is used to examine how the value of the portfolio changes under extreme market conditions. LBBW's risk system includes historical and synthetic (self-defined) scenarios. Synthetic scenarios are based mostly on selected market factor groups such as individual and combined interest shifts. Historical scenarios were generated from the data analyses of market shocks. All scenarios serve the purpose of mapping extreme events in the financial markets on a forward-looking basis in cases in which these are not specifically included in the VaR. These scenarios are applied to the portfolio on a weekly basis together with the pre-defined market data changes and any resulting changes in the present values reported as stress test results.

At present, a scenario which simulates the 2008/2009 financial crisis is the scenario with the greatest impact on LBBW's trading book. Under this scenario, the credit spreads of financials and corporates widen particularly and interest rates fall. The scenario with the second largest impact on LBBW's trading book is that featuring a sovereign crisis that simulates market fluctuations from 2011 and 2012. Credit spreads of periphery countries increase significantly, financials and corporates widen moderately and interest rates fall.

## Inclusion in the trading book

The Internal Criteria of LBBW (including foreign branches) are the central document for the allocating positions to the trading book for the purpose of defining the trading book in accordance with Articles 102 et seqq. CRR. This document describes the general allocation criterion as well as specific details with respect to the business portfolio of LBBW (Bank), the rules for shifts between the non-trading book and the trading book as well as the technical methods for determining the positions. The Internal Criteria also include the following rules.

Pursuant to Article 4 (1) (86) CRR, LBBW's trading book consists of »all positions in financial instruments and commodities held […] either with trading intent or to hedge positions held with trading intent«. According to Article 4 (1) (86) CRR, the decisive criterion for the allocation of a financial instrument or a commodity to the trading book is the trading intent or the hedging of other positions held with trading intent. This is expressed as the intent to generate income from own trading, i.e. to leverage differences between buying and selling prices or from other price, value or interest rate variations in the short term or to sell the position at short notice. Trading intent as per Article 102 (2) CRR can be demonstrated clearly based on LBBW's market-price/liquidity risk strategy along with the clearly drawn up rules on the active management and monitoring of the positions held in the trading book.

The trading strategy also includes the expected holding period (Article 103 (a) CRR). At LBBW, this period is up to one year. If positions allocated to the trading book are not resold or closed within this period, the intended purpose and the future allocation to the trading or non-trading book are reviewed based on the holding period concepts defined internally. In this review, trading intent can be evidenced both based on trading turnover (changes in holdings of a specific security) – which should be the main focus of attention when monitoring the holding period of securities – and on changes in sensitivities.



Apart from a review of the holding period, tradability is also reviewed. Under normal market conditions, the criteria set out in LBBW's holding-period concept shall be factored in to check the tradability and hedgeability of the positions' market risk in the trading book. These criteria refer to individual product classes respectively. The middle office of the respective trading areas is responsible for checking with the appropriate trader the tradability and hedgeability of each and every position which has exceeded the permitted holding period based on technical evaluations and taking into account the criteria mentioned earlier. Apart from answering the question of whether the position is still tradable and hedgeable, the staff in charge are required to provide detailed justification of any remaining trading intent based on an assessment of the market and of tradability and hedgeability. Monitoring the holding period and marketability takes place at the set dates, namely as per the last trading days of April and October, respectively.

Reallocation decisions in relation to individual positions which have to be switched from the trading into the non-trading book because the holding period has been exceeded or for any other reason defined in the Internal Criteria shall be taken in accordance with set procedures and documented in writing.

In the case of derivatives positions, the review for an allocation to the trading book is based on an analysis of whether the portfolio is being actively managed and not at individual transaction level. This process arises because it involves OTC contracts which are generally held until final maturity. The active management of a portfolio is checked based on changes in sensitivities.

## Measurement of trading book positions

LBBW measures its trading book positions at market prices which are obtained on a daily basis from sources independent of trading and are especially quality-assured or which are supplied by the trading units and examined in Risk Control. Risk Control also applies consistent standards and processes for performing an independent price verification (IPV) process, in which trading prices are monitored on an independent basis.

The providers of market data used include Reuters, Bloomberg and MarkIT. If the data is not directly observable in the market, LBBW uses measurement models which incorporate parameters derived from market prices. In addition, model valuation adjustments are made in the light of the principle of caution.

### Adjustments in accordance with Article 105 CRR (»prudent valuation«)

In addition, LBBW makes deductions from its regulatory own funds to allow for model risks, settlement costs, market price uncertainty, unearned credit risk premiums, operational risks, less liquid and concentration positions as well as administration expenses, cash investment and borrowing costs. These adjustments are calculated for all positions measured at fair value and deducted from Common Equity Tier 1 capital. The prudent valuations are regularly reviewed in a procedure documented in writing in LBBW's rules.

