

Disclosure Report 2023

Breaking new ground

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Disclosure Report 2023

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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”.

Part of the regulatory disclosure of ESG risks in accordance with Article 449a CRR was completed for the first time as at 31 December 2022. As per the law, further disclosures under Article 449a CRR will be made in stages in subsequent years. Information on the green asset ratio (GAR) and taxonomy compliance will thus be reported for the first time as at 31 December 2023.

The figures will be published by the Supervisory Board in the disclosure report on 8 April 2024 after approval of the annual financial statements. There will be slight increases in regulatory equity due to earnings retention and in the total risk exposure amount due to the changes to operational risks compared with the 2023 annual report, with a corresponding impact on the related ratios.

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. As in the previous year, the regulatory scope of consolidation in the disclosure report includes Berlin Hyp AG (“Berlin Hyp”), which was acquired in the 2022 financial year.

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

The section on the disclosure of own funds pursuant to Article 437 CRR 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). The requirement to publish supervisory relief granted by regulators during the COVID-19 pandemic under the EBA Guidelines EBA/GL/2020/07 no longer applies and this therefore no longer forms part of the disclosure report.

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 2023 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 438b, 447 a-g CRR)

The figures will be published by the Supervisory Board in the disclosure report on 8 April 2024 after approval of the annual financial statements. There will be slight increases in regulatory equity due to earnings retention and in the total risk exposure amount due to the changes to operational risks compared with the 2023 annual report, with a corresponding impact on the related ratios.

As a result of higher own funds combined with a total risk exposure amount at the previous quarter's level, the capital ratios increased. The CET1 ratio rose by 0.5% to 15.0%, the T1 ratio by 0.5% to 15.8%, and the total capital ratio by 0.3% to 20.2%. A detailed explanation of the changes can be found in sections 2.2 *Overview of risk-weighted exposure amounts (Article 438 d CRR)* and 5.1 *Composition of regulatory own funds (Article 437 a, d – f CRR)*.

The leverage ratio on the basis of the CRR transitional provisions (phase-in) came to 4.7% as at the end of the year (as at 30 September 2023: 4.1%). The leverage ratio exposure (phase-in) declined by EUR 38,608m last quarter. The decline in the leverage ratio exposure is particularly attributable to the reduction in transactions with sovereigns and central banks.

In the fourth quarter of 2023, the LCR ranged between 131% and 150% as at the reporting dates.

As at 31 December 2023, the net stable funding ratio (NSFR) was largely stable compared to the previous quarter.

		a	b	c	d	e
	EUR million	31/12/2023	30/09/2023	30/06/2023	31/03/2023	31/12/2022
Available own funds (amounts)						
1	Common Equity Tier 1 (CET1) capital	13,852	13,383	13,496	13,554	13,708
2	Tier 1 capital	14,596	14,127	14,239	14,298	14,452
3	Total capital	18,719	18,414	18,628	18,789	18,934
Risk-weighted exposure amounts						
4	Total risk-weighted exposure amount	92,480	92,429	93,643	93,663	93,645
Capital ratios (as a percentage of risk-weighted exposure amount)						
5	Common Equity Tier 1 ratio (%)	15.0	14.5	14.4	14.5	14.6
6	Tier 1 ratio (%)	15.8	15.3	15.2	15.3	15.4
7	Total capital ratio (%)	20.2	19.9	19.9	20.1	20.2
Additional own funds requirements to address risks other than the risk of excessive leverage (as a percentage of risk-weighted exposure amount)						
EU 7a	Additional own funds requirements to address risks other than the risk of excessive leverage (%)	1.83	1.83	1.83	1.83	1.83
EU 7b	of which to be made up of CET1 capital (percentage points)	1.03	1.03	1.03	1.03	1.03
EU 7c	of which to be made up of Tier 1 capital (percentage points)	1.37	1.37	1.37	1.37	1.37
EU 7d	Total SREP own funds requirements (%)	9.83	9.83	9.83	9.83	9.83
Combined buffer requirement (as a percentage of risk-weighted exposure amount)						
8	Capital conservation buffer (%)	2.50	2.50	2.50	2.50	2.50
EU 8a	Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)					
9	Institution specific countercyclical capital buffer (%)	0.64	0.64	0.63	0.57	0.06
EU 9a	Systemic risk buffer (%)	0.10	0.10	0.10	0.10	
10	Global systemically important institution buffer (%)					
EU 10a	Other systemically important institution buffer (%)	0.75	0.75	0.75	0.75	0.75
11	Combined buffer requirement (%)	3.99	3.99	3.98	3.92	3.31
EU 11a	Overall capital requirements (%)	13.82	13.82	13.81	13.75	13.14
12	CET1 available after meeting the total SREP own funds requirements (%)	8.41	7.91	7.83	7.89	8.06
Leverage ratio						
13	Total exposure measure	308,740	347,348	342,130	366,180	305,958
14	Leverage ratio (%)	4.7	4.1	4.7	3.9	4.7
Additional own funds requirements to address the risk of excessive leverage (as a percentage of total exposure measure)						
EU 14a	Additional own funds requirements to address the risk of excessive leverage (%)					
EU 14b	of which to be made up of CET1 capital (percentage points)					
EU 14c	Total SREP leverage ratio requirements (%)	3.0	3.0	3.0	3.0	3.0
Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)						
EU 14d	Leverage ratio buffer requirement (%)					
EU 14e	Overall leverage ratio requirements (%)	3.0	3.0	3.0	3.0	3.0
Liquidity coverage ratio						
15	Total high-quality liquid assets (HQLA) (weighted value - average)	106,635	106,915	105,436	101,963	
EU 16a	Cash outflows - total weighted value	101,012	101,597	100,221	99,330	
EU 16b	Cash inflows - total weighted value	21,704	21,039	20,514	21,129	
16	Total net cash outflows (adjusted value)	79,308	80,557	79,708	78,199	
17	Liquidity coverage ratio (%)	134.9	133.1	132.5	130.5	
Net stable funding ratio						
18	Total available stable funding	162,272	163,120	166,648	168,596	
19	Total required stable funding	147,788	147,251	145,987	142,624	
20	NSFR ratio (%)	109.8	110.8	114.2	118.2	

Figure 1: EU KM1 – Key metrics template

2.2 Overview of risk-weighted 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 using the simple risk-weighted method under the IRB approach. 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), SEC-IRBA (Securitization – Internal Ratings-Based Approach), 1,250%/deduction, 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	a	b	c
		Total risk exposure amounts (TREA)		Total own funds requirements
		31/12/2023	30/09/2023	31/12/2023
1	Credit risk (excluding CCR)	72,695	72,558	5,816
2	of which standardized approach	11,690	11,401	935
3	of which foundation IRB (FIRB) approach	58,875	58,764	4,710
4	of which slotting approach	106	114	9
EU 4a	of which equity exposures under the simple risk-weighted approach	1,368	1,534	109
5	of which advanced IRB (AIRB) approach			
6	Counterparty credit risk - CCR	5,393	5,260	431
7	of which standardized approach	2,785	2,783	223
8	of which internal model method (IMM)			
EU 8a	of which exposures to a CCP	209	156	17
EU 8b	of which credit valuation adjustment (CVA)	1,443	1,159	115
9	of which other CCR	955	1,163	76
10	Set not applicable in the EU			
11	Set not applicable in the EU			
12	Set not applicable in the EU			
13	Set not applicable in the EU			
14	Set not applicable in the EU			
15	Settlement risk	22	23	2
16	Securitization exposures in the non-trading book (after the cap)	3,479	3,516	278
17	of which SEC-IRBA approach	879	960	70
18	of which SEC-ERBA (including IAA)	1,063	1,016	85
19	of which SEC-SA approach	112	108	9
EU 19a	Of which 1250%/ deduction	1,424	1,432	114
20	Position, foreign exchange and commodities risks (market risk)	5,303	6,132	424
21	of which standardized approach	2,970	3,961	238
22	of which IMA	2,333	2,171	187
EU 22a	Large exposures			
23	Operational risk	7,012	6,371	561
EU 23a	of which basic indicator approach			
EU 23b	of which standardized approach	7,012	6,371	561
EU 23c	of which advanced measurement approach			
24	Amounts below the thresholds for deduction (subject to 250% risk weight - for informative purposes)	2,616	2,581	209
25	Set not applicable in the EU			
26	Set not applicable in the EU			
27	Set not applicable in the EU			
28	Set not applicable in the EU			
29	Total	93,904	93,860	7,512

Figure 2: EU OV1 – Overview of risk-weighted exposure amounts

The total risk-weighted exposure amount is virtually unchanged as against the previous quarter. The increase in operational risk essentially reflects higher gross income. This was offset by decreases in market price risks.

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 1,424m 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. A detailed analysis was performed in the Group risk inventory in 2023 in relation to environmental, social and governance risk drivers. The particularly important interdisciplinary risk area of "environmental risk" covers climate and environmental risks, which can have a transitory or physical impact.

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.

Further information on ESG risks can be found in *section 20 Regulatory disclosure of ESG risks (Article 449 a CRR)*.

The following material risk types were identified:

Financial risks

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

Non-financial risks

- Operational risks (in narrower sense)
- Legal risks
- ICT (information and communication technology) risks
- Compliance risks
- Outsourcing risks
- Reputation risks

- Business risks
- Model risks
- Tax compliance 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 individual, unforeseeable business incidents that cannot be quantified or can only be quantified with a high degree of uncertainty.

LBBW also considers “interdisciplinary risks”. These can also have negative 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 risks are:

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

LBBW works intensively on developing its methods and procedures for managing financial and non-financial risks and ESG risks.

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. 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 Group risk inventory. Berlin Hyp is integrated in the limit system.

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 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 internal sustainability targets and account for the resulting risks, sustainability aspects are included in the existing risk guidelines. Quantitative targets were also set in 2023.

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 resilience 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 current geopolitical/economic situation 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 developments. Both dynamic adverse developments in the medium-term planning time horizon and the shock occurrence of stress scenarios 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 (economic capital), 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 valuation 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 using internal risk models 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, operational, business and reputation risks.

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 quantified risk types. Berlin Hyp has its own economic capital limits related to risk types based on the upper economic capital limit.

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 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 considering the current risk situation, for example with regard to acute geopolitical risks and the major central banks' current monetary

policy, as well as hypothetical 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, dynamic time frame as part of medium-term planning or simulated as sudden shock scenarios. 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 and expected developments in the form of scenarios. 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 medium-term planning assuming 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.

ESG scenarios constitute a separate scenario class in LBBW's conceptual framework for stress tests and scenario analyses. ESG scenario analyses serve primarily as an early warning and way of identifying where action is required in the long term, as well as a basis for strategic discussions. To quantify the potential impact on the portfolio of climate and environmental risks, LBBW regularly performs an internal climate risk stress test, for example. The scenarios in the climate stress test are designed for medium to long-term horizons on the basis of scientifically substantiated state-of-the-art climate risk scenarios and particularly test LBBW's strategic portfolio alignment under adverse climate risk scenarios.

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. Berlin Hyp was included in reporting in the financial year, ensuring a high level of transparency.

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. This committee is made up of the divisional managers from Legal, Risk Control, Group Compliance, Finance, Group Auditing, the PKS central division, the COO for Risk Management, the COO for Capital Markets, IT Governance, and the managers of the Strategy and Investments departments.

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

EUR million	31/12/2023		31/12/2022	
	Absolute ¹	Utilization in %	Absolute ¹	Utilization in %
Aggregate risk cover	13,700	47	13,335	44
Economic capital limit ²	11,050	59	10,700	54
Correlated total economic capital	6,475		5,830	
of which:				
Counterparty risk	3,848		3,604	
Market price risk	1,928		1,665	
Investment risk	22		30	
Operational risk	803		690	
Development risk	132		98	
Real estate risk	150		135	
Other risks ³	409		279	
Interrisk correlations	-817		-672	

¹ Confidence level 99.9%/1 year.

² The individual risk types are capped by economic capital limits.

³ According to presentation of "Influencing factors for operational risk" in the section Non-Financial Risks – Operational Risks

⁴ Other risks (business and reputation risks)

Aggregate risk cover increased further by EUR 0.4bn compared to year-end 2022 to EUR 13.7bn. The positive development of earnings more than compensated for negative effects from market developments.

Economic capital has increased by a total of EUR 0.6bn since the end of 2022. The increase in counterparty risk is due firstly to portfolio effects and secondly to the loss of rating inheritance as a result of implementing EBA guidelines. The higher market price risk results in particular from the implementation of the EBA guideline on credit spread risk in the banking book. Methodological developments led to an increase in operational risk and in business and reputation risk. Lower interest rates also have a risk-increasing effect on the present values of the individual risk types.

To sum up, it can be stated that the risk-bearing capacity of the LBBW Group was maintained at the reporting dates during the 2023 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.

Details on the regulatory key figures can be found in the report on financial position and performance, the notes and in the liquidity risks section.

Other potential effects of geopolitical conflicts, supply chain bottlenecks, inflation and the development of interest rates on LBBW's economic and regulatory key performance indicators are regularly analyzed and investigated in stress scenarios. Given the dynamic pace of developments, however, the ability to provide an exact forecast is very limited.

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 2023 (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 Armbrorst	1	0
Jens Baumgarten	1	0
Dr. Danyal Bayaz	0	7
Christian Brand	3	2
Wolfgang Dietz	2	10
Christian Hirsch	1	0
Berhard Ilg	3	4
Gabriele Kellermann	3	4
Marc Oliver Kiefer	1	0
Bettina Kies-Hartmann	2	1
Dr. Frank Nopper	1	14
Dr. Fritz Oesterle	3	2
Martin Peters	2	45
B. Jutta Schneider	1	0
Peter Schneider	4	8
Wiebke Sommer	1	0
Dr. Florian Stegmann	3	5
Thomas Strobl	0	3
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 2023 (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	6
Andreas Götz	3	3
Karl Manfred Lochner	4	9
Stefanie Münz	1	1
Dr. Christian Ricken	2	5
Thorsten Schönenberger	2	3

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 aspects of diversity when selecting suitable candidates for the Board of Managing Directors and the Supervisory Board (e.g. gender, educational background and age) in order to include a wide range of qualities and skills. The various diversity aspects and their relevance to LBBW are reassessed regularly, at least once a year, to ensure they remain up to date.

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 the minimum percentage of women on the Supervisory Board and the Board of Managing Directors at LBBW is to be maintained at the previous year's level. 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.

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.

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.

Information on the diversity strategy is also published in LBBW's 2023 annual report.

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 Committee 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

Key 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.