## 16.4 Market risk under the internal Model Approach (IMA) (Article 455 e CRR)

| EUR million | RWEAs | Own funds requirements |
|---|---|---|
| **VaR (higher of values a and b)** | **350** | **28** |
| Previous day's VaR (VaRt-1) | | 8 |
| Multiplication factor (mc) x average of previous 60 working days (VaRavg) | | 28 |
| **SVaR (higher of values a and b)** | **2,738** | **219** |
| Latest available SVaR (SVaRt-1) | | 73 |
| Multiplication factor (ms) x average of previous 60 working days (sVaRavg) | | 219 |
| **IRC (higher of values a and b)** | | |
| Most recent IRC measure | | |
| 12 weeks average IRC measure | | |
| **Comprehensive risk measure (higher of values a, b and c)** | | |
| Most recent risk measure of comprehensive risk measure | | |
| 12 weeks average of comprehensive risk measure | | |
| Comprehensive risk measure - Floor | | |
| **Other** | | |
| *Total* | *3,089* | *247* |

Figure 50: EU MR2-A - Market risk under the Internal Model Approach (IMA)

## 16.5 RWEA flow statements of market risk exposures under the IMA (Article 438 h CRR)

| EUR million | VaR | SVaR | IRC | Compre-hensive risk measure | Other | Total RWAs | Total own funds require-ments |
|---|---|---|---|---|---|---|---|
| *RWAs at previous period end* | *374* | *2,439* | | | | *2,813* | *225* |
| *Regulatory adjustment* | 271 | 1,732 | | | | 2,003 | 160 |
| *RWAs at the previous quarter-end (end of the day)* | *103* | *707* | | | | *810* | *65* |
| Movement in risk levels | -25 | 205 | | | | 180 | 14 |
| Model updates/changes | | | | | | | |
| Methodology and policy | | | | | | | |
| Acquisitions and disposals | | | | | | | |
| Foreign exchange movements | | | | | | | |
| Other | 19 | | | | | 19 | 2 |
| *RWAs at the end of the reporting period (end of the day)* | *97* | *912* | | | | *1,009* | *81* |
| *Regulatory adjustment* | 253 | 1,826 | | | | 2,079 | 166 |
| *RWAs at the end of the reporting period* | *350* | *2,738* | | | | *3,089* | *247* |

Figure 51: EU MR2-B – RWEA flow statements of market risk exposures under the IMA



The values for RWEAs including regulatory adjustments calculated in accordance with the internal model increased on the previous quarter.

In the case of RWEAs from VaR before regulatory adjustment, the decline due to position changes (movement in risk levels) overrode the increase due to the change in market data (other). The regulatory adjustment also declined. The reason for this is that the 60-day average used for the calculation is lower because higher, older values fell out of the observation period. RWEAs from stressed VaR before regulatory application increased due to position changes. Inclusion of the higher SVaR values in the 60-day average additionally resulted in a higher regulatory adjustment.

## 16.6 IMA values for trading portfolios (Article 455 d CRR)

The following table shows the normal VaR and stressed VaR for the trading book (99%/10 days) at institution level.

| **EUR million** | |
|---|---|
| **VaR (10 day 99%)** | |
| Maximum value | 10 |
| Average value | 8 |
| Minimum value | 6 |
| Period end | 8 |
| **sVaR (10 day 99%)** | |
| Maximum value | 81 |
| Average value | 59 |
| Minimum value | 51 |
| Period end | 73 |
| **IRC (99.9%)** | |
| Maximum value | |
| Average value | |
| Minimum value | |
| Period end | |
| **Comprehensive risk measure (99.9%)** | |
| Maximum value | |
| Average value | |
| Minimum value | |
| Period end | |

Figure 52: EU MR3 - IMA values for trading portfolios

## 16.7 Comparison of VaR estimates with gains/losses (Article 455 g CRR)

### Backtesting and validation

LBBW's market risk model is subject to an extensive validation program implemented within Risk Control by the Independent Validation Unit, which is organizationally independent of model development. In this validation program, the potential model risks are identified in the stochastics of the market factors (distribution model, risk factor model), in the implemented valuation procedures (measurement model) and in the relevant market data (market data model), and are measured in terms of their materiality using tailor-made analyses. These analyses comprise benchmarking and backtesting. Benchmarking compares the productive model against benchmark models that are (objectively) improved in one or more model components in order to quantify incorrect VaR forecasts (from one or more model weakness(es)). In contrast, backtesting constitutes statistical backtesting of risk predictions with hypothetical (clean backtesting) and actual (dirty backtesting) changes in portfolio value. In this context, the hypothetical changes in portfolio value are so separate that backtesting allows not only a statement on the forecast quality of the model as a whole, but also isolated statements on the quality of the distribution model, the risk factor model and the measurement model. If the validation indicates material model risks, these are made transparent to the model developers and recipients of the reports so that necessary model optimization measures can be initiated promptly.

The CRR portfolio, which comprises trading transactions whose own funds requirements for general equity and general interest rate risks takes place via the internal risk model, shows four outliers in the past 250 trading days for the clean P/L. The first outlier occurred on 27 October 2021 with an overshoot of EUR 2.184m and was caused by strong market fluctuations in yield and credit spread curves, triggered by concerns over a global tightening of monetary policy by central banks and the affects of COVID-19 on economic developments. The next outlier was on 29 October 2021 at EUR 0.612m as a result of strong market fluctuations in credit spread curves of sovereign bonds and financials as well as market movements in swap curves associated with partial curve flattening. This was again due to market participants' concerns over tightening of monetary policy to combat inflation, which led to reassessment of the money markets and interest rate expectations. On 17 November 2021, there was another outlier of EUR 1.382m due to the widening of credit spreads. Risk sentiment deteriorated as a result of inflation and growth concerns. The fourth outlier was on 26 November 2021 and amounted to EUR 5.335m due to sharp changes in yield and credit spread curves. The market was reacting to a sharp rise in COVID-19 infections and the emergence of the Omicron variant.

On the basis of the dirty P/L, there were two outliers for the CRR portfolio. The first outlier occurred on 4 November 2021 at EUR 0.449m due to an unexpected decision by a central bank. This resulted in significant changes in yield curves and prices for sovereign bonds. The second outlier on 26 November 2021 resulted in an overshoot of EUR 2.063m due to significant changes in yield and credit spread curves. The market was reacting to a sharp rise in COVID-19 infections and the emergence of the Omicron variant.

In backtesting, models representing 45.7% of total own funds requirements for market price risks are compared backwards.



For a better overview, clean backtesting and dirty backtesting are illustrated in two charts (1) and (2).

Clean backtesting CRR portfolio for the period 8 January 2021 – 30 December 2021 in EUR million

**VaR parameters: 99% confidence level, 1-day holding period**

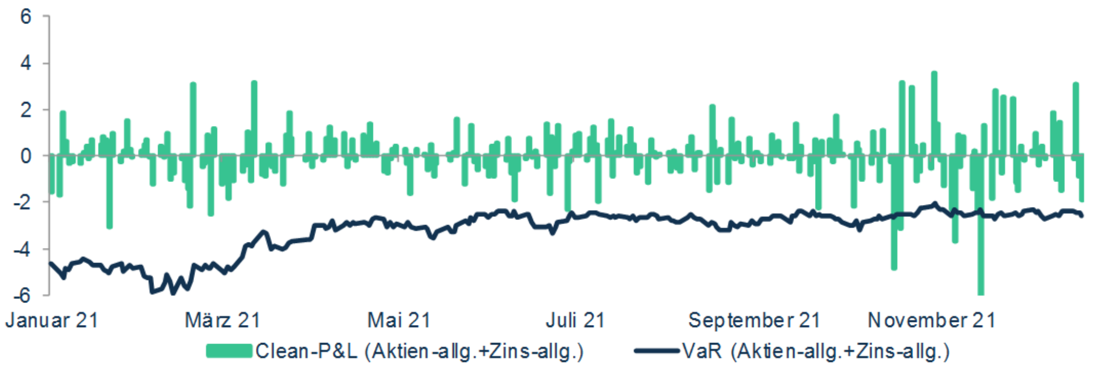


Figure 53: EU MR4 - Comparison of VaR estimates with gains/losses (1)

Dirty backtesting CRR portfolio for the period 8 January 2021 – 30 December 2021 in EUR million

**VaR parameters: 99% confidence level, 1-day holding period**

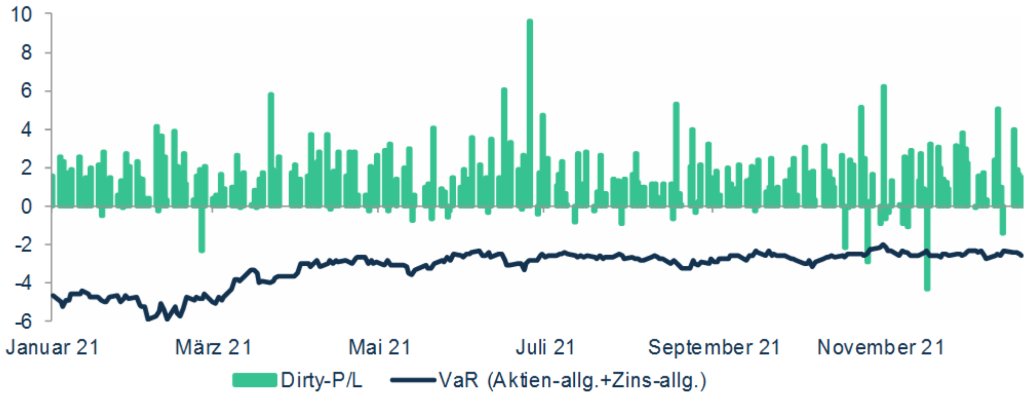


Figure 54: EU MR4 - Comparison of VaR estimates with gains/losses (2)

# 17 Disclosure of operational risk (Articles 435, 446, 454 CRR)

## 17.1 Qualitative information on operational risk (Articles 435 (1), 446, 454 CRR)

In accordance with regulatory requirements, operational risks are described as the risk of losses arising due to the unsuitability or failure of internal processes and systems, people, or due to external events. This definition also includes legal risks. Business risks and reputation risks are not included under operational risks.

A dual overall approach is in place, under which an independent, centralized organizational unit within Risk Control is tasked with further developing and implementing the methods and tools used by OpRisk controlling. In the LBBW Group, the execution of the processes implemented for the management of operational risks is mainly the responsibility of the local divisions and subsidiaries.