Within the framework of regular risk reporting by the Board of Managing Directors, the Risk Committee addressed the Bank's risk situation, main types of risk, risk-bearing capacity and risk management in depth at a total of eleven meetings in 2023. It also granted its approval for or acknowledged exposures of the Bank for which reporting duties apply in accordance with the law, the articles of association and the bylaws. The Risk Committee discussed the Group risk strategy as derived from the business strategy, as well as the credit, market price, liquidity, real estate, development, investment and NFR risk strategies with the Board of Managing Directors, particularly also taking account of Berlin Hyp. In the context of dealing with the NFR risk strategy, the sub-types of risk included here were also discussed, particularly ESG and reputation risks as well as risks associated with information and communication technology. There was also in-depth reporting on the development of financed emissions and further developments in the assessment of sustainability risks. In addition, it took note of the annual report on country limits and their 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, and the implementation of BCBS 239. The Risk Committee also regularly dealt with other current topics and business areas, including periodic reports on the development of the pension fund and the LCR portfolio as well as current reports on major exposures and credit portfolios from a credit risk and non-financial risk perspective. In addition to the regular sector reports, there were other specific reports on the CRE portfolio and on the portfolios for the automotive industry, construction and financials. The Board of Managing Directors consistently informed the Risk Committee about current risk-relevant developments in the market and competitive environment, such as the development of interest rates and retail deposits, and about regulatory requirements with corresponding effects on the Bank. In particular, the results of ECB reviews were discussed in this context. The Risk Committee also examined whether the Bank's remuneration system took adequate account of the Bank's risk, capital and liquidity structure.

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 2023.

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 2023, 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.

	a	b	c	d	e	f	g
	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
EUR million							
Assets							
1 Cash and cash equivalents	12,026	12,023	12,023			8,725	
2 Financial assets measured at amortized cost:	238,565	235,139	219,441		9,289	28,447	
3 Of which: Loans and advances to banks	82,241	82,198	81,218			3,491	
4 Of which: Loans and advances to customers	152,883	149,499	135,814		8,258	24,727	
5 Of which: Debentures and other fixed-income securities	3,441	3,441	2,410		1,031	229	
6 Financial assets measured at fair value through other comprehensive income	37,015	37,355	37,355			6,097	
7 Financial assets designated at fair value	856	856	856			85	
8 Financial assets mandatorily measured at fair value through profit or loss	36,317	38,169	6,265	16,701	6	36,377	4
9 Shares in investments accounted for using the equity method	203						
10 Portfolio hedge adjustment attributable to assets	-237	-237					-237
11 Non-current assets and disposal groups held for sale	2	2	2				
12 Intangible assets	211	201					201
13 Investment property	781	37	37				
14 Property and equipment	836	790	790			0	
15 Current income tax assets	63	60	60			2	
16 Deferred income tax assets	1,023	1,065	802				264
17 Other assets	5,646	5,143	5,076			521	66
18 Total assets	333,305	330,604	282,708	16,701	9,294	80,254	298

	a	b	c	d	e	f	g
	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
EUR million							
Equity and liabilities							
Financial liabilities measured at amortized cost, of which							
1	287,371	284,943				50,326	234,618
2 Deposits from banks	73,138	72,560				15,773	56,826
3 Deposits from customers	127,361	127,498				15,296	112,201
4 Securitised liabilities	82,264	80,238				18,605	61,632
5 Subordinated capital	4,608	4,608				650	3,958
Financial liabilities designated at fair value							
6	3,229	3,229				751	2,447
Financial liabilities mandatorily measured at fair value through profit or loss							
7	23,758	23,764		14,348		22,164	641
Portfolio hedge adjustment attributable to liabilities							
8	-1,892	-1,892					-1,892
9 Provisions	1,881	1,807				1	1,805
10 Liabilities from disposal groups							
11 Current income tax liabilities	95	77				2	75
12 Deferred income tax liabilities	23	3					3
13 Other liabilities	2,773	2,702				2	2,670
14 Equity	16,067	15,971					15,971
15 <i>Total equity and liabilities</i>	<i>333,305</i>	<i>330,604</i>		<i>14,348</i>		<i>73,246</i>	<i>256,399</i>

Figure 3: EU L11 – 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)

EUR million	a	b	c	d	e
	Total	Items subject to			
		Credit risk framework	Securitization framework	CCR framework	Market risk framework
1 Carrying amount of assets under the scope of regulatory consolidation (as per template LI1)	330,306	282,708	9,294	16,701	80,254
2 Carrying amount of liabilities under the regulatory scope of consolidation (as per template LI1)	74,205			14,348	73,246
3 Total net amount under the regulatory scope of consolidation	301,363	282,708	9,294	2,353	7,008
4 Off-balance-sheet amounts	77,536	74,107	3,429		
5 Differences in valuations	- 227				
6 Differences due to different netting rules, other than those already included in row 2	11,262			11,262	
7 Differences due to consideration of provisions					
8 Differences due to the use of credit risk mitigation techniques (CRMs)					
9 Differences due to credit conversion factors					
10 Differences due to securitization with risk transfer					
11 Other differences	22,340	25,195	- 6	- 2,849	
12 Exposure amounts considered for regulatory purposes	412,273	382,009	12,718	10,765	17,623

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)
 - IAA (Internal Assessment 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.

a	b	c	d	e	f	g	h
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
Berlin Hyp AG	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 Beteiligungsgesellschaft 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.

	a	b	c	d	e	EU e1	EU e2	f	g	h
	Risk category					Category-level AVA – valuation uncertainty				
	Equity	Interest rates	Foreign exchange	Credit	Commodity risk	Unearned credit spreads AVA	Investment and funding costs AVA	Total category-level value post-diversification	Of which: Total core approach in the trading book	Of which: Total core approach in the banking book
Category-level AVA										
1 Market price uncertainty	40	93	0	26		4		88	43	45
2 Set not applicable in the EU										
3 Close-out cost	23	83	0	4		4		57	36	21
4 Concentrated positions				20				20	3	18
5 Early termination										
6 Model risk	22	16	0	1	0	1		21	21	0
7 Operational risk	3	9	0	2				15	8	7
8 Set not applicable in the EU										
9 Set not applicable in the EU										
10 Future administrative costs	9	9	1	8	0			26	26	
11 Set not applicable in the EU										
12 Total Additional Valuation Adjustments (AVAs)								227	137	90

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 the *EU CC1 table* reconciles the components of the Bank’s own funds under CRR with the balance sheet. The *EU CC2 table* 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:
 - subordinated AT1 bonds
- Tier 2 (T2) capital, which comprises the following items:
 - non-current subordinated liabilities
 - silent partners’ contributions

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

Explanation of changes from 2022 to 2023:

The figures will be published by the Supervisory Board in the disclosure report on 8 April 2024 after approval of the annual financial statements. There will be slight increases in regulatory equity due to earnings retention and in the total risk exposure amount due to the changes to operational risks compared with the 2023 annual report, with a corresponding impact on the related ratios.

The Common Equity Tier 1 (CET1) of the LBBW Group increased on the previous year. This was chiefly due to the inclusion of the annual profit from 2023, while actuarial losses had the opposite effect on CET1. The revaluation reserve for securities and equity investments developed negatively. The deduction for securitization exposures increased due to an additional synthetic securitization transaction.

Additional Tier 1 (AT1) capital still consists of the AT1 bond issued in 2019.

Tier 2 (T2) capital declined, particularly as a result of same-day amortization of Tier 2 capital components. The effects of first-time adoption to be deducted from Tier 2 capital as per IFRS 9 decreased compared to the previous year.

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 *section 2.2 Overview of risk-weighted exposure amounts (Article 438 d CRR)*.

		a	b
			Source based on reference numbers/ letters of the balance sheet under the regulatory scope of consolidation
EUR million	Amounts		
Capital instruments			
Common Equity Tier 1 (CET1) capital: instruments and reserves			
1	Capital instruments and the related share premium accounts	11,724	
	of which paid-in capital	3,484	j
	of which capital reserves	8,240	k
	of which other		
2	Retained earnings	2,679	l
3	Accumulated other comprehensive income (and other reserves)	- 202	m + n + o
EU-3a	Funds for general banking risk		
4	Amount of qualifying items referred to in Article 484 (3) and the related share premium accounts subject to phase out from CET1		
5	Minority interests (amount allowed in consolidated CET1)		
EU-5a	Independently reviewed interim profits net of any foreseeable charge or dividend	524	
6	<i>Common Equity Tier 1 (CET1) capital before regulatory adjustments</i>	<i>14,725</i>	
Common Equity Tier 1 (CET1) capital: regulatory adjustments			
7	Additional value adjustments (negative amount)	- 227	
8	Intangible assets (net of related tax liability) (negative amount)	- 201	a + b
9	Not applicable		
10	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)	- 130	c
11	Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value		
12	Negative amounts resulting from the calculation of expected loss amounts	- 6	
13	Any increase in equity that results from securitized assets (negative amount)		
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	- 22	
15	Defined-benefit pension fund assets (negative amount)	- 17	
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)		
17	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)		
18	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)		
19	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)		
20	Not applicable		
EU-20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	- 114	
EU-20b	of which qualifying holdings outside the financial sector (negative amount)		
EU-20c	of which securitization positions (negative amount)	- 114	
EU-20d	of which free deliveries (negative amount)		
21	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)		
22	Amount exceeding the 17,65% threshold (negative amount)		
23	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		
24	Not applicable		
25	of which deferred tax assets arising from temporary differences		
EU-25a	Losses for the current financial year (negative amount)		

		a	b
EUR million			
Capital instruments		Amounts	Source based on reference numbers/ letters of the balance sheet under the regulatory scope of consolidation
EU-25b	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)		
26	Not applicable		
27	Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount)		
27a	Other regulatory adjustments	- 156	
28	Total regulatory adjustments to Common Equity Tier 1 (CET1)	- 873	
29	Common Equity Tier 1 (CET1) capital	13,852	
Additional Tier 1 (AT1) capital: instruments			
30	Capital instruments and the related share premium accounts	744	
31	of which classified as equity under applicable accounting standards	744	
32	of which classified as liabilities under applicable accounting standards		
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1		
EU-33a	Amount of qualifying items referred to in Article 494a(1) subject to phase out from AT1		
EU-33b	Amount of qualifying items referred to in Article 494b(1) subject to phase out from AT1		
34	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		
35	of which instruments issued by subsidiaries subject to phase out		
36	Additional Tier 1 (AT1) capital before regulatory adjustments	744	p
Additional Tier 1 (AT1) capital: regulatory adjustments			
37	Direct, indirect and synthetic holdings by an institution of own AT1 instruments (negative amount)		
38	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)		
39	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)		
40	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)		
41	Not applicable		
42	Qualifying T2 deductions that exceed the T2 items of the institution (negative amount)		
42a	Other regulatory adjustments to AT1 capital		
43	Total regulatory adjustments to Additional Tier 1 (AT1) capital		
44	Additional Tier 1 (AT1) capital	744	
45	Tier 1 capital (T1 = CET1 + AT1)	14,596	
Tier 2 (T2) capital: instruments			
46	Capital instruments and the related share premium accounts	3,971	e + f + g + h + i
47	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		
EU-47a	Amount of qualifying items referred to in Article 494a (2) subject to phase out from T2		
EU-47b	Amount of qualifying items referred to in Article 494b (2) subject to phase out from T2		
48	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		
49	of which instruments issued by subsidiaries subject to phase out		
50	Credit risk adjustments	388	
51	Tier 2 (T2) capital before regulatory adjustments	4,359	
Tier 2 (T2) capital: regulatory adjustments			
52	Direct, indirect and synthetic holdings by an institution of own T2 instruments and subordinated loans (negative amount)	- 25	

		a	b
	EUR million		Source based on reference numbers/ letters of the balance sheet under the regulatory scope of consolidation
	Capital instruments	Amounts	
53	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)		
54	Direct and indirect 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)		
54a	Not applicable		
55	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)		
56	Not applicable		
EU-56a	Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)		
56b	Other regulatory adjustments to T2 capital	-211	
57	<i>Total regulatory adjustments to Tier 2 (T2) capital</i>	-236	
58	<i>Tier 2 (T2) capital</i>	4,123	
59	<i>Total capital (TC = T1 + T2)</i>	18,719	
60	Total risk-weighted exposure amount	92,480	
Capital ratios and requirements including buffers			
61	Common Equity Tier 1	15.0	
62	Tier 1	15.8	
63	Total capital	20.2	
64	Institution CET1 overall capital requirements	9.5	
65	of which capital conservation buffer requirement	2.5	
66	of which countercyclical capital buffer requirement	0.6	
67	of which systemic risk buffer requirement	0.1	
EU-67a	of which global systemically important institution (G-SII) or other systemically important institution (O-SII) buffer requirement	0.8	
EU-67b	of which additional own funds requirements to address the risks other than the risk of excessive leverage	1.0	
68	Common Equity Tier 1 capital (as a percentage of risk exposure amount) available after meeting the minimum capital requirements	8.4	
National minimum requirements (if different from Basel III)			
69	Not applicable		
70	Not applicable		
71	Not applicable		
Amounts below the thresholds for deduction (before risk weighting)			
72	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)	558	
73	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)	245	
74	Not applicable		
75	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)	802	d
Applicable caps on the inclusion of provisions in Tier 2			
76	Credit risk adjustments included in T2 in respect of exposures subject to standardized approach (prior to the application of the cap)		
77	Cap on inclusion of credit risk adjustments in T2 under standardized approach	148	
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	810	
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	388	

		a	b
EUR million			Source based on reference numbers/ letters of the balance sheet under the regulatory scope of consolidation
Capital instruments		Amounts	
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)			
80	Current cap on CET1 instruments subject to phase out arrangements		
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)		
82	Current cap on AT1 instruments subject to phase out arrangements		
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)		
84	Current cap on T2 instruments subject to phase out arrangements		
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)		

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 437a 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.

	a	b	c
	Balance sheet as in published financial statements (IFRS)	Under regulatory scope of consolidation (FINREP)	
EUR million	As at period end		Reference
Assets – breakdown by asset classes according to the balance sheet in the published financial statements			
1	Intangible assets	211	201
2	of which goodwill		a
3	of which other intangible assets	211	201
4	Deferred income tax assets	1,023	1,065
5	of which from unused tax losses	130	126
6	of which from temporary differences	893	940
Equity and liabilities – breakdown by equity and liability classes according to the balance sheet in the published financial statements			
1	Financial liabilities designated at fair value	3,229	3,229
2	of which subordinated liabilities	390	390
3	of which capital generated from profit-participation rights		
4	Subordinated capital	4,608	4,608
5	of which subordinated liabilities	3,715	3,715
6	of which typical silent partners' contributions	893	893
7	of which capital generated from profit-participation rights		
8	Equity	16,067	15,971
9	of which share capital	3,484	3,484
10	of which capital reserve	8,240	8,240
11	of which retained earnings	2,854	2,679
12	of which other income	-276	-146
13	of which revaluation reserve	-351	-213
14	of which revaluation reserve for equity investments	-40	99
15	of which revaluation reserve for debt instruments	-311	-311
16	of which currency translation reserve	20	11
17	of which additional equity components (Additional Tier 1)	745	745

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)

The disclosures required under Article 437 (1) (b) CRR on the key features of all capital instruments issued are shown separately for presentation reasons in the annex “EU CA table – key features of regulatory own funds instruments and eligible liabilities instruments” at the same location on LBBW’s website. The full terms and conditions pursuant to Article 437 (1)(c) CRR are published in the “LBBW Markets Portal” under “Startseite Privatkunden – Themen – Rechtliches – [Nachrang-Emissionen](#)” (available in German only) and on the Berlin Hyp website under “Investors – [Base Prospectus / Final Terms](#).”