The central parameters for handling operational risks are anchored in the Group risk strategy, the operational risk section of the non-financial risk strategy and the policy for operational risks as well as in the framework and instructions.



Operational risk management and controlling focuses on identifying operational risks at an early stage, presenting them in a transparent manner and managing them proactively. The objective is to minimize or avoid risks, taking cost/benefit aspects into consideration. The internal control system, an open risk culture, the sensitivity to risks of all staff members and transparency when handling risks also play an important role in limiting operational risks.

Internal and external loss event data, the annual risk inventory (self-assessment and scenario analysis) and risk indicators are used to identify and assess the risk situation. The centralized OpRisk Controlling unit provides decision-makers with relevant information as part of regular risk reporting. Ad hoc reports are also made depending on the amount of loss. The overall exposure to operational risks is aggregated within the risk-bearing capacity concept on the basis of operational value-at-risk (OpVaR) in the LBBW Group's limit system.

The standard approach under Article 317 et seqq. CRR is applied to determine own fund requirements for regulatory purposes. As at 31 December 2021, these amounted to EUR 385m (previous year: EUR 385m). Unlike in the previous year, this year LBBW did not include year-end gains for the 2021 financial year in advance.

Further information on operational risks can be found in section 3.1 Institution's risk management approach (Article 435 (1) CRR).

The advanced measurement approach (AMA) and risk mitigation with insurance in the advanced measurement approach are not applicable for LBBW.

## 17.2 Operational risk own funds requirements and risk-weighted exposure amounts (Articles 446, 454 CRR)

| | a | b | c | d | e |
|---|---|---|---|---|---|
| EUR million | Relevant indicator | | | Own funds requirements | Risk exposure amount |
| | Year-3 | Year-2 | Last year | | |
| Banking activities subject to basic indicator approach (BIA) | | | | | |
| Banking activities subject to standardized (TSA) / alternative standardized (ASA) approaches | 2,497 | 2,587 | 2,600 | 385 | 4,815 |
| Subject to TSA: | 2,497 | 2,587 | 2,600 | | |
| Subject to ASA: | | | | | |
| Banking activities subject to advanced measurement approaches AMA | | | | | |

Figure 55: EU OR1 - Operational risk own funds requirements and risk-weighted exposure amounts

The own funds requirement is calculated on the basis of the audited annual financial statements.

# 18 Disclosure of encumbered and unencumbered assets (Article 443 CRR)

## 18.1 Encumbered and unencumbered assets (Article 443 CRR)

| | Carrying amount of encumbered assets | | Fair value of encumbered assets | | Carrying amount of unencumbered assets | | Fair value of unencumbered assets | |
|---|---|---|---|---|---|---|---|---|
| | | of which notionally eligible EHQLA and HQLA | | of which notionally eligible EHQLA and HQLA | | of which EHQLA and HQLA | | of which EHQLA and HQLA |
| **Assets of the reporting institution** | **101,546** | **16,690** | | | **200,432** | **73,723** | | |
| Equity instruments | 1 | 0 | 1 | 0 | 10,265 | 993 | 11,735 | 1,513 |
| Debt securities | 17,357 | 14,348 | 17,354 | 14,344 | 20,696 | 9,127 | 21,327 | 9,859 |
| of which: covered bonds | 11,600 | 11,486 | 11,605 | 11,491 | 3,759 | 3,451 | 3,762 | 3,453 |
| of which: securitizations | - | - | - | - | 428 | - | 429 | - |
| of which: issued by general governments | 2,364 | 2,349 | 2,354 | 2,339 | 3,793 | 3,303 | 3,757 | 3,312 |
| of which: issued by financial corporations | 14,840 | 11,838 | 14,849 | 11,844 | 15,689 | 5,126 | 15,588 | 5,131 |
| of which: issued by non-financial corporations | 153 | 78 | 152 | 78 | 765 | 264 | 807 | 272 |
| Other assets | 83,773 | 2,359 | | | 178,990 | 65,084 | | |

Figure 56: EU AE1 - Encumbered and unencumbered assets

## 18.2 Collateral received and own debt securities issued (Article 443 CRR)

| | Fair value of encumbered collateral received or own debt securities issued | | Unencumbered: Fair value of collateral received or own debt securities issued available for encumbrance | |
|---|---|---|---|---|
| | | of which notionally eligible EHQLA and HQLA | | of which EHQLA and HQLA |
| **Collateral received by the reporting institution** | **21,138** | **16,445** | **23,979** | **17,582** |
| Loans on demand | - | - | - | - |
| Equity instruments | - | - | 1,736 | 1,640 |
| Debt securities | 21,138 | 16,445 | 22,480 | 16,093 |
| of which: covered bonds | 880 | 461 | 450 | 329 |
| of which: securitizations | - | - | - | - |
| of which: issued by general governments | 14,998 | 14,738 | 5,390 | 5,231 |
| of which: issued by financial corporations | 4,708 | 1,335 | 16,968 | 10,600 |
| of which: issued by non-financial corporations | 619 | 394 | 674 | 333 |
| Loans and advances other than loans on demand | - | - | - | - |
| Other collateral received | - | - | - | - |
| **Own debt securities issued other than own covered bonds or securitizations** | **-** | **-** | **930** | **-** |
| **Own covered bonds and asset-backed securities issued and not yet pledged** | | | **66** | **-** |
| *TOTAL ASSETS, COLLATERAL RECEIVED AND OWN DEBT SECURITIES ISSUED* | *123,166* | *33,221* | | |

Figure 57: EU AE2 - Collateral received and own debt securities issued

## 18.3 Sources of encumbrance (Article 443 CRR)

| | Matching liabilities, contingent liabilities or securities lent | Assets, collateral received and own debt securities issued other than covered bonds and securitizations encumbered |
|---|---|---|
| Carrying amount of selected financial liabilities | *93,632* | *110,148* |

Figure 58: EU AE3 - Sources of encumbrance

## 18.4 Explanatory information (Article 443 CRR)

Asset encumbrance is defined in the Commission Implementing Regulation (EU) 2021/451. Under this, an asset is encumbered if it is used as collateral or is the subject of any form of agreement on the provision of collateral, the securing or grant of loan collateral for a transaction from which it cannot be withdrawn without prior approval (for a definition see Commission Implementing Regulation (EU) 2021/451 of 17 December 2020, Chapter 1.7). The value of encumbered assets is therefore fundamentally influenced by a bank's business model.

At LBBW, disclosures on asset encumbrance are based on the regulatory scope of consolidation within the meaning of CRR.

There is no material difference between the methodology for calculating encumbered assets as part of the asset encumbrance report and the assets shown in the notes to the consolidated financial statements, where assets are posted/transferred.

For this disclosure of encumbered assets, the medians are calculated on the basis of quarterly figures for the last twelve months. It should be noted that the totals are also calculated as a median on the basis of quarterly figures for the last twelve months. The total disclosed may therefore differ from the total of the sub-items.

A large part of the encumbered assets results from LBBW's function as the clearing bank for the savings banks. This causes an increase in encumbered assets allocated particularly to the promotional pass-through loans, repo transactions and derivatives asset categories. LBBW has encumbered (on-balance-sheet) assets of EUR 101.5bn (previous year: EUR 112.3bn) and unencumbered assets of EUR 200.4bn (previous year: EUR 174.2bn). The encumbered on-balance-sheet assets primarily relate to the following positions:

- Promotional pass-through loans: LBBW passes on loans provided by promotional/development banks to the savings banks. These pass-through loans are classed as encumbered assets. Encumbered pass-through loans account for 33% (previous year: 27%) of the encumbered assets.
- Covered bonds: LBBW issues covered bond in accordance with German covered bond legislation. Accordingly, 28% (previous year: 24%) of the encumbered assets are for covered bonds. The figures include the statutory, the rating-related and the voluntary surplus cover.
- Derivatives: 12% (previous year: 23%) of the encumbered assets are related to OTC derivatives. Positive fair values under derivatives particularly result in an encumbrance as some of these are reported within gross asset encumbrance (without netting of the corresponding liability position). LBBW transacts derivatives under national and international agreements (German Rahmenvertrag and ISDA Master Agreement) and with corresponding credit support annexes.

Virtually all encumbrances are driven by LBBW itself. There are only negligible encumbrances within the LBBW Group.

The total of the cover pools for outstanding Pfandbriefe (public and mortgage Pfandbriefe) for the disclosure period (2021 financial year) was EUR 27.8bn (previous year: EUR 26.9bn). The cover pools also include overcollateralization of EUR 11.9bn (previous year: EUR 9.0bn), which is categorized as encumbered for the purposes of the asset encumbrance report. This comprises the legally required overcollateralization, overcollateralization required by rating agencies and, primarily, voluntary overcollateralization. This high overcollateralization is also a key reason for the high share of Pfandbriefe in comparison to total encumbered assets. This thus affects LBBW's asset encumbrance ratio.

LBBW received collateral worth a total of EUR 45.2bn (previous year: EUR 45.6bn); of this, EUR 21.1bn (previous year: EUR 18.6bn) was reused. The reused collateral is particularly related to repo and securities lending business. LBBW uses bilateral and triparty repo and lending markets such as Eurex GC Pooling and Fixed Income Clearing Corporation (FICC) for funding purposes. LBBW transacts derivatives under national and international repo contracts (Rahmenvertrag für Wertpapierpensionsgeschäfte, Global Master Repurchase Agreement and Master Repurchase Agreement). LBBW enters into securities lending agreements under national and international security loan master agreements (Rahmenvertrag für Wertpapierdarlehen and Global Master Securities Lending Agreement).

At LBBW, the US dollar is currently a significant currency in the sense of Article 415 (2) CRR. Encumbrances in USD are immaterial in terms of their amount and result chiefly from repos and securities lending.

LBBW does not consider some of the unencumbered assets in the column »Carrying amount of unencumbered assets« listed in form A as suitable for encumbrance. This essentially includes receivables from reverse repos, derivative assets, majority interests, property plant and equipment and cash in hand.