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.

	a	b	c	d	e
Ratios in %	31/12/2023	30/09/2023	30/06/2023	31/03/2023	31/12/2022
<i>Available capital (amounts)</i>					
1 Common Equity Tier 1 (CET1) capital	13,852	13,383	13,496	13,554	13,708
2 Common Equity Tier 1 (CET1) capital not applying transitional provisions for IFRS 9 or similar expected credit losses	13,639	13,215	13,324	13,374	13,391
3 Tier 1 capital	14,596	14,127	14,239	14,298	14,452
4 Tier 1 capital not applying transitional provisions for IFRS 9 or similar expected credit losses	14,382	13,959	14,068	14,117	14,135
5 Total capital	18,719	18,414	18,628	18,789	18,934
6 Total capital not applying transitional provisions for IFRS 9 or similar expected credit losses	18,716	18,413	18,626	18,787	18,924
<i>Risk-weighted assets</i>					
7 Total amount of risk-weighted assets	92,480	92,429	93,643	93,663	93,645
8 Total amount of risk-weighted assets not applying transitional provisions for IFRS 9 or similar expected credit losses	92,706	92,608	93,826	93,855	93,975
<i>Capital ratios</i>					
9 CET1 capital (as a percentage of the total risk exposure amount)	15.0	14.5	14.4	14.5	14.6
10 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	14.7	14.3	14.2	14.2	14.2
11 Tier 1 capital (as a percentage of the total risk exposure amount)	15.8	15.3	15.2	15.3	15.4
12 Tier 1 capital (as a percentage of the total risk exposure amount) not applying transitional provisions for IFRS 9 or similar expected credit losses	15.5	15.1	15.0	15.0	15.0
13 Total capital (as a percentage of the total risk exposure amount)	20.2	19.9	19.9	20.1	20.2
14 Total capital (as a percentage of the total risk exposure amount) not applying transitional provisions for IFRS 9 or similar expected credit losses	20.2	19.9	19.9	20.0	20.1
<i>Leverage ratio</i>					
15 Leverage ratio total exposure measure	308,740	347,348	342,130	366,180	305,958
16 Leverage ratio	4.7	4.1	4.2	3.9	4.7
17 Leverage ratio not applying transitional provisions for IFRS 9 or similar expected capital losses	4.7	4.0	4.1	3.9	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 2023 are shown in the following table.

The “Other countries” item groups countries whose share in the weighted own funds requirements is only 6.7%. These are therefore regarded as non-material and not listed individually in accordance with Article 432 (1) CRR.

	a	b	c	d	e	f	g	h	i	j	k	l	m
	General credit exposures		Relevant credit exposures – market risk				Own funds requirements						
	Exposure value KSA	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	Total exposure value	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 (%)	Counter-cyclical buffer rate (%)
EUR million Breakdown by country													
Armenia		0				0				0	0	0.00	1.50
Australia	10	140	9			159	3	0		3	38	0.05	1.00
Bulgaria	0					0	0			0	0	0.00	2.00
Denmark	5	414	8			427	13	0		13	166	0.23	2.50
Germany	19,800	93,018	4,526		12,576	129,920	3,594	44	151	3,789	47,360	66.55	0.75
Estonia	0					0	0			0	0	0.00	1.50
France	20	3,549	506		99	4,174	138	12	2	153	1,915	2.69	0.50
United Kingdom	39	2,536	1,184		29	3,788	90	19	1	110	1,375	1.93	2.00
Hong Kong	63	412	109			585	22	0		23	283	0.40	1.00
Ireland	11	562	4			577	20	0		20	255	0.36	1.00
Iceland	0					0	0			0	0	0.00	2.00
Croatia	0		0			0	0	0		0	0	0.00	1.00
Lithuania	0	109	2			111	1	0		1	9	0.01	1.00
Luxembourg	93	5,126	393			5,612	151	3		154	1,920	2.70	0.50
Netherlands	225	8,229	260			8,714	255	6		261	3,260	4.58	1.00
Norway	2	1,423	38			1,463	16	0		16	197	0.28	2.50
Austria	83	2,858	198		108	3,246	126	2	2	130	1,627	2.29	
Poland	17	2,198	5			2,221	77	0		77	961	1.35	
Romania	2	7				8	0			0	4	0.01	1.00
Sweden	2	458	46		57	563	23	1	1	24	305	0.43	2.00
Switzerland	124	2,267	270		25	2,687	80	4	1	85	1,060	1.49	
Slovakia	1		3			4	0	0		0	2	0.00	1.50
Slovenia	0	2				2	0			0	1	0.00	0.50
Czech Republic	4	222	7			233	7	0		7	82	0.12	2.00
USA	214	13,372	432		208	14,226	422	12	9	444	5,544	7.79	
Cyprus	0					0	0			0	0	0.00	0.50
Other countries	1,277	9,886	3,377		71	14,611	333	50	2	384	4,800	6.74	
Total	21,995	146,790	11,378		13,171	193,333	5,371	154	168	5,693	71,163	100	

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. The figures will be published by the Supervisory Board in the disclosure report on 8 April 2024 after approval of the annual financial statements, with a slight increase in the total risk exposure amount compared with the 2023 annual report.

		a
Amount of institution-specific countercyclical capital buffer		Amount
1	Total risk exposure amount (EUR million)	92,480
2	Institution specific countercyclical capital buffer rate (%)	0.64
3	Institution specific countercyclical capital buffer requirements (EUR million)	594

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)

		a
		Applicable amount EUR million
1	Total assets as per published financial statements	333,305
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of prudential consolidation	-2,702
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	-2,504
9	Adjustment for securities financing transactions (SFTs)	2,465
10	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	30,190
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	-52,015
13	Total exposure measure	308,740

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.

		a	b
		CRR leverage ratio exposures	
EUR million		31/12/2023	30/06/2023
On-balance sheet exposures (excluding derivatives and SFTs)			
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	287,932	321,641
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)	-5,606	-9,303
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)	-254	-267
7	Total on-balance sheet exposures (excluding derivatives and SFTs)	282,073	312,071
Derivative exposures			
8	Replacement cost associated with SA-CCR derivatives transactions (i.e. net of eligible cash variation margin)	9,534	12,164
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	10,794	11,552
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)	-7,021	-9,975
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	5,578	4,831
12	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	-4,122	-3,529
13	Total derivatives exposures	14,763	15,042
Securities financing transaction (SFT) exposures			
14	Gross SFT assets (with no recognition of netting) after adjustment for sales accounting transactions	31,276	29,758
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)	-6,723	-3,674
16	Counterparty credit risk exposure for SFT assets	2,462	1,957
EU-16a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429e(5) and 222 CRR		
17	Agent transaction exposures		
EU-17a	(Exempted CCP leg of client-cleared SFT exposure)		
18	Total securities financing transaction exposures	27,014	28,041
Other off-balance sheet exposures			
19	Off-balance sheet exposures at gross notional amount	77,761	75,347
20	(Adjustments for conversion to credit equivalent amounts)	-47,571	-46,137
21	(General provisions deducted in determining Tier 1 capital and specific provisions associated with off-balance sheet exposures)		
22	Off-balance sheet exposure	30,190	29,210
Excluded exposures			
EU-22a	(Exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) CRR)	-15,963	-13,055
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))	-26,097	-26,009
EU-22f	(Excluded guaranteed parts of exposures arising from export credits)	-3,240	-3,170
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)	-45,300	-42,234
Capital and total exposure measure			
23	Tier 1 capital	14,596	14,239
24	Total exposure measure	308,740	342,130
Leverage ratio			

		a	b
		CRR leverage ratio exposures	
EUR million		31/12/2023	30/06/2023
25	Leverage ratio (%)	4.73	4.16
EU-25	Leverage ratio (excluding the impact of the exemption of public sector investments and promotional loans) (%)	4.73	4.16
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) (%)	4.73	4.16
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 (%)	3.00	3.00
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	28,373	27,666
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	24,553	26,084
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)	312,560	343,711
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)	312,560	343,711
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)	4.67	4.14
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)	4.67	4.14

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 4.7% as at 31 December 2023 (as at 30 June 2023: 4.2%). The leverage ratio exposure (“phase-in”) was EUR 308.7bn as at 31 December 2023 (EUR 342.1bn as at 30 June 2023).

The change in the leverage ratio exposure compared to the prior period (30 June 2023) is mainly due to the decrease in risk exposures to sovereigns (EUR -28.6bn) and SFTs (EUR -1.1bn).

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

		a
		CRR leverage ratio exposures EUR million
EU-1	Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	240,998
EU-2	Trading book exposures	13,426
EU-3	Banking book exposures, of which:	227,572
EU-4	Covered bonds	15,478
EU-5	Exposures treated as sovereigns	61,607
EU-6	Exposures to regional governments, MDB, international organizations and PSE not treated as sovereigns	1,031
EU-7	Institutions	12,856
EU-8	Secured by mortgages of immovable properties	48,051
EU-9	Retail exposures	5,412
EU-10	Corporates	77,874
EU-11	Exposures in default	1,052
EU-12	Other exposures (e.g. equity, securitizations, and other non-credit obligation assets)	4,210

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 risks

Definitions

When monitoring and managing liquidity risks, LBBW differentiates between liquidity risk in the narrower meaning (i.e. the risk of not meeting payment obligations due to an acute lack of funds), and the refinancing (spread) risk (negative effects on income due to a potential deterioration in the refinancing spread).

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).

A buffer requirement for excess liquidity and free collateral to be held applies for the main time horizons in the Group perspective. There are also limits 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.

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. They 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. As well as adjusting the call speed for non-maturity deposits under stress conditions, the call risks for the provision of cash collateral were expanded to additional underlyings and a separate stress test was introduced for the New York branch in 2023.

Call risks from demand and savings deposits are calculated using historic changes in portfolios and their volatility. 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 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 also analyzes the development of intraday liquidity in its 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 identification of refinancing spread risks was revised in 2023 and will in future be included in market price risk.

The LCR and NSFR stipulations apply in the regulatory steering view and are partially supplemented by internal guidelines and an LCR stress assessment. A daily LCR forecast is also prepared to support steering.

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 order to identify new call risks or an increase in known 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.

Following the takeover of Berlin Hyp, it was directly integrated into the Group's risk identification and monitoring processes. Work on aligning methods and consolidating the data basis will continue in 2024.

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. 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.

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. 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 2023 through German covered bonds, 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 bonds and social bonds.

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

In 2023, excess liquidity on the market decreased as a result of central banks' efforts to tackle inflation and interest rates increased, leading to a change in customer preferences with regard to the interest on their deposits. LBBW maintained consistently good liquidity in this environment still. Capital market placements attracted lively interest among national and international investors, and the LBBW Group's sources of funding meet the target level of stability in terms of volume and diversification.

As at the reporting date of 31 December 2023, the funding needs and the counterbalancing capacity were as follows:

Overview of funding requirements and counterbalancing capacity

EUR billion	3 months		12 months	
	31/12/2023	31/12/2022	31/12/2023	31/12/2022
Funding requirement from the business portfolio (deterministic cash flow)	11.7	– 9.8	17.1	– 4.4
Funding requirement from material call risks (stochastic cash flow)	30.7	25.8	62.3	48.1
Funding potential from free liquidity reserves	37	19.2	37.9	30.6
Funding potential on the market	86.7	77.1	108.7	95.5
Surplus	81.3	80.3	67.3	82.5

The funding requirement from the business portfolio in the three and twelve-month forecast is negative for the previous year, as cash in hand plus liquidity inflows exceeded the outflows and thus resulted in excess liquidity instead, partly as a result of participating in the ECB's longer-term tenders. Although the funding requirement from the business portfolio increased when a larger tranche was repaid in June 2023, free collateral increased at the same time. In particular, net inflows in EUR (excess liquidity) are opposed by net outflows of the foreign currencies USD and GBP (funding requirement). 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.

The funding potential is adequate to compensate for any liquidity outflows or negative effects from fluctuating market factors in the short term and continues to ensure significant overcollateralization on a three-month and twelve-month horizon.

Results of the economic stress scenarios

EUR billion	Funding requirement (3 months)		Funding potential (3 months)	
	31/12/2023	31/12/2022	31/12/2023	31/12/2022
Rating downgrade scenario	47.4	25.9	60.9	44.4
Financial market crisis scenario	51.8	25.7	71.3	56.5
Combined scenario of market crisis with downgrade	51.8	25.6	70	55

Despite the challenging conditions for financial institutions, the targeted stress resistance was met in every stress test in 2023. 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 2023. At 150.5%, it was exceeded as at year-end 2022 (31 December 2022: 144.2%). The net stable funding ratio (NSFR) requirements were also met and exceeded at year-end at 109.8% (31 December 2022: 111.4%).

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 2023. The risk management system is reviewed at least annually.

8.2 Quantitative information on 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 2023.

		a	b	c	d	e	f	g	h
	EUR million	Total unweighted value				Total weighted value			
EU 1a	Quarter ending on	31/12/23	30/09/23	30/06/23	31/03/23	31/12/23	30/09/23	30/06/23	31/03/23
EU 1b	Number of data points used in the calculation of averages	12	12	12	12	12	12	12	12
	High-quality liquid assets								
1	Total high-quality liquid assets (HQLA)					106,635	106,915	105,436	101,963
	Cash outflows								
2	Retail deposits and deposits from small business customers, of which:	22,810	22,806	22,897	22,932	1,470	1,531	1,597	1,638
3	Stable deposits	9,163	9,486	9,734	9,902	458	474	487	495
4	Less stable deposits	7,550	7,895	8,306	8,557	1,010	1,055	1,109	1,142
5	Unsecured wholesale funding	117,666	118,228	116,283	113,770	75,262	75,544	74,008	73,213
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	21,795	23,298	24,927	26,293	5,517	5,890	6,286	6,617
7	Non-operational deposits (all counterparties)	75,447	74,649	71,865	67,421	49,321	49,373	48,231	46,540
8	Unsecured debt	20,424	20,281	19,491	20,056	20,424	20,281	19,491	20,056
9	Secured wholesale funding					1,856	2,222	2,566	2,701
10	Additional requirements	42,123	41,690	41,455	40,873	13,142	12,944	12,905	12,419
11	Outflows related to derivative exposures and other collateral requirements	6,108	5,984	5,957	5,625	4,525	4,474	4,438	4,176
12	Outflows related to loss of funding on debt products	376	284	325	214	376	284	325	214
13	Credit and liquidity facilities	35,639	35,422	35,173	35,034	8,241	8,186	8,142	8,029
14	Other contractual funding obligations	6,870	6,745	6,337	6,495	6,665	6,555	6,147	6,288
15	Other contingent funding obligations	38,603	38,458	38,060	37,252	2,617	2,801	2,998	3,071
16	TOTAL CASH OUTFLOWS					101,012	101,597	100,221	99,330
	Cash inflows								
17	Secured lending (e.g. reverse repos)	15,554	15,203	14,906	14,918	2,089	1,834	1,600	1,627
18	Inflows from fully performing exposures	16,311	16,099	16,407	16,916	10,130	9,917	10,068	10,370
19	Other cash inflows	11,553	11,370	11,062	11,185	9,486	9,288	8,847	9,133
EU-19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)								
EU-19b	(Excess inflows from a related specialized credit institution)								
20	TOTAL CASH INFLOWS	43,418	42,672	42,375	43,019	21,704	21,039	20,514	21,129
EU-20a	Fully exempt inflows								
EU-20b	Inflows subject to 90% cap								
EU-20c	Inflows subject to 75% cap	38,389	37,629	37,065	37,320	21,704	21,039	20,514	21,129
	Total adjusted value								
EU-21	LIQUIDITY BUFFER					106,635	106,915	105,436	101,963
22	TOTAL NET CASH OUTFLOWS					79,308	80,557	79,708	78,199
23	LIQUIDITY COVERAGE RATIO					134.9%	133.1%	132.5%	130.5%

Figure 15: EU LIQ1 – quantitative information on 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 2023, the LCR ranged between 131% and 150% as at the reporting dates.