Repurchased covered bonds amounted to EUR 66.5m in the disclosure period (previous year: EUR 220.7m). These are unencumbered, as the underlying assets in the cover fund are fully encumbered. LBBW does not have any retained asset-backed securities.

# 19 Disclosure of exposures to interest rate risk on positions not held in the trading book (Article 448 CRR)

## 19.1 Exposures to interest rate risk on positions not held in the trading book (Article 448 CRR)

| EUR million | Changes of the economic value of equity | | Changes of the net interest income | |
|---|---|---|---|---|
| Supervisory shock scenarios | Current period | Last period | Current period | Last period |
| Parallel up | -1,303 | -1,213 | 292 | 295 |
| Parallel down | 277 | 133 | -102 | -92 |
| Steepener | -74 | -88 | | |
| Flattener | -306 | -249 | | |
| Short-term shock up | -574 | -488 | | |
| Short-term shock down | 345 | 260 | | |

Figure 59: EU IRRBB1 - Interest rate risks of non-trading book activities

»Last period« shows the figures as of 30 June 2021.

## 19.2 Explanatory information (Article 448 CRR)

As a matter of principle, all new customer exposures are funded on a matching maturities basis with minimum delay, based on their legal maturities. Treasury accepts further strategic positions in a framework established by the Board of Managing Directors as a whole on the basis of LBBW's business strategy. These items include risks in the form of cash flow incongruities (structural risks), risks from leveraging interest rate gaps between individual market segments (basic risk) and options risks from financial transactions entered into.

## Quantification

All relevant interest-bearing and/or interest-sensitive positions in the non-trading book are included in measurements of potential changes in economic value in accordance with LBBW's own procedures for measuring interest rate risks. These also include definitions for handling loans that mature early. The daily valuation is on an individual-transaction and portfolio basis respectively.

For variable-rate transactions with private and corporate customers (particularly deposits), records made on grounds of conditions or conduct are taken into account by using the deposit base theory in conjunction with the concept of moving averages.

Interest rate risks are measured daily using a Monte Carlo simulation. Here, changes in the value of the non-trading book as a whole or even for individual portfolios are specified for each currency using randomly selected interest rate scenarios. Together with the confidence level, the distribution arising from this serves to determine the VaR (confidence level of 99% and holding period of one trading day). The VaR expresses the potential loss which with 99% probability will not be exceeded within a trading day. The calculated risks of the non-trading book are taken into account in risk-bearing capacity on the basis of the relevant parameterization.

In addition to daily reporting, further stress and worst-case scenarios are calculated on a weekly basis. All scenarios help to show the future effects of extreme events on the financial markets which are not sufficiently presented in the VaR normal impact event on the respective book. Extreme historic market fluctuations and self-defined scenarios are used in this respect. Scenarios that specifically quantify the effects of interest rate changes on the economic value of positions in the non-trading book are also included.

In order to measure the influence of interest rate changes on net interest income, projections for interest income and expenses are calculated in various scenarios. The scenarios are divided between scenarios with a constant balance sheet (balance sheet with new business to replace expiring transactions) and scenarios with a dynamic balance sheet. In addition to the interest projections for a constant balance sheet in combination with parallel shifts, interest projections are also calculated for a constant balance sheet in combination with the four other regulatory scenarios.

The quarterly ICAAP looks at multi-period scenarios (5 years) based on a dynamic balance sheet. These scenarios include both cross-risk type and interest-specific scenarios. The interest-specific scenarios comprise a scenario in which interest rates increase and a scenario with constant interest rates.

The interest projections relate to the complete external interest rate. The interest projections require assumptions on the development of market data as well as assumptions on the development of the balance sheet. A distinction is drawn between a constant and a dynamic balance sheet. For a constant balance sheet, expiring transactions are replaced by similar new transactions. This approach is also applied to the hedges. Further assumptions on balance sheet development are not required.

For the dynamic balance sheet, assumptions must be made regarding balance sheet development. These assumptions are part of the definition of the respective scenario.

Net interest income is part of monthly reporting. In addition, effects of shock scenarios are calculated and reported on a quarterly basis for the constant balance sheet and the effects of dynamic interest rate developments ascertained in the ICAAP.

Modeling for ancillary agreements and non-maturity deposits is based on specific models.

## Ancillary agreements

The scope of the analysis for modeling ancillary agreements includes all fixed-rate euro loans with material ancillary agreements. For materiality reasons, other currencies are not currently in the focus of ancillary agreement modeling. This overall portfolio is divided by type of termination right and into the customer groups retail and non-retail. In the case of termination rights, a distinction is made – as far as possible – between BGB and contractual termination rights.

In the modeling of special repayments, the starting nominal of a transaction is selected as the reference value for the modeled prepayment rate. As special repayment rights' dependence on interest rates is historically limited, especially in the current low interest rate environment, they are covered by a non-interest model. The basic assumption of the modeling is always that the expected prepayment rate for active special repayment rights (in relation to the starting nominal) is independent of time and interest rates. A standard expected prepayment rate is assumed for all transactions whose special repayment right is active at time $t$; a prepayment rate of zero is assumed for all other transactions.

In the modeling of Section 489 BGB special termination rights until the end of margin pegging (margin pegging here is the same as interest rate pegging), only the next possible termination right is relevant for this portfolio segment. The modeling uses a prepayment model, which seems particularly reasonable in light of the special termination character of the Section 489 BGB special termination rights. Interest-based models are used as the interest rate environment has considerable influence on the termination decision. The starting nominal is of subordinate importance for special termination rights. Ignoring partial terminations, the central parameter is the termination rate, i.e. the probability of termination. In a portfolio view, the termination rate corresponds to a prepayment rate in relation to the current outstanding nominal. It therefore stands to reason to select the currently outstanding capital balance $K(t)$ as the reference value for the modeled prepayment rate. The basic assumption of the modeling is that the expected prepayment rate for active special termination rights comprises two components: an interest-based, one-time rate and a non-interest, periodic core deposit rate. Both prepayment rates relate to the outstanding capital balance.



## Non-maturity deposits

Non-maturity deposits are presented using a core deposit model in combination with a replication model.

In the quantification of interest rate risk, the stock of non-maturity deposits (NMD stock) is broken down into the stable portion, the core deposits, and a complementary and directly interest-sensitive volatile portion due to transactions in NMD accounts that fluctuate due to regular deposits and withdrawals. The volatile portion is expressed by a fluctuation range. The method selected to obtain a constant, specific behavior-based term for NMDs is the creation of a replication portfolio, which allocates the volume of the core deposits to long-term investments and generates a moving average return. The method of compiling a replication portfolio is intended to create a portfolio of products of differing terms that replicates the cash flows of the NMDs sufficiently closely and has a constant average term, on which the NMDs are based.

The creation of the portfolio does not account for all potentially possible mix ratios, but only those that can practically be used and can meaningfully be used under the given term restrictions.

# Interest rate risks in the non-trading book

**Present value perspective**

Under regulatory requirements, the effect of an interest-rate shock on the economic value must be disclosed in the non-trading book. This involves a parallel shift in the yield curve in accordance with EBA/GL/2018/02. The change in customer behavior was also simulated when assessing the impact. In the »Parallel fall in interest rates« scenario, each currency has a lower interest rate limit depending on the maturity, starting at -1% for items that mature immediately. This lower limits increases by 5 basis points each year, until 0% is reached for maturities from 20 years. Thus, the effective fall in interest rates assumed in the scenario is determined by current interest rates and the lower interest rate limit depending on the maturity.

Given the still very low interest rates in EUR and the lower interest rate limit depending on the maturity, there is still a difference between the absolute stress results for the increasing interest rate and declining interest rate scenario.

**Periodic perspective**

The changes in net interest income (NII) in a 12-month analysis for the shock scenarios result primarily from the non-maturity deposits (NMDs).

# 20 Disclosures on COVID-19 (EBA/GL/2020/07)

The following section discloses the information on the effects of the COVID-19 crisis as required by EBA/GL/2020/07 of 2 June 2020.

## 20.1 Information on loans and advances subject to legislative and non-legislative moratoria (EBA/GL/2020/07)

As *COVID-19 template 1 - Information on loans and advances subject to legislative and non-legislative moratoria* is a zero report for both the current and the previous period (30 June 2021), the template is not presented.

# 20.2 Breakdown of loans and advances subject to legislative and non-legislative moratoria by residual maturity of moratoria (EBA/GL/2020/07)

| EUR million | Number of obligors | Gross carrying amount | Of which: legislative moratoria | Of which: expired | Residual maturity of moratoria: <= 3 months | > 3 months <= 6 months | > 6 months <= 9 months | > 9 months <= 12 months | > 1 year |
|---|---|---|---|---|---|---|---|---|---|
| *Loans and advances for which moratorium was offered* | *1,294* | *562* | | | | | | | |
| *Loans and advances subject to moratorium (granted)* | *1,294* | *562* | *168* | *562* | | | | | |
| Of which: households | | 259 | 167 | 259 | | | | | |
| Of which: collateralized by residential immovable property | | 206 | 139 | 206 | | | | | |
| Of which: non-financial corporations | | 289 | 1 | 289 | | | | | |
| Of which: small and medium-sized enterprises | | 195 | 1 | 195 | | | | | |
| Of which: collateralized by commercial immovable property | | 216 | 1 | 216 | | | | | |
| *Loans and advances for which moratorium was offered – 30 June 2021* | *1,301* | *602* | | | | | | | |
| *Loans and advances subject to moratorium (granted) – 30 June 2021* | *1,301* | *602* | *181* | *602* | | | | | |

Figure 60: COVID-19 template 2 - Breakdown of loans and advances subject to legislative and non-legislative moratoria by residual maturity of moratoria

In addition to the legislative moratorium for consumers, LBBW also used private moratoria of DSGV (Deutscher Sparkassen- und Giroverband), VdP (Verband der Pfandbriefbanken) and VÖB (Bundesverband Öffentlicher Banken Deutschlands) during the COVID-19 pandemic. The KfW private moratorium for development loans was also used.