Liquidity in the market remains high but has declined on account of current central bank monetary policy. LBBW still has a high liquidity buffer, significant parts of which are held as cash balances at central banks. Like other market participants, LBBW also participated in the ECB's longer-term tender (TLTRO III) in previous years and has a good standing in the market and can obtain the necessary amount of unsecured funding. LBBW repaid a significant share of the refinancing volume raised through the long-term tender.

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 by way of investor lists.

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 2023, the average share of outflows calculated based on the HLBA amounted to around 6% 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 or in close collaboration with LBBW Treasury. With the exception of Berlin Hyp, the impact of the other 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 thus 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.

Expected and planned declines due to the lower remaining TLTRO III term were the main reason for the development in the third quarter of 2023 (110.8% as at 30 September 2023). In the fourth quarter, the NSFR ratio was largely stable due to a balanced level of new lending business compared to funding activities (including preferred deposits) (109.8% as at 31 December 2023).

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 39,853m each as at 31 December 2023 (30 June 2023: EUR 40,032m), of which EUR 36,138m (30 June 2023: EUR 36,204m) was from promotional business and EUR 3,715m (30 June 2022: EUR 3,828m) from derivative clearing activities.

		a	b	c	d	e
		Unweighted value by residual maturity				Weighted value
31/12/2023 EUR million		No maturity	< 6 months	6 months to < 1yr	≥ 1yr	
	Available stable funding (ASF) Items					
1	Capital items and instruments	15,397			5,242	20,639
2	Own funds	15,397			5,242	20,639
3	Other capital instruments					
4	Retail deposits		20,352	1,532	1,247	21,541
5	Stable deposits		11,288	679	838	12,207
6	Less stable deposits		9,064	853	409	9,334
7	Wholesale funding:		143,598	16,615	72,506	118,549
8	Operational deposits		22,235	0	0	4,725
9	Other wholesale funding		121,363	16,615	72,506	113,824
10	Interdependent liabilities		3,481	2,031	34,341	0
11	Other liabilities:		2,480	1	1,543	1,543
12	NSFR derivative liabilities					
13	All other liabilities and capital instruments not included in the above categories		2,480	1	1,543	1,543
14	Total available stable funding (ASF)					162,272
	Required stable funding (RSF) Items					
15	Total high-quality liquid assets (HQLA)					4,823
EU-15a	Assets encumbered for a residual maturity of one year or more in a cover pool		940	1,113	32,545	29,408
16	Deposits held at other financial institutions for operational purposes		1	0	0	0
17	Performing loans and securities:		60,540	16,669	89,976	102,017
18	Performing securities financing transactions with financial customers collateralized by Level 1 HQLA subject to 0% haircut		9,454	805	69	952
19	Performing securities financing transactions with financial customer collateralized by other assets and loans and advances to financial institutions		23,415	8,512	18,651	24,641
20	Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns and PSEs, of which:		20,971	5,444	30,935	48,482
21	With a risk weight of less than or equal to 35% under the Basel II Standardized Approach for credit risk		211	131	1,580	6,800
22	Performing residential mortgages, of which:		470	240	7,858	
23	With a risk weight of less than or equal to 35% under the Basel II Standardized Approach for credit risk		470	240	7,858	
24	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		4,870	925	13,587	14,343
25	Interdependent assets		3,481	2,031	34,341	0
26	Other assets		45,444	338	4,981	8,656
27	Physical traded commodities				467	397
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs		697	205	832	1,473
29	NSFR derivative assets		0			0
30	NSFR derivative liabilities before deduction of variation margin posted		11,400			570
31	All other assets not included in the above categories		33,347	133	3,683	6,216
32	Off-balance sheet items		33,183	4,891	35,264	2,883
33	Total RSF					147,788
34	Net stable funding ratio (%)					109.8%

Figure 16: EU LIQ2 – disclosure of net stable funding ratio (NSFR) as at 31/12/2023

The disclosure of the net stable funding ratio for the previous period as of 30 September 2023 is presented below.

	30/09/2023 EUR million	a	b	c	d	e
		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1yr	≥ 1yr	
	Available stable funding (ASF) Items					
1	Capital items and instruments	15,003			5,398	20,401
2	Own funds	15,003			5,398	20,401
3	Other capital instruments					
4	Retail deposits		21,029	1,315	332	21,063
5	Stable deposits		11,865	567	183	11,993
6	Less stable deposits		9,164	748	148	9,069
7	Wholesale funding:		171,642	14,893	73,164	119,130
8	Operational deposits		20,072	0	0	3,863
9	Other wholesale funding		151,571	14,893	73,164	115,267
10	Interdependent liabilities		3,365	2,028	33,952	0
11	Other liabilities:		4,501	1	2,526	2,526
12	NSFR derivative liabilities					
13	All other liabilities and capital instruments not included in the above categories		4,501	1	2,526	2,526
14	Total available stable funding (ASF)					163,120
	Required stable funding (RSF) Items					
15	Total high-quality liquid assets (HQLA)					4,082
EU-15a	Assets encumbered for a residual maturity of one year or more in a cover pool		1,051	916	33,489	30,138
16	Deposits held at other financial institutions for operational purposes		0	0	0	0
17	Performing loans and securities:		64,489	15,416	88,458	101,255
18	Performing securities financing transactions with financial customers collateralized by Level 1 HQLA subject to 0% haircut		10,381	538	16	755
19	Performing securities financing transactions with financial customer collateralized by other assets and loans and advances to financial institutions		24,805	6,932	19,847	25,230
20	Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns and PSEs, of which:		19,968	5,791	28,970	46,560
21	With a risk weight of less than or equal to 35% under the Basel II Standardized Approach for credit risk		499	98	1,321	6,868
22	Performing residential mortgages, of which:		612	260	7,908	
23	With a risk weight of less than or equal to 35% under the Basel II Standardized Approach for credit risk		612	260	7,908	
24	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		6,502	1,177	13,261	14,973
25	Interdependent assets		3,365	2,028	33,952	0
26	Other assets		27,680	169	5,290	8,936
27	Physical traded commodities				749	637
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs		758	102	932	1,523
29	NSFR derivative assets		0			0
30	NSFR derivative liabilities before deduction of variation margin posted		19,097			955
31	All other assets not included in the above categories		7,825	67	3,609	5,821
32	Off-balance sheet items		33,772	4,627	33,695	2,841
33	Total RSF					147,251
34	Net stable funding ratio (%)					110.8%

Figure 17: EU LIQ2 – disclosure of net stable funding ratio (NSFR) as at 30/09/2023

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

Berlin Hyp has been integrated into all material aspects of counterparty risk management at LBBW since 1 July 2022. Any cases where a significantly different approach or methodology is used to account for Berlin Hyp in Group management compared to for LBBW are indicated below.

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 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.

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.

ESG risks are also taken into account in the rating procedure if they are shown to be relevant to probability of default.

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. Berlin Hyp will use the SA CCR standardized approach for the time being.

Expected losses, value adjustments and credit valuation 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 a special situation (significant macroeconomic turbulence), the EL is also recognized over the entire residual term (as for the 2023 annual financial statements) for stage 1 transactions in order to adequately account for the higher overall loss risk. 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 valuation 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 or the exposure, among other methods, and is limited using the LBBW Group's free aggregate risk cover or its free CET1 capital. Risk Control proposes concentration 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 developments are converted into negative changes to the key lending risk parameters (PD, LGD and correlations) of the transactions in the portfolio in question. Berlin Hyp is included in Group stress testing.

Risk monitoring and reporting

Individual transaction level

Risk management at the level of individual exposures is the duty of the Risk Management 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 Risk Management by a customer or sector-specific organizational structure. Credit decisions are made in a system of graded competencies, which are regulated in the Group'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 Risk Management divisions responsible or in special loan management. LBBW aims to minimize losses generally 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 office and Risk Management 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. At present, Berlin Hyp is included in the country limit monitoring process on a monthly basis and ad hoc as required. At institution level, the monitoring of country limit utilization by Berlin Hyp is also ensured on a daily basis.

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, risk concentration and segments. 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 half-yearly in-depth sector report with detailed information on the sector situation, portfolio development and important customers in each sector.
- The half-yearly in-depth CRE portfolio analysis, with detailed information on the portfolio structure and development, is broken down by segment, customer group, location and use type.
- The ESG risks of financed emissions and physical risks for collateral items that have a material effect on counterparty risk are discussed in separate reports.

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 Risk Management 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 to reduce risks. 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, such as hedging transactions to reduce risk or a ban on new business, etc., if certain thresholds are exceeded. In addition to the sector limits, there are additional special limits for specific parts of the portfolio, e.g. for shadow banks and leveraged transactions.

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 may provide indications of potentially critical or even dangerous risk situations, which may require suitable countermeasures or risk management 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 necessarily 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 comparable 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.
- Reporting of an exposure as "non-performing" in line with the template for submitting financial information (FINREP).

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).

Significant macroeconomic turbulence (e.g. a sharp hike in energy prices or abrupt interest rate rise), the effects of which on financial instruments' credit rating cannot be specifically and individually determined, does not immediately trigger a stage transfer. To adequately account for the higher overall loss risk, in these special situations impairment losses for stage 1 assets affected are also determined on the basis of expected credit losses over their entire residual term (as for the 2023 annual financial statements).

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 unlikelihood to pay (doubts about obligor's creditworthiness)
- There is unlikelihood 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 12 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 40.1m at the end of 2023. 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)

The following table shows performing and non-performing exposures and related provisions.

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions							Collaterals and financial guarantees received	
		Performing exposures			Non-performing exposures			Performing exposures - accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			Accumulated partial write-off	On performing exposures	On non-performing exposures
	EUR million		of which stage 1	of which stage 2		of which stage 2	of which stage 3		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	41,680	41,660	20	1		1	-0	-0	-0	-0		-0			
005	Loans and advances	205,216	174,340	29,829	1,995	1	1,912	-998	-510	-488	-682	-0	-676	-218	79,380	995
020	Central banks	104	104													
030	General governments	9,157	8,212	153	0		0	-11	-10	-1	-0		-0		352	
040	Credit institutions	52,403	52,233	122	24		24	-13	-12	-1	-21		-21		85	
050	Other financial corporations	25,878	24,045	1,683	106		42	-95	-57	-37	-16		-16	-4	11,104	82
060	Non-financial corporations	105,868	79,859	25,960	1,795		1,775	-814	-389	-425	-617		-611	-196	60,202	888
070	of which SMEs	36,971	26,549	10,422	586		576	-327	-173	-154	-150		-145	-1	28,346	358
080	Households	11,807	9,886	1,911	71	1	70	-66	-41	-25	-28	-0	-27	-17	7,638	25
090	Debt securities	38,450	37,878	6	6		6	-5	-5	-0	-6		-6			
100	Central banks	537	537					-0	-0							
110	General governments	6,374	6,356					-1	-1							
120	Credit institutions	26,394	26,394					-4	-4							
130	Other financial corporations	4,872	4,325					-1	-1							
140	Non-financial corporations	272	266	6	6		6	-0	-0	-0	-6		-6			
150	Off-balance sheet exposure	78,642	62,983	6,052	200	0	150	-231	-131	-100	-54	-0	-33		3,271	70
160	Central banks	0	0					-0	-0							
170	General governments	2,896	2,754	17				-0	-0	-0					317	
180	Credit institutions	6,438	5,778	24				-1	-1	-0					6	
190	Other financial corporations	9,433	8,320	185	0		0	-20	-14	-5	-0				468	
200	Non-financial corporations	56,595	43,062	5,627	199		149	-207	-114	-93	-54		-33		2,425	70
210	Households	3,280	3,068	199	1	0	1	-2	-1	-1	-0	-0	-0		56	
220	Total	363,988	316,861	35,907	2,202	1	2,069	-1,234	-646	-589	-743	-0	-715	-218	82,652	1,065

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

9.4 Residual maturity of exposures (Article 442g CRR)

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

	a	b	c	d	e	f
	Net exposure value					
EUR million	On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total
1 <i>Loans and advances</i>	5,241	43,557	68,676	87,954	104	205,532
2 <i>Debt securities</i>		5,740	20,649	12,056		38,444
3 <i>Total</i>	5,241	49,297	89,324	100,010	104	243,976

Figure 19: EU CR1-A – Maturity of exposures

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

The following table shows the stock of non-performing loans and advances as at 31 December 2023 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 2023.

	a
EUR million	Gross carrying amount
010 <i>Initial stock of non-performing loans and advances</i>	1,523
020 <i>Inflows to non-performing portfolios</i>	707
030 <i>Outflows from non-performing portfolios</i>	-235
040 <i>Outflows due to write-offs</i>	-2
050 <i>Outflow due to other situations</i>	-233
060 <i>Final stock of non-performing loans and advances</i>	1,995

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 currently below 5%.

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

		a	b	c	d	e	f	g	h
		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							
								Of which collateral and financial guarantees received on non-performing exposures with forbearance measures	
EUR million		Performing forborne		Of which defaulted	Of which impaired	On performing forborne exposures	On non-performing forborne exposures		
005	Cash balances at central banks and other demand deposits								
010	Loans and advances	1,772	957	956	949	-19	-326	1,733	463
020	Central banks								
030	General governments								
040	Credit institutions								
050	Other financial corporations	73				0		66	
060	Non-financial corporations	1,698	951	951	944	-19	-323	1,665	462
070	Households	2	6	5	5	0	-3	2	2
080	Debt securities								
090	Loan commitments given	15	79	79	79	-2	-4	67	65
100	Total	1,787	1,036	1,035	1,028	-21	-331	1,800	529

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 currently below 5%.

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

	a	b	c	d	e	f	g	h	i	j	k	l
	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 defaulted
EUR million												
005 <i>Cash balances at central banks and other demand deposits</i>	41,680	41,680	0	1	1							1
010 <i>Loans and advances</i>	205,216	204,996	220	1,995	1,260	316	158	125	83	12	41	1,995
020 Central banks	104	104										
030 General governments	9,157	9,155	2	0	0							0
040 Credit institutions	52,403	52,391	12	24		0	24	0	0		0	24
050 Other financial corporations	25,878	25,878	0	106	12	42	0	52	0	0		106
060 Non-financial corporations	105,868	105,671	197	1,795	1,216	269	150	44	77	11	28	1,795
070 of which SMEs	36,971	36,956	14	586	502	44	12	18	8	1	1	586
080 Households	11,807	11,798	9	71	33	4	8	5	6	1	14	70
090 <i>Debt securities</i>	38,450	38,450		6					6			6
100 Central banks	537	537										
110 General governments	6,374	6,374										
120 Credit institutions	26,394	26,394										
130 Other financial corporations	4,872	4,872										
140 Non-financial corporations	272	272		6					6			6
150 <i>Off-balance sheet exposure</i>	78,642			200								200
160 Central banks	0											
170 General governments	2,896											
180 Credit institutions	6,438											
190 Other financial corporations	9,433			0								0
200 Non-financial corporations	56,595			199								199
210 Households	3,280			1								1
220 <i>Total</i>	363,988	285,126	220	2,202	1,261	316	158	125	90	12	41	2,202

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”. These are therefore regarded as non-material and not listed individually in accordance with Article 432 (1) CRR.

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 currently below 5%.

		a	c	e	f	g
	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
010	<i>On-balance sheet exposures</i>	245,668	2,001	-1,687		-5
020	Germany	133,539	1,203	-1,182		-5
030	USA	17,550	212	-176		
040	France	16,241	5	-29		
050	United Kingdom	14,133	0	-17		
060	Luxembourg	8,910	88	-33		
070	Netherlands	8,435	12	-47		
080	Canada	5,672	0	-13		
090	Singapore	4,291		0		
100	Austria	3,959	0	-12		
110	Republic of Korea	2,703		0		
120	Poland	2,589	0	-25		
130	Switzerland	2,093	30	-7		
140	Spain	1,951	0	-1		
150	Sweden	1,913	0	-11		
160	Australia	1,720		0		
170	Others/supranational organizations	19,969	450	-132		
180	<i>Off-balance sheet exposure</i>	78,842	200		-285	
190	Germany	57,409	200		-235	
200	Ireland	4,312			0	
210	France	2,674			0	
220	Switzerland	2,662			-8	
230	USA	2,323			-18	
240	Austria	2,282			-8	
250	Netherlands	1,006			-6	
260	Luxembourg	725			-2	
270	Republic of Korea	551			0	
280	United Kingdom	460			0	
290	Others/supranational organizations	4,438	0		-7	
300	<i>Total</i>	324,510	2,201	-1,687	-285	-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 amount – 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 currently below 5%.

	a	c	e	f
EUR million 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
010 Agriculture, forestry and fishing	114	6	-2	
020 Mining and quarrying	521	8	-3	
030 Manufacturing	16,690	748	-394	-5
040 Electricity, gas, steam and air conditioning supply	5,472	32	-64	
050 Water supply	2,628	3	-7	
060 Construction	2,453	104	-76	
070 Wholesale and retail trade	6,576	155	-134	
080 Transport and storage	3,550	27	-27	
090 Accommodation and food service activities	118	0	-1	
100 Information and communication	3,480	32	-43	
110 Financial and insurance activities				
120 Real estate activities	50,509	522	-430	
130 Professional, scientific and technical activities	8,053	101	-157	
140 Administrative and support service activities	4,801	31	-59	
150 Public administration and defense, compulsory social security				
160 Education	240	0	-3	
170 Human health services and social work activities	1,277	23	-15	
180 Arts, entertainment and recreation	369	0	-2	
190 Other services	812	2	-8	
200 Total	107,662	1,795	-1,426	-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 currently 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 currently 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.
- 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 2023, 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, *disclosure of 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 600,000: 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 dropped below the tolerance limit of negative market fluctuation, which thus 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 in the variation margin for OTC derivatives are avoided by taking in mainly cash collateral (approx. 95%), particularly in EUR (95%) and in other currencies, as well as first-class sovereign bonds, regional government 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 453f 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	Unsecured carrying amount	Secured carrying amount	Of which secured by collateral	Of which secured by financial guarantees	Of which secured by credit derivatives
		a	b	c	d	e
1	Loans and advances	166,837	80,375	69,077	11,298	0
2	Debt securities	38,444	0	0	0	
3	Total	205,281	80,375	69,077	11,298	0
4	Of which non-performing exposures	318	995	546	449	0
EU-5	Of which defaulted	318	995			

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

The change in the unsecured carrying amounts in loans and advances as against the previous period is primarily due to the decline in on-demand or current receivables (essentially cash balances at central banks).

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).

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 444e, 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 Exposure classes	Exposures before CCF and before CRM		Exposures post CCF and post CRM		RWAs and RWA density	
	On-balance sheet exposure	Off-balance sheet exposure	On-balance sheet exposure	Off-balance sheet exposure	RWAs	RWA density (%)
	a	b	c	d	e	f
1 Central governments or central banks	63		459	36		
2 Regional government or local authorities	1,942	315	2,701	218	1	0.00
3 Public sector entities	782	930	554	327	73	0.08
4 Multilateral development banks						
5 International organizations	585		585			
6 Institutions	37,421	3,613	39,220	1,827	199	0.00
7 Corporates	9,454	2,684	8,125	380	5,799	0.68
8 Retail	5,411	2,886	5,138	191	3,536	0.66
9 Secured by mortgages on immovable property	5,330	30	5,330	19	1,884	0.35
10 Exposures in default	83	2	75	0	100	1.33
11 Exposures associated with particularly high risk	3	7	3	4	10	1.50
12 Covered bonds	409		409			
13 Institutions and corporates with a short-term credit assessment						
14 Collective investment undertakings	20		20		28	1.36
15 Equity						
16 Other items	60		60		60	1.00
17 <i>Total</i>	<i>61,564</i>	<i>10,468</i>	<i>62,679</i>	<i>3,002</i>	<i>11,690</i>	<i>0.18</i>

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

11.3 Standardized approach (Article 444e CRR)

		Risk weight															Of which unrated	
EUR million		0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Other	Total	
Exposure classes		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1	Central governments or central banks	496															496	251
2	Regional government or local authorities	2,913				6											2,918	1,108
3	Public sector entities	515				366		0			0						881	13
4	Multilateral development banks																	
5	International organizations	585															585	
6	Institutions	40,129				873		42			3						41,047	39,733
7	Corporates	571				1,827	24	726	9		5,346	0			1		8,504	4,818
8	Retail exposures									5,329							5,329	4,291
9	Secured by mortgages on immovable property						4,913	436									5,349	4,916
10	Exposures in default										25	50					75	54
11	Exposures associated with particularly high risk											7					7	7
12	Covered bonds	409															409	13
13	Institutions and corporates with a short-term credit assessment																	
14	Unit or shares in collective investment undertakings															20	20	20
15	Equity																	
16	Other items	0									60						60	135
17	Total	45,617				3,071	4,936	1,205	9	5,329	5,435	57			1	20	65,681	55,359

Figure 27: EU CR5 – standardized approach

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

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

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

In LBBW's Group of institutions, LBBW and Berlin Hyp have been authorized to use the foundation IRB approach since 2008 at Group level and institution level respectively. Regulatory capital backing is based on the following rating systems in line with the IRB approach:

- Banks (LBBW, Berlin Hyp)
- Country and transfer risks (LBBW, Berlin Hyp)
- Corporates (LBBW, Berlin Hyp)
- International real estate finance (LBBW, Berlin Hyp)
- Sparkassen real estate business rating (LBBW, Berlin Hyp)
- Insurance companies (LBBW)
- Project finance (LBBW)
- DSGVO-Haftungsverbund (LBBW)
- Sparkassen standard rating (LBBW)
- Leasing (LBBW)
- Leveraged finance (LBBW)
- Aircraft finance (LBBW)
- International administrative authorities (LBBW)
- Funds (LBBW)

With the inclusion of Berlin Hyp in LBBW's group of institutions (since 1 July 2022), LBBW's approval to use the IRB approach at Group level does not yet extend to Berlin Hyp's IRB model. To obtain the required approval, LBBW continues to follow a return-to-compliance plan in accordance with Article 146 CRR to meet all regulatory requirements for use of the IRB approach within the expanded group of institutions. Based on this plan, in accordance with an ECB resolution LBBW was granted temporary approval to use Berlin Hyp's rating systems to calculate own funds requirements at Group level for the time being.

In addition, at LBBW, mandatory treatment of positions in IRB takes the form of applying fixed risk weights for specialized lending ("slotting criteria") that is not covered by one of the approved rating systems for specialized lending listed above, as well as at LBBW, Berlin Hyp and all other subsidiaries for equity exposures and other non-credit obligation assets.

The CRSA is used for all other portfolios of LBBW (Bank), Berlin Hyp and all other companies included in the regulatory scope of consolidation of the LBBW Group. If these portfolios had not received permission for permanent partial use of the CRSA in accordance with Article 150 CRR, applications for such were submitted to the ECB, the banking authority responsible for LBBW. A decision has not yet been made on these applications.

With the existing IRB cover, the materially significant LBBW Group 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, the internal rating procedures of LBBW and Berlin Hyp used in IRB can be divided into two categories:

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	Private customers with main cash flow from renting and leasing	Non-accounting customers in Sparkassen ImmobiliengeschäftsRating	Scorecard-based rating procedure
	Corporate Customers	Sparkassen standard rating	Scorecard-based rating procedure
	Business customers	Sparkassen standard rating	Scorecard-based rating procedure
	Corporate Customers	Sparkassen standard rating	Scorecard-based rating procedure
	Start-ups	Sparkassen standard rating	Scorecard-based rating procedure
	Corporate customers/key accounts	Rating for corporates	Scorecard-based rating procedure
Project and specialized lending exposures	National commercial real estate	Sparkassen ImmobiliengeschäftsRating	Scorecard-based rating procedure
	International commercial real estate	Rating for international real estate finance	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 DSGVO-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
	National (German) administrative authorities/public-sector loans	Rating inheritance	n/a
		Rating for international administrative authorities	Scorecard-based rating procedure
	Municipal corporations	Sparkassen standard rating	Scorecard-based rating procedure
		Rating for corporates	Scorecard-based rating procedure
	Sovereigns & transfer risks	Rating for country and transfer risks	Scorecard-based rating procedure
	Funds	Rating for funds	Scorecard-based rating 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 standard rating, Sparkassen real estate business rating, leveraged finance rating. Ratings 16 to 18 indicate default.

Ratings	LBBW rating master scale	Probability of default (%)
	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
Investment grade	5	0.39
	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
Speculative grade	15C	45.00
	16	100.00
	17	100.00
Default classes	18	100.00

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

Within LBBW and Berlin Hyp, the units or functions below are responsible for the IRB rating systems:

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

The departments or groups that perform these functions are independent of each other at both banks through organizational separation and separately accountable for the performance of their regulatory tasks. The structure of these functions and the interfaces between Berlin Hyp and LBBW are also partly covered by the return to compliance plan (see comments on Article 452 a CRR).

The credit risk control units are responsible for the design and development of the rating systems, in particular for the design, selection, implementation, oversight and performance of the rating systems (Article 190 CRR). They report to the respective 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 (e.g. 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 units inform the respective 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 used at LBBW, the rating procedures used by both banks 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 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 and Berlin Hyp's employees.

The rating systems of both banks are subject to a regular review process by the respective credit risk control units, 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 and Berlin Hyp perform a test to ensure that they are representative. In turn, this ensures that the rating procedures can also be applied to the portfolios of the two banks without restriction. Senior management is informed of the results of the pool review in the case of every rating process.

Revisions to the rating procedure at both banks are made in accordance with a Group-wide Model Change Policy, which stipulates that banking regulators must be informed or even grant prior approval depending on the significance of a model revision. Banking regulators are informed of the respective version of the Model Change Policy.

In addition, at LBBW the correct use of rating systems is analyzed and evaluated extensively by a rating controlling process, which also initiates and monitors any adjustments that may be required. Reports to that effect are sent on a regular basis to senior management and the management tiers below them of all relevant units of the Bank.

The validation units at LBBW and Berlin Hyp assess the performance of the rating procedures at the respective banks in accordance with Article 185 CRR in an independent process separate from the credit risk control unit's review process. The validation units report the validation results to the respective senior management and to the respective management body or one of its committees appointed for this purpose on a quarterly basis.

Risk Management at each bank 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, LBBW and Berlin Hyp. 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)

At both LBBW and Berlin Hyp, 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. 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 and all international corporate customers are assessed using the “corporates” rating. Domestic borrowers not rated with the corporates rating are rated using the Sparkassen standard rating methodology. The distinction between Corporates Rating and Sparkassen StandardRating when categorizing domestic borrowers is made based on the borrower’s consolidated revenue. 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: check whether it is a small or medium-sized enterprise (SME)

Under Article 147 (5) (a) (ii) CRR, the customer’s (consolidated) annual revenue is used as a size indicator (SME threshold).

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

Equity investment exposure class

Equity exposures are backed by fixed risk weightings. System allocations and product numbers ensure the correct assignment to the equity investments exposure class in accordance with Article 147 (6) CRR.

Retail business exposure class

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

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

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

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 (%)
		a	b	c	d	e
1	Central governments or central banks	59,295	62,615	1.71	98.29	
1.1	of which regional governments or local authorities		1,973			
1.2	of which public sector entities		1,214			
2	Institutions	71,009	99,713	28.97	71.03	
3	Corporates	125,326	139,504	12.56	87.44	
3.1	of which corporates - specialized lending, excluding slotting approach		42,191			
3.2	of which corporates - specialized lending under slotting approach		410			
4	Retail		9,058	100		
4.1	of which retail – secured by real estate, SMEs		274			
4.2	of which retail – secured by real estate, non-SMEs		4,184			
4.3	of which retail – qualifying revolving					
4.4	of which retail – other, SMEs		1,567			
4.5	of which retail – other, non-SMEs		3,033			
5	Equity	698	698		100	
6	Other non-credit obligation assets	1,518	1,578	4.61	95.39	
7	Total	257,846	313,167	19.03	80.97	

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

The difference between the first and second columns is primarily because part 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 exposure	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
a	b	c	d	e	f	g	h	i	j	k	l	m
Exposure class Central governments and central banks												
0.00 to <0.15	57,154	1,282	0.46	63,248	0.00	1,991	45.03	3	731	0.01	1	-41
0.00 to <0.10	56,658	1,282	0.46	62,752	1.21	1,987	45.03	3	557	0.01	0	-41
0.10 to <0.15	496			496	0.11	4	45.00	3	173	0.35	0	0
0.15 to <0.25	18			18	0.20	1	45.00	3	9	0.47	0	0
0.25 to <0.50	116	19		79	0.39	2	45.00	3	52	0.66	0	0
0.50 to <0.75												
0.75 to <2.50	0	0	0.20	0	1.12	3	45.00	3	0	1.01	0	0
0.75 to <1.75	0	0	0.20	0	1.02	2	45.00	3	0	0.98	0	0
1.75 to <2.5	0			0	2.39	1	45.00	3	0	1.28	0	0
2.50 to <10.00	66	3	0	3	8.04	1	45.00	3	5	1.89	0	0
2.5 to <5												
5 to <10	66	3	0	3	8.04	1	45.00	3	5	1.89	0	0
10.00 to <100.00	140	493	0.75	7	12.18	4	45.00	3	15	2.19	0	-1
10 to <20	140	493	0.75	7	12.18	4	45.00	3	15	2.19	0	-1
20 to <30												
30.00 to <100.00												
100.00 (default)												
Subtotal	57,494	1,796	0.53	63,355	0.00	2,002	45.03	3	811	0.01	1	-42
Exposure class Institutions												
0.00 to <0.15	27,361	1,641	0.54	28,179	0.05	310	26.43	2	3,941	0.14	4	-4
0.00 to <0.10	26,141	1,423	0.55	26,893	0.05	284	25.96	2	3,579	0.13	3	-4
0.10 to <0.15	1,220	218	0.46	1,285	0.12	26	36.23	2	361	0.28	1	0
0.15 to <0.25	643	91	0.59	707	0.19	29	30.67	3	249	0.35	0	0
0.25 to <0.50	91	29	0.13	95	0.42	22	45.00	3	78	0.82	0	0
0.50 to <0.75	1			1	0.51	2	45.00	3	1	0.75	0	0
0.75 to <2.50	248	102	0.38	255	1.10	20	44.75	2	320	1.26	1	0
0.75 to <1.75	246	102	0.38	253	1.09	19	44.75	2	319	1.26	1	0
1.75 to <2.5	1			1	2.00	1	45.00	3	2	1.22	0	
2.50 to <10.00												
2.5 to <5												
5 to <10												
10.00 to <100.00	110	0	0.75	4	18.47	4	45.00	3	12	2.82	0	-1
10 to <20	110	0	0.75	4	18.47	4	45.00	3	12	2.82	0	-1
20 to <30												
30.00 to <100.00												
100.00 (default)	0			0	100.00	1	45.00	3			0	0
Subtotal	28,454	1,863	0.52	29,240	0.07	388	26.75	2	4,600	0.16	6	-6
Exposure class Corporates – SMEs												
0.00 to <0.15	3,773	1,988	0.27	4,199	0.08	2,299	35.69	3	643	0.15	1	-5
0.00 to <0.10	2,615	1,604	0.25	2,978	0.06	1,782	34.30	3	385	0.13	1	-2
0.10 to <0.15	1,158	384	0.33	1,221	0.12	517	39.08	3	258	0.21	1	-3
0.15 to <0.25	821	356	0.21	855	0.18	613	38.55	3	229	0.27	1	-3
0.25 to <0.50	917	702	0.31	1,048	0.33	1,131	42.70	2	427	0.41	2	-3
0.50 to <0.75	390	347	0.41	469	0.43	442	29.10	2	237	0.51	1	-2
0.75 to <2.50	1,132	425	0.23	1,098	0.69	950	25.61	1	709	0.65	5	-9
0.75 to <1.75	878	316	0.22	854	0.58	726	25.51	1	539	0.63	3	-6
1.75 to <2.5	254	109	0.25	244	1.07	224	25.94	1	169	0.69	2	-3
2.50 to <10.00	473	167	0.25	405	3.22	371	36.47	2	363	0.90	6	-15
2.5 to <5	393	121	0.23	330	2.75	293	35.11	2	274	0.83	4	-12

F-IRB EUR million PD scale	On-balance sheet exposure	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
a	b	c	d	e	f	g	h	i	j	k	l	m
5 to <10	81	46	0.28	75	5.26	78	42.42	2	89	1.18	2	-3
10.00 to <100.00	167	69	0.37	63	11.72	187	34.69	2	86	1.36	4	-4
10 to <20	141	62	0.38	48	8.71	91	35.82	2	65	1.37	2	-2
20 to <30	20	4	0.48	10	13.76	51	28.12	2	13	1.25	1	-1
30.00 to <100.00	6	3	0.09	5	34.73	45	37.05	2	7	1.40	1	-1
100.00 (default)	110	33	0.22	78	100.00	79	44.61	3	0	0.00	35	-42
Subtotal	7,783	4,087	0.28	8,217	1.42	6,072	35.27	2	2,693	0.33	54	-83

Exposure class Corporates – Specialized lending

0.00 to <0.15	8,610	596	0.78	8,473	0.10	54	37.99	3	1,886	0.22	3	-13
0.00 to <0.10	4,647	338	0.80	4,394	0.08	34	37.59	3	813	0.19	1	-7
0.10 to <0.15	3,963	257	0.75	4,079	0.13	20	38.43	3	1,073	0.26	2	-6
0.15 to <0.25	3,163	205	0.74	3,314	0.19	16	37.34	3	1,015	0.31	2	-9
0.25 to <0.50	8,240	1,510	0.64	8,990	0.35	39	38.04	2	4,101	0.46	12	-42
0.50 to <0.75	1,908	259	0.74	2,098	0.52	11	33.07	2	1,132	0.54	5	-14
0.75 to <2.50	3,564	448	0.70	3,706	1.08	29	33.19	2	2,726	0.74	17	-47
0.75 to <1.75	3,157	363	0.68	3,235	0.93	26	32.57	2	2,320	0.72	13	-38
1.75 to <2.5	407	85	0.76	471	2.07	3	37.44	2	405	0.86	4	-9
2.50 to <10.00	546	14	0.75	556	4.69	6	36.44	2	673	1.21	11	-10
2.5 to <5	317	14	0.76	328	3.05	4	33.68	2	321	0.98	4	-5
5 to <10	229	1	0.50	228	7.05	2	40.40	3	352	1.54	6	-4
10.00 to <100.00	525	3	0.75	518	15.90	8	41.87	2	1,070	2.07	35	-9
10 to <20	285	3	0.75	278	10.37	5	43.50	2	551	1.99	14	-6
20 to <30	240			240	22.30	3	39.98	3	518	2.16	21	-3
30.00 to <100.00												
100.00 (default)	638	76	0.76	695	100.00	3	42.26	3			294	-114
Subtotal	27,195	3,112	0.70	28,350	3.18	166	37.08	2	12,603	0.44	380	-259

Exposure class Corporates – Other

0.00 to <0.15	18,989	29,490	0.42	31,809	0.08	2,394	42.21	3	8,187	0.26	11	-17
0.00 to <0.10	14,303	21,726	0.42	23,789	0.09	1,638	41.74	3	5,384	0.23	6	-13
0.10 to <0.15	4,687	7,763	0.43	8,020	0.13	756	43.62	3	2,803	0.35	4	-5
0.15 to <0.25	4,347	6,913	0.47	7,531	0.18	897	44.42	3	3,362	0.45	6	-9
0.25 to <0.50	7,778	7,094	0.49	10,597	0.31	1,336	43.52	2	6,198	0.58	15	-18
0.50 to <0.75	1,389	1,283	0.39	1,396	0.54	379	40.23	2	1,151	0.82	4	-9
0.75 to <2.50	3,623	2,827	0.36	3,541	1.31	718	42.59	2	3,727	1.05	21	-40
0.75 to <1.75	2,666	2,353	0.35	2,721	1.07	532	42.08	2	2,717	1.00	14	-27
1.75 to <2.5	957	474	0.40	820	2.13	186	44.25	2	1,010	1.23	8	-13
2.50 to <10.00	1,872	1,607	0.43	1,440	3.89	376	38.61	2	2,002	1.39	25	-40
2.5 to <5	1,145	1,242	0.46	1,162	3.33	278	38.36	2	1,542	1.33	17	-24
5 to <10	727	365	0.33	278	6.23	98	39.68	2	460	1.66	7	-15
10.00 to <100.00	1,124	391	0.39	335	15.05	183	35.12	2	611	1.83	17	-25
10 to <20	746	299	0.45	247	13.27	102	43.61	2	552	2.23	15	-22
20 to <30	374	89	0.20	83	20.44	38	11.84	2	57	0.69	2	-4
30.00 to <100.00	3	3	0.40	5	12.55	43	1.29	1	2	0.52	0	0
100.00 (default)	982	102	0.56	642	100.00	236	44.73	3			287	-392
Subtotal	40,103	49,707	0.44	57,290	1.53	6,519	42.62	2	25,238	0.44	387	-550
Total (all exposures classes)	161,030	60,565	0.44	186,451	1.03	15,147	39.79	2	45,944	0.25	828	- 940

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

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		Pre-credit derivatives	Actual risk-weighted
Exposure class		risk-weighted	exposure amount
		exposure amount	exposure amount
		a	b
1	Exposures under F-IRB	57,464	57,464
2	Central governments and central banks	2,856	2,856
3	Institutions	4,602	4,602
4	Corporates	50,006	50,006
4.1	of which corporates – SMEs	4,579	4,579
4.2	of which corporates – specialized lending	17,278	17,278
5	Exposures under A-IRB		
6	Central governments and central banks		
7	Institutions		
8	Corporates		
8.1	of which corporates – SMEs		
8.2	of which corporates – specialized lending		
9	Retail		
9.1	of which retail – SMEs – secured by immovable property collateral		
9.2	of which retail – non-SMEs – secured by immovable property collateral		
9.3	of which retail – qualifying revolving		
9.4	of which retail – SMEs – other		
9.5	of which retail – non-SMEs – other		
10	Total (including F-IRB exposures and A-IRB exposures)	57,464	57,464

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 CR7-A - 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.

Credit risk mitigation techniques															Credit risk mitigation methods in the calculation of RWEAs EUR million																																			
Funded Credit Protection (FCP)															Funded Credit Protection (FCP)		Unfunded Credit Protection (UFCP)																																	
F-IRB															Total exposures EUR million		Part of exposures covered by financial collateral (%)		Part of exposures covered by other eligible collateral (%)		Part of exposures covered by immovable property collateral (%)		Part of exposures covered by receivables (%)		Part of exposures covered by other physical collateral (%)		Part of exposures covered by other funded credit protection (%)		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)									
a															b		c		d		e		f		g		h		i		j		k		l		m		n											
1 Central governments and central banks															64,484																																			
2 Institutions															29,308		1.67																																	
3 Corporates															127,183		0.77		31.85		31.49		0.36		0.01																									
3.1 of which corporates – SMEs															16,421		0.75		47.04		46.66		0.38		0.06																									
3.2 of which corporates – specialized lending															42,320		0.14		53.38		52.65		0.73		0.01																									
3.3 of which corporates – other															68,442		1.16		14.89		14.76		0.12		0.01																									
4 Total															220,976		0.66		18.33		18.12		0.21		0.01																									

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

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

The following table shows the development of RWEAs of risk exposures under the IRB approach between 30 September 2023 and 31 December 2023.

EUR million		Risk-weighted exposure amount
		a
1	<i>Risk-weighted exposure amount as at the end of the previous reporting period</i>	61,146
2	Asset size (+/-)	1,377
3	Asset quality (+/-)	78
4	Model updates (+/-)	-998
5	Methodology and policy (+/-)	
6	Acquisitions and disposals (+/-)	
7	Foreign exchange movements (+/-)	-304
8	Other (+/-)	-294
9	<i>Risk weighted exposure amount as at the end of the reporting period</i>	61,006

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

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 “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 452h 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 (%)
		c	d of which: number of obligors which defaulted during the year				
a	b	c	d	e	f	g	h
Central governments and central banks	0.00 to <0.15	2,040					
	0.00 to <0.10	2,038			1.21		
	0.10 to <0.15	2			0.11	0.09	
	0.15 to <0.25				0.20		
	0.25 to <0.50	2			0.39	0.29	
	0.50 to <0.75						
	0.75 to <2.50	3			1.12	1.32	
	0.75 to <1.75	3			1.02	1.98	
	1.75 to <2.5				2.39		
	2.50 to <10.00	4			8.04	49.93	
	2.5 to <5	1					
	5 to <10	3			8.04	45.49	
	10.00 to <100.00	3			12.18	10.03	
	10 to <20	3			12.18	10.03	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		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				
a	b	c	d	e	f	g	h
	0.00 to <0.15	273			0.05	0.09	
	0.00 to <0.10	202			0.05	0.06	
	0.10 to <0.15	71			0.12	0.41	
	0.15 to <0.25	29			0.19	0.26	
	0.25 to <0.50	14			0.42	0.31	
	0.50 to <0.75	8			0.51	3.39	
	0.75 to <2.50	9			1.10	0.63	
	0.75 to <1.75	8			1.09	0.56	
	1.75 to <2.5	1			2.00	2.00	
	2.50 to <10.00						
	2.5 to <5						
	5 to <10						
	10.00 to <100.00	6			18.47	17.25	
	10 to <20	6			18.47	17.25	
	20 to <30						
	30.00 to <100.00						
Institutions	100.00 (default)	1			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				
a	b	c	d	e	f	g	h
	0.00 to <0.15	2,811			0.08	0.08	0.03
	0.00 to <0.10	2,190			0.06	0.07	0.02
	0.10 to <0.15	621			0.12	0.13	0.03
	0.15 to <0.25	670			0.18	0.17	0.03
	0.25 to <0.50	1,394	3	0.22	0.33	0.38	0.09
	0.50 to <0.75	547	6	1.10	0.43	0.66	0.41
	0.75 to <2.50	1,020	13	1.27	0.69	1.39	0.90
	0.75 to <1.75	790	8	1.01	0.58	1.16	0.66
	1.75 to <2.5	230	5	2.17	1.07	2.15	1.64
	2.50 to <10.00	337	32	9.50	3.22	3.96	4.48
	2.5 to <5	273	18	6.59	2.75	3.52	3.08
	5 to <10	64	14	21.88	5.26	5.63	7.46
	10.00 to <100.00	156	5	3.21	11.72	18.17	5.83
	10 to <20	80	3	3.75	8.71	11.43	4.96
	20 to <30	43	1	2.33	13.76	17.67	18.10
	30.00 to <100.00	33	1	3.03	34.73	33.00	6.12
Corporates – SMEs	100.00 (default)	61			100.00	86.59	

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				
a	b	c	d	e	f	g	h
	0.00 to <0.15	323			0.10	0.10	0.12
	0.00 to <0.10	225			0.08	0.07	
	0.10 to <0.15	98			0.13	0.24	0.18
	0.15 to <0.25	70			0.19	0.22	0.23
	0.25 to <0.50	128	1	0.78	0.35	0.47	0.14
	0.50 to <0.75	56	1	1.79	0.52	1.18	0.55
	0.75 to <2.50	60			1.08	1.42	0.29
	0.75 to <1.75	51			0.93	1.27	
	1.75 to <2.5	9			2.07	2.29	
	2.50 to <10.00	8			4.69	3.09	9.69
	2.5 to <5	7			3.05	3.03	1.54
	5 to <10	2			7.05	5.89	16.73
	10.00 to <100.00	4			15.90	6.50	27.31
	10 to <20	1			10.37	1.43	35.60
	20 to <30	3			22.30	13.60	
	30.00 to <100.00						
Corporates – specialized lending	100.00 (default)	3			100.00	60.00	

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				
a	b	c	d	e	f	g	h
	0.00 to <0.15	2,740			0.08	0.12	
	0.00 to <0.10	1,702			0.09	0.07	
	0.10 to <0.15	1,038			0.13	0.22	
	0.15 to <0.25	1,138	3	0.26	0.18	0.28	0.09
	0.25 to <0.50	1,750			0.31	0.51	0.15
	0.50 to <0.75	472			0.54	0.87	0.47
	0.75 to <2.50	863	4	0.46	1.31	1.84	0.74
	0.75 to <1.75	691	4	0.58	1.07	1.64	0.72
	1.75 to <2.5	172			2.13	2.50	0.99
	2.50 to <10.00	277	18	6.50	3.89	4.84	5.75
	2.5 to <5	170	5	2.94	3.33	3.13	3.69
	5 to <10	107	13	12.15	6.23	9.81	8.51
	10.00 to <100.00	231	12	5.19	15.05	30.75	3.73
	10 to <20	111	1	0.90	13.27	14.57	2.68
	20 to <30	52	10	19.23	20.44	34.31	7.54
	30.00 to <100.00	68	1	1.47	12.55	68.86	20.30
Corporates – Other	100.00 (default)	276			100.00	100.00	

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

As at 31 December 2023, LBBW has 10,797 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) CRR.

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)

Specialized lending: project finance (slotting approach)							
EUR million	Remaining maturity	On-balance sheet exposure	Off-balance sheet exposure	Risk weight	Exposure value	Risk-weighted exposure amount	Expected loss amount
Regulatory categories		a	b	c	d	e	f
Category 1	Less than 2.5 years		3	50%	2	1	
	Equal to or more than 2.5 years		0	70%	0	0	0
Category 2	Less than 2.5 years	0	1	70%	1	0	0
	Equal to or more than 2.5 years	4		90%	4	3	0
Category 3	Less than 2.5 years	0	0	115%	0	0	0
	Equal to or more than 2.5 years	0		115%	0	0	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	4		2	1	0
	Equal to or more than 2.5 years						
Total		4	0		4	3	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)

Specialized lending: income-producing real estate and high-volatility commercial real estate (slotting approach)							
EUR million		On-balance sheet exposure	Off-balance sheet exposure	Risk weight	Exposure value	Risk-weighted exposure amount	Expected loss amount
Regulatory categories	Remaining maturity	a	b	c	d	e	f
Category 1	Less than 2.5 years	0		50%	0	0	
	Equal to or more than 2.5 years	7		70%	7	5	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	7		115%	7	7	0
Category 4	Less than 2.5 years			250%			
	Equal to or more than 2.5 years	7		250%	7	18	1
Category 5	Less than 2.5 years			-			
	Equal to or more than 2.5 years			-			
Total	Less than 2.5 years	0			0	0	
	Equal to or more than 2.5 years	21			21	30	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)

		Specialized lending : Object finance (slotting approach)					
EUR million	Remaining maturity	On-balance sheet exposure	Off-balance sheet exposure	Risk weight	Exposure value	Risk-weighted exposure amount	Expected loss amount
Regulatory categories		a	b	c	d	e	f
Category 1	Less than 2.5 years			50%			
	Equal to or more than 2.5 years			70%			
Category 2	Less than 2.5 years	4	45	70%	38	26	0
	Equal to or more than 2.5 years	39		90%	39	32	0
Category 3	Less than 2.5 years			115%			
	Equal to or more than 2.5 years	12		115%	12	14	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			-			
	Less than 2.5 years	4	45		38	26	0
	Equal to or more than 2.5 years						
Total		51			51	47	1

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 2023.

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

	Equity exposures under the simple risk-weighted approach					
	On-balance sheet exposure	Off-balance sheet exposure	Risk weight	Exposure value	Risk-weighted exposure amount	Expected loss amount
Categories	a	b	c	d	e	f
Private equity exposures	653	3	190%	656	1,247	5
Exchange-traded equity exposures	40		290%	40	117	0
Other equity exposures	1		370%	1	4	0
Total	694	3		698	1,368	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 (CCR) (Article 439 a-d CRR)

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 CRR. LBBW, including Berlin Hyp, 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 2023, the additional funding obligation amounted to around EUR 7m 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 valuation 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.

		a	b	c	d	e	f	g	h
	EUR million	Replacement cost (RC)	Potential future exposure (PFE)	EEPE	Alpha used for computing regulatory exposure value	Exposure value pre-CRM	Exposure value post-CRM	Exposure value	RWEA
EU-1	EU - Original Exposure Method (for derivatives)								
EU-2	EU - Simplified SA-CCR (for derivatives)								
1	SA-CCR (for derivatives)	2,701	4,917		1.4	19,216	10,075	10,050	2,785
2	IMM (for derivatives and SFTs)								
2a	of which securities financing transaction netting sets								
2b	of which derivatives and long settlement transaction netting sets								
2c	of which from contractual cross-product netting sets								
3	Financial collateral simple method (for SFTs)								
4	Financial collateral comprehensive method (for SFTs)					30,271	29,469	29,469	886
5	VaR for SFTs								
6	Total					49,486	39,543	39,519	3,671

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	a	b
		Exposure value	RWEA
1	Total transactions subject to the advanced method		
2	(i) VaR component (including the 3x multiplier)		
3	(ii) stressed VaR component (including the 3x multiplier)		
4	Transactions subject to the standardized method	3,011	1,443
EU-4	Transactions subject to the alternative approach (based on the original exposure method)		
5	<i>Total transactions subject to own funds requirements for CVA risk</i>	<i>3,011</i>	<i>1,443</i>

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 I CRR)

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

EUR million	Risk weight											Total exposure value
	a	b	c	d	e	f	g	h	i	j	k	
	0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Other	
1	Central governments or central banks											
2	Regional government or local authorities	4										4
3	Public sector entities											
4	Multilateral development banks											
5	International organizations											
6	Institutions	1,630				0						1,630
7	Corporates								117	12		128
8	Retail							6				6
9	Institutions and corporates with a short-term credit assessment					0			0			0
10	Other items											
11	<i>Total exposure value</i>	<i>1,634</i>				<i>0</i>	<i>0</i>	<i>6</i>	<i>117</i>	<i>12</i>		<i>1,769</i>

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 I 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.

	a	b	c	d	e	f	g	
	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
1	Exposure class Central governments and central banks							
2	0.00 to <0.15	1,507	0.00	117	42.06	2	5	0.34
3	0.15 to <0.25							
4	0.25 to <0.50							
5	0.50 to <0.75							
6	0.75 to <2.50							
7	2.50 to <10.00							
8	10.00 to <100.00							
9	100.00 (default)							
10	Subtotal	1,507	0.00	117	42.06	2	5	0.34
11	Exposure class Institutions							
12	0.00 to <0.15	19,556	0.06	174	12.92	1	1,026	5.25
13	0.15 to <0.25	7,255	0.16	19	6.82	1	353	4.86
14	0.25 to <0.50	979	0.34	5	3.42	1	31	3.13
15	0.50 to <0.75	453	0.51	2	6.45	1	32	7.13
16	0.75 to <2.50	87	1.19	4	6.70	1	14	16.35
17	2.50 to <10.00							
18	10.00 to <100.00							
19	100.00 (default)							
20	Subtotal	28,330	0.11	204	10.91	1	1,456	5.14
21	Exposure class Corporates							
22	0.00 to <0.15	6,251	0.08	779	22.68	1	759	48.73
23	0.15 to <0.25	1,003	0.14	289	26.74	2	582	127.25
24	0.25 to <0.50	709	0.34	363	45.00	2	405	153.37
25	0.50 to <0.75	74	0.61	84	45.05	3	51	193.26
26	0.75 to <2.50	189	1.24	193	45.00	3	200	271.03
27	2.50 to <10.00	41	4.22	62	45.00	2	60	399.55
28	10.00 to <100.00	14	17.75	22	32.41	3	21	526.87
29	100.00 (default)	5	100.00	12	45.00	3		
30	Subtotal	8,286	0.25	1804	25.93	2	2,077	94.10
31	Total (all CCR relevant exposure classes)	38,122	0.13	2125	15.40	0.93	3,538	9.28

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.

		a	b	c	d	e	f	g	h
		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
1	Cash – domestic currency	410	12,727		8,203				
2	Cash – other currencies		1,152		303				
3	Domestic sovereign debt	1					1,563		0
4	Other sovereign debt	108	244				11,585		
5	Government agency debt	12	113				872		
6	Corporate bonds	40	562				2,712		1,634
7	Equity securities						6,837		1,898
8	Other collateral	55	1,200	1,827	3		5,312		13,479
9	<i>Total</i>	627	15,997	1,827	8,509		28,881		17,012

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 2023.

EUR million	Notionals	a	b
		Protection bought	Protection sold
1	Single-name credit default swaps	6,709	4,962
2	Index credit default swaps		
3	Total return swaps	1,794	
4	Credit options		
5	Other credit derivatives	2,110	665
6	<i>Total notionals</i>	10,613	5,628
<i>Fair values</i>			
7	<i>Positive fair value (asset)</i>	18	93
8	<i>Negative fair value (liability)</i>	-187	-4

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 central counterparties (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	a	b
		Exposure value	RWEA
1	<i>Exposures to QCCPs (total)</i>		209
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions) of which:	288	6
3	(i) OTC derivatives	288	6
4	(ii) Exchange-traded derivatives		
5	(iii) SFTs		
6	(iv) Netting sets where cross-product netting has been approved		
7	Segregated initial margin	1,000	
8	Non-segregated initial margin	28	1
9	Prefunded default fund contributions	444	203
10	Unfunded default fund contributions		
11	<i>Exposures to non-QCCPs (total)</i>		
12	Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions), of which		
13	(i) OTC derivatives		
14	(ii) Exchange-traded derivatives		
15	(iii) SFTs		
16	(iv) Netting sets where cross-product netting has been approved		
17	Segregated initial margin		
18	Non-segregated initial margin		
19	Prefunded default fund contributions		
20	Unfunded default fund contributions		

Figure 44: EU CCR8 – Exposures to CCPs

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

LBBW concluded one additional synthetic securitization in the 2023 reporting year. This 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. In this case, the significant risk is transferred to the mezzanine tranche by way of a financial guarantee. 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. LBBW's RWAs are reduced accordingly. The efficiency of the transaction is substantiated by the new business enabled by the reduced own funds requirements of the securitized portfolio.

In all securitizations that it has concluded, 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) a) of the Securitization Regulation. The remaining exposure after deduction of the risk retention is tranching in line with the securitization structure. The total mezzanine/first loss tranche is placed in the market in each case.

The securitized exposures are at least 95% assigned 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 eight additional securitization transactions in the 2023 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 four 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 2023. 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 2023, LBBW declared that a total of four 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 2023. 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 four synthetic originator positions in the 2023 reporting year.

Resecuritizations

LBBW did not hold any resecuritization positions during the 2023 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 of each securitization position 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 2023. 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 2023, EUR 7.8bn (loan receivables from companies based in Germany) is available for four synthetic securitization transactions.

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 2023:

- 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 value¹ 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".

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
	Institution acts as originator							Institution acts as sponsor				Institution acts as investor			
	Traditional		Synthetic		Subtotal			Traditional		Subtotal		Traditional		Subtotal	
	STS	Non-STs													
EUR million		of which SRT		of which SRT		of which SRT		STS	Non-STs	Synthetic		STS	Non-STs	Synthetic	
1 Total exposures					7,362	7,362	7,362	3,530	350		3,881	1,475			1,475
2 Retail (total)												358			358
3 residential mortgage															
4 credit card															
5 other retail exposures												358			358
6 Re-securitization															
7 Wholesale (total)					7,362	7,362	7,362	3,530	350		3,881	1,116			1,116
8 loans to corporates					7,362	7,362	7,362					444			444
9 commercial mortgage															
10 lease and receivables								3,530	350		3,881	673			673
11 other wholesale															
12 Re-securitization															

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

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)

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	EU-p	EU-q
	Exposure values (by RW bands/deductions)					Exposure values (by regulatory approach)				RWEA (by regulatory approach)				Capital charge after cap			
EUR million	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1,250% RW/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1,250% RW/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1,250% RW	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1,250% RW
1 Total exposures	8,720	2,235	175		114	7,248	3,374	507	114	879	975	51		70	78	4	
2 Traditional transactions	1,471	2,235	175				3,374	507			975	51			78	4	
3 Securitization	1,471	2,235	175				3,374	507			975	51			78	4	
4 Retail																	
5 of which STS																	
6 Wholesale	1,471	2,235	175				3,374	507			975	51			78	4	
7 of which STS	1,358	2,172					3,024	507			821	51			66	4	
8 Re-securitization																	
9 Synthetic transactions	7,248				114	7,248			114	879				70			
10 Securitization	7,248				114	7,248			114	879				70			
11 Retail																	
12 Wholesale	7,248				114	7,248			114	879				70			
13 Re-securitization																	

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

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

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	EU-p	EU-q
	Exposure values (by RW bands/deductions)					Exposure values (by regulatory approach)				RWEA (by regulatory approach)				Capital charge after cap			
EUR million	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1,250% RW/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1,250% RW/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1,250% RW	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1,250% RW
1 Total exposures	1,464	10					879	595			89	62			7	5	
2 Traditional transactions	1,464	10					879	595			89	62			7	5	
3 Securitization	1,464	10					879	595			89	62			7	5	
4 Retail	358						358				36				3		
5 of which STS	358						358				36				3		
6 Wholesale	1,106	10					521	595			53	62			4	5	
7 of which STS	1,106	10					521	595			53	62			4	5	
8 Re-securitization																	
9 Synthetic transactions																	
10 Securitization																	
11 Retail																	
12 Wholesale																	
13 Re-securitization																	

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

15.5 Exposures securitized by the institution - Exposures in default and specific credit risk adjustments (Article 449 I CRR)

		a	b	c
		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	
	EUR million		Of which exposures in default	
1	Total exposures	11,697	25	0
2	Retail (total)			
3	residential mortgage			
4	credit card			
5	other retail exposures			
6	Re-securitization			
7	Wholesale (total)	11,697	25	0
8	loans to corporates	7,816	14	
9	commercial mortgage			
10	lease and receivables	3,881	11	0
11	other wholesale			
12	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, interest rate volatility or inflation (interest rate risk in a narrower sense). In addition, it includes specific interest rate risks such as credit spread risks. Interest rate risk also includes the risk of interest rate changes in the banking book (IRRBB and CSRBB).

FX/commodity risk

FX risk is based on the development of exchange rates. Commodity risk is based on changes in the prices of precious metals and other commodities. It also includes the risk of price changes for energy commodities and CO₂ emission rights.

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 for the LBBW Group 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.

Berlin Hyp is a non-trading book institution, operates as an independent subsidiary and determines its market price risk itself. Berlin Hyp's risk controlling supports the company's Board of Managing Directors on all risk policy issues. Its main

task here is to monitor the risk situation and compliance with risk limits on an ongoing basis and to report to the Board of Managing Directors and committees of Berlin Hyp. Berlin Hyp's market price risk is integrated into all material aspects of LBBW's market price risk management.

LBBW's market risk positions are marked to the market on a daily basis by the controlling units in question. This is used as a basis for calculating business performance. Market price risks are quantified using value-at-risk approaches, which are 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. Risk controlling in Stuttgart prepares a daily report for the LBBW Group, including Berlin Hyp, that gives an overview of earnings performance and risk development.

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

The integrated bank management of the LBBW Group excluding Berlin Hyp is supplemented by weekly stressed value-at-risk calculations. This is based on an observation period which covers a significant 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. The calculations are included both in the own funds requirements of the trading book based on the internal model and in determining the economic capital for market price risks. Using methodology similar to that of the LBBW Group excluding Berlin Hyp, Berlin Hyp also calculates a stressed value-at-risk each month. This is also included in integrated bank management and 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		a
		RWEAs
Outright products		
1	Interest rate risk (general and specific)	1,600
2	Equity risk (general and specific)	326
3	Foreign exchange risk	900
4	Commodity risk	117
Options		
5	Simplified approach	
6	Delta-plus approach	27
7	Scenario approach	
8	Securitization (specific risk)	
9	Total	2,970

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

The LBBW Group'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. Berlin Hyp constitutes an exception, as it uses its own risk model to calculate market price risk. Berlin Hyp does not calculate risk-weighted exposure amounts using an internal risk model. The following explanations thus relate to the internal risk model of the LBBW Group excluding Berlin Hyp, which the authority responsible has authorized for determining capital backing for market price risks.

The internal risk model is used to calculate 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.

In the risk-calculation simulation, the deviation of the risk factors is calculated using the following models: equity prices, FX rates, commodities and interest-rate volatility using log yields, CDS spreads and interest rates including inflation 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 and FX 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 for sub-portfolios.

At present, a scenario relating to the 2008/2009 financial crisis is the scenario with the greatest impact on LBBW's trading book. Changes in equities, interest rates, credit spreads and FX are simulated.

The scenario with the second largest impact on LBBW's trading book is that featuring an increase in credit spreads, a rise in interest rates, and an increase in volatility.

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. 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. The review is based on an analysis of whether the portfolio is being actively managed. The first stage here involves granular monitoring of changes in the portfolio's sensitivities between the trading days. Any conspicuous positions are then evaluated in detail at individual deal level to ensure that allocation to the trading book is still appropriate.

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 June and December, 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.

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 Refinitiv, 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)

		a	b
EUR million		RWEAs	Own funds requirements
1	VaR (higher of values a and b)	492	39
(a)	Previous day's VaR (VaRt-1)		14
(b)	Multiplication factor (mc) x average of previous 60 working days (VaRavg)		39
2	SVaR (higher of values a and b)	1,842	147
(a)	Latest available SVaR (SVaRt-1)		45
(b)	Multiplication factor (ms) x average of previous 60 working days (sVaRavg)		147
3	IRC (higher of values a and b)		
(a)	Most recent IRC measure		
(b)	12 weeks average IRC measure		
4	Comprehensive risk measure (higher of values a, b and c)		
(a)	Most recent risk measure of comprehensive risk measure		
(b)	12-week average of comprehensive risk measure		
(c)	Comprehensive risk measure - floor		
5	Other		
6	Total	2,333	187

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)

		a	b	c	d	e	f	g
EUR million		VaR	SVaR	IRC	Comprehensive risk measure	Other	Total RWAs	Total own funds requirements
1	RWAs at previous period end	521	1,650				2,171	174
1a	Regulatory adjustment	329	1,047				1,376	110
1b	RWAs at the previous quarter-end (end of the day)	192	603				795	64
2	Movement in risk levels	0	- 42				- 42	- 3
3	Model updates/changes							
4	Methodology and policy							
5	Acquisitions and disposals							
6	Foreign exchange movements							
7	Other	- 22					- 22	- 2
	RWAs at the end of the reporting period (end of the day)	170	561				731	58
8a	Regulatory adjustment	322	1,290				1,612	129
8	RWAs at the end of the reporting period	492	1,852				2,343	187

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

The value for RWEAs calculated using the internal model increased overall as compared to the previous quarter due to the higher regulatory adjustments in sVaR. By contrast, the exposure before regulatory adjustments as shown in VaR and sVaR decreased due to changes in market data and position.

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		a
VaR (10-day 99%)		
1	Maximum value	23
2	Average value	18
3	Minimum value	13
4	Period end	15
sVaR (10 day 99%)		
5	Maximum value	59
6	Average value	47
7	Minimum value	37
8	Period end	45
IRC (99.9%)		
9	Maximum value	
10	Average value	
11	Minimum value	
12	Period end	
Comprehensive risk measure (99.9%)		
13	Maximum value	
14	Average value	
15	Minimum value	
16	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 (including 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 changes in portfolio value (dirty backtesting), which excludes credit, debit and additional valuation adjustments). 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 one outlier in the past 250 trading days for the clean P/L. On the basis of the dirty P/L, there was also one outlier for the CRR portfolio. In backtesting, models representing 44.0% of total own funds requirements for market price risks are compared backwards.

The outlier in clean backtesting occurred on 4 December 2023 with an excess amount of EUR 0.3m due to widening credit spreads. This was caused by news on the development of the economy and inflation.

The outlier in dirty backtesting is dated 15 March 2023, with an excess amount of EUR 2.0m resulting from a substantial change in exchange rates. This was attributable to reports in connection with Credit Suisse.

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

Clean backtesting CRR portfolio for the period 4 January 2023 – 29 December 2023 in EUR million

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

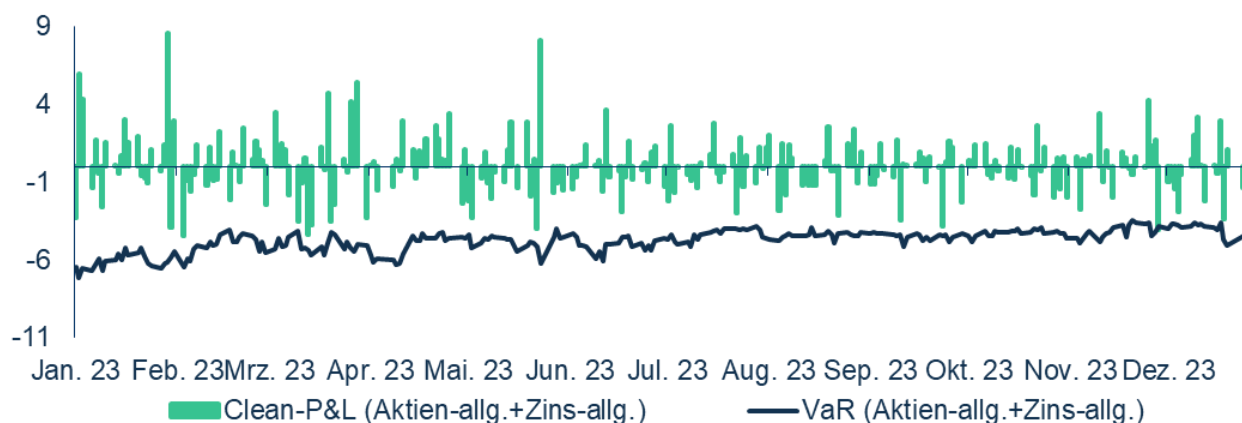


Figure 53: EU MR4 – Comparison of VaR estimates with gains/losses (1)

Dirty backtesting CRR portfolio for the period 4 January 2023 – 29 December 2023 in EUR million

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

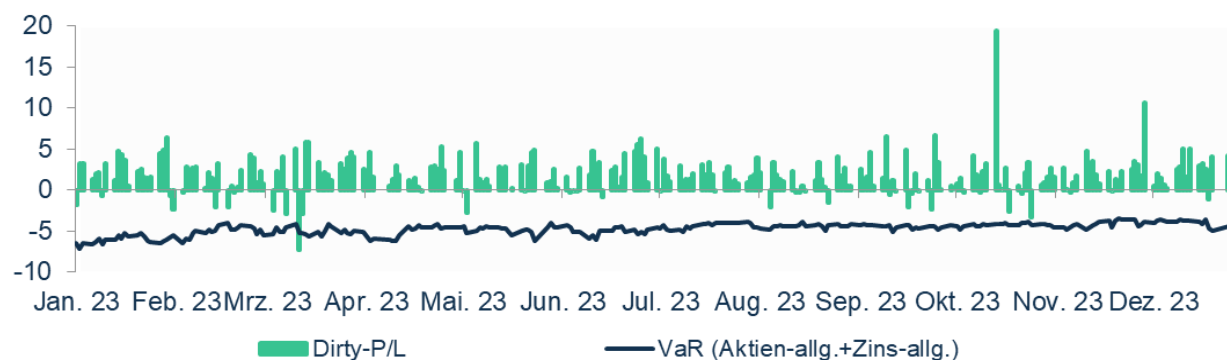


Figure 54: EU MR4 – Comparison of VaR estimates with gains/losses (2)

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 appropriate 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. Berlin Hyp's economic risk contribution is taken into account on an additive basis in the Group on a quarterly basis during a transitional phase. It is calculated based on an internal OpRisk model (advanced measurement approach (AMA) model).

The standard approach under Article 317 et seqq. CRR is applied to determine own fund requirements for regulatory purposes. As at 31 December 2023, these amounted to EUR 560.9m (previous year: EUR 509.7m). LBBW requested to include year-end gains for the 2023 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)*.

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

	a	b	c	d	e
	Relevant indicator			Own funds requirements	Risk exposure amount
EUR million	Year-3	Year-2	Last year		
1 Banking activities subject to basic indicator approach (BIA)					
2 Banking activities subject to standardized (TSA) / alternative standardized (ASA) approaches	3,499	3,688	3,998	561	7,012
3 Subject to TSA:	3,499	3,688	3,998		
4 Subject to ASA:					
5 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 adopted 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
		010	030	040	050	060	080	090	100
010	Assets of the reporting institution	126,712	7,709			239,475	92,766		
030	Equity instruments	603	603	603	603	5,968	2,203	6,618	2,899
040	Debt securities	7,233	5,662	7,161	5,589	39,211	22,043	39,205	21,994
050	of which: covered bonds	1,767	1,615	1,726	1,574	16,042	15,563	16,137	15,658
060	of which: securitizations					914		909	
070	of which: issued by general governments	2,828	2,828	2,799	2,799	4,524	4,282	4,457	4,306
080	of which: issued by financial corporations	4,365	2,834	4,320	2,789	33,566	16,935	33,631	17,032
090	of which: issued by non-financial corporations	41		41		408	193	407	193
120	Other assets	120,341	1,997			199,378	70,502		

Figure 56: EU AE1 - Encumbered and unencumbered assets

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

		Unencumbered			
		Fair value of encumbered collateral received or own debt securities issued	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		
		010	030	040	060
130	Collateral received by the reporting institution	18,751	15,740	25,798	15,190
140	Loans on demand			405	
150	Equity instruments	311	311	1,890	962
160	Debt securities	18,382	15,371	23,858	14,286
170	of which: covered bonds	499	432	1,930	667
180	of which: securitizations				
190	of which: issued by general governments	14,316	13,915	4,559	3,346
200	of which: issued by financial corporations	3,893	1,439	16,555	9,615
210	of which: issued by non-financial corporations	173	105	1,800	813
220	Loans and advances other than loans on demand				
230	Other collateral received				
240	Own debt securities issued other than own covered bonds or securitizations			577	
241	Own covered bonds and asset-backed securities issued and not yet pledged			4,539	
250	TOTAL ASSETS, COLLATERAL RECEIVED AND OWN DEBT SECURITIES ISSUED	143,912	23,449		

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
		010	030
010	Carrying amount of selected financial liabilities	106,802	130,393

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 or the securing or granting of loan collateral for a transaction from which it cannot be withdrawn without prior approval. 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 143.9bn (previous year: EUR 137.7bn) and unencumbered assets of EUR 239.5bn (previous year: EUR 194.9bn). 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 25% (previous year: 26%) of the encumbered assets.
- Covered bonds: LBBW issues covered bond in accordance with German covered bond legislation. Accordingly, 34% (previous year: 22%) 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: 14%) 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.

The total of the cover pools for outstanding Pfandbriefe (public and mortgage Pfandbriefe) for the disclosure period (2023 financial year) was EUR 49.9bn (previous year: EUR 28.8bn). The cover pools also include overcollateralization of EUR 15.2bn (previous year: EUR 14.5bn), 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 42.9bn (previous year: EUR 44.9bn); of this, EUR 18.8bn (previous year: EUR 22.1bn) 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 4.5bn in the disclosure period (previous year: EUR 104.9m). 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)

		a	b	c	d
		Changes of the economic value of equity		Changes of the net interest income	
EUR million					
Supervisory shock scenarios		Current period	Last period	Current period	Last period
1	Parallel up	-659	-864	-864	-1,303
2	Parallel down	212	398	398	277
3	Steeper	84	33		
4	Flattener	-325	-233		
5	Short-term shock up	-464	-463		
6	Short-term shock down	220	235		

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

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 regarding 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. Special repayment rights are presented using a non-interest, linear prepayment model. The basic assumption of the modeling is 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 shift in the yield curve in accordance with EBA/GL/2022/14.

The change in customer behavior was also simulated when assessing the impact.

A portfolio reduction reduced the effect of the interest rate shock.

Given the regulatory requirement that only half of the positive stress effects may be taken into account, there is a considerable 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 Regulatory disclosure of ESG risks (Article 449 a CRR)

20.1 Qualitative information on ESG risks

Business strategy and processes

Through its long-term strategic development and focus, LBBW aims to play a proactive role in the fundamental economic and social shift towards sustainability. The strategic levers were developed further in the 2023 financial year as part of the LBBW Group strategy. The five defined strategic levers (sustainable transformation, innovative solutions, more resilience, inspiring employees, and contribution to society) contribute to the corporate objectives of growth and relevance on a long-term basis. In this way, the relevant requirements and future challenges for LBBW are addressed. In particular, the “sustainable transformation” and “contribution to society” levers highlight LBBW’s ESG ambitions.

LBBW’s long-term environmental, social and governance targets (ESG targets) include achieving the goals of the Paris Agreement. Specific targets to be met by 2030 were set for selected sectors with high greenhouse gas emissions (GHG) (sector-specific transformation) that clarify LBBW’s aspirations in discussions with customers. As a partner and shaper of the transformation, the needs arising from the transformation requirements are taken into account and suitable solutions for the customers are developed on this basis. In line with the strategic lever “contribution to society,” charitable initiatives by employees are also actively supported. These particularly include a wide range of corporate volunteering opportunities.

The strategic levers are monitored at operational unit level using incentive systems. At the LBBW Group, the corporate remuneration strategy provides the framework for designing and implementing the remuneration systems. It is derived from the overarching business and risk strategy and from the HR strategy. This ensures that the strategic requirements are implemented in LBBW’s remuneration systems and processes. The LBBW Group’s strategic objectives form the framework for measuring performance-based variable remuneration. LBBW’s remuneration strategy is essentially based on the main objectives of growth and relevance. The defined strategic levers are grouped in the “LBBW Strategy House” and include ESG-specific key figures that are used for internal management purposes and for measuring success and are therefore relevant to remuneration. Target achievement is reviewed at regular intervals.”

In addition, LBBW expressly supports the principle of gender-neutral remuneration for the same or equivalent work and performance, and endeavors to grant fair, non-discriminatory remuneration for each employee. The corporate remuneration strategy ensures that the remuneration systems are essentially based on performance, results, and the market, meaning that disadvantages in pay on the basis of gender can be ruled out.

The business strategy analyzes and presents the impact of sustainability efforts with their regulatory requirements and the climate and environmental risks on the LBBW Group and its individual business areas in close collaboration with the relevant divisions. To account for ESG risks, general qualitative principles have been outlined in the Group risk strategy, which aligns with the business strategy. These provide a framework for all activities at the LBBW Group and are fleshed out in the form of guidelines and exclusions. The Group-wide risk appetite statement has been enhanced significantly in terms of material ESG risks. All applicable regulations are set out in the ESG risk section of the non-financial risk strategy.

The following excerpts from the risk appetite statement relate to the LBBW Group. Individual subsidiaries such as Berlin Hyp may have different statements, for example due to their specific business model.

In its corporate risk strategy, LBBW defines its quantitative and qualitative risk appetite. The definition of risk appetite was fleshed out with ESG aspects in the risk strategy for 2024. The quantitative risk appetite defines long-term ESG goals such as achieving the climate goals of the Paris Agreement and decarbonizing the portfolio. Emissions intensity at Group and segment level will be used as a key risk indicator for monitoring climate and environmental risks in future.

Specific risk-taking principles have been established as qualitative risk appetite guidelines. The goal of a sustainable business model necessitates various ESG-related requirements that are described in this excerpt from the Group risk strategy:

1. “The LBBW Group