LBBW thereby allowed customers affected by the COVID-19 crisis to defer the loan repayments due for up to six months, or nine months for KfW development loans. As at 30 June 2021, there were already no more forbearance agreements made on the basis of the moratoria up to 30 September 2020.

## 20.3 Information on newly originated loans and advances provided under newly applicable public guarantee schemes introduced in response to COVID-19 crisis (EBA/GL/2020/07)

| | Gross carrying amount | | Maximum amount of the guarantee that can be considered | Gross carrying amount |
|---|---|---|---|---|
| EUR million | | Of which: forborne | Public guarantees received | Inflows to non-performing exposures |
| *Newly originated loans and advances subject to public guarantee schemes* | *833* | *13* | *698* | *1* |
| Of which: households | 31 | | | |
| Of which: collateralized by residential immovable property | 1 | | | |
| Of which: non-financial corporations | 802 | 13 | 670 | 1 |
| Of which: small and medium-sized enterprises | 301 | | | |
| Of which: collateralized by commercial immovable property | 83 | | | |
| *Newly originated loans and advances subject to public guarantee schemes – 30 June 2021* | *875* | *8* | *731* | *0* |

Figure 61: COVID-19 template 3 - Information on newly originated loans and advances provided under newly applicable public guarantee schemes introduced in response to COVID-19 crisis



Newly originated exposures subject to public guarantee schemes essentially comprise KfW (Kreditanstalt für Wiederaufbau) loans with indemnity.

# Attestation by the Board of Managing Directors pursuant to Article 431 CRR

With approval granted by the responsible member of the Board of Managing Directors Stefanie Münz, it is hereby attested that this disclosure has been made in accordance with the formal policies adopted by Landesbank Baden-Württemberg and internal processes, systems and controls.

# List of abbreviations

| | |
|---|---|
| ABCP | Asset-backed commercial paper |
| ASF | Available stable funding |
| AT1 | Additional Tier 1 capital |
| BaFin | Bundesanstalt für Finanzdienstleistungsaufsicht (German Federal Financial Supervisory Authority) |
| BCBS | Basel Committee on Banking Supervision |
| CCF | Credit conversion factor |
| CCP | Central counterparty |
| CCR | Counterparty credit risk |
| CDS | Credit default swap |
| CET1 | Common Equity Tier 1 |
| CLN | Credit linked note |
| COREP | Common solvency ratio reporting |
| CR | Credit risk |
| CRD | Capital Requirements Directive |
| CRM | Credit risk mitigation |
| CRR | Capital Requirements Regulation |
| CSD | Central securities depository |
| CVA | Credit valuation adjustment |
| DSGV | Deutscher Sparkassen- und Giroverband (German Savings Banks Finance Group) |
| EAD | Exposure at default |
| EBA | European Banking Authority |
| EEPE | Effective expected positive exposure |
| EIF | European Investment Fund |
| EL | Expected loss |
| ERBA | External ratings-based approach |
| EEA | European Economic Area |
| FBE | Forborne exposure |
| FCP | Funded credit protection |
| FINREP | Financial reporting |
| FX | Foreign exchange |
| GL | Guideline |
| HLBA | Historical look-back approach |
| IAA | Internal assessment approach |
| ICAAP | Internal capital adequacy assessment process |
| IFRS | International Financial Reporting Standards |
| IMA | Internal model approach |
| IMM | Internal model method |
| IRBA | Internal ratings-based approach |
| IRC | Incremental default and migration risk charge |
| SME | Small and medium-sized enterprises |
| CRSA | Credit risk standardized approach |
| KWG | Kreditwesengesetz (German Banking Act) |
| LCR | Liquidity coverage ratio |
| LGD | Loss given default |
| MTN | Medium term notes |
| NACE | Nomenclature Générale des Activités Économiques |
| NII | Net interest income |
| NMD | Non-maturity deposits |

| | |
|---|---|
| NPL | Non-performing loans |
| NSFR | Net stable funding ratio |
| O-SII | Other systemically important institutions |
| OTC | Over the counter |
| P/L | Profit and loss |
| PD | Probability of default |
| PFE | Potential future exposure |
| RC | Replacement cost |
| RSF | Required stable funding |
| RWA | Risk-weighted assets |
| RWEA | Risk-weighted exposure amount |
| SA-CCR | Standardized approach for counterparty credit risk |
| SFT | Securities financing transaction |
| SREP | Supervisory review and evaluation process |
| SRT | Significant risk transfer |
| STS | Simple, transparent and standardized securitizations |
| sVaR | Stressed value-at-risk |
| sVaRavg | Average stressed value-at-risk |
| T1 | Tier 1 capital |
| T2 | Tier 2 capital |
| TC | Total capital |
| TLTRO | Targeted longer-term refinancing operations |
| VaR | Value-at-risk |
| VdP | Verband deutscher Pfandbriefbanken (Association of German Pfandbrief Banks) |
| VÖB | Bundesverband Öffentlicher Banken Deutschlands (Association of German Public Banks) |

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Breaking new ground

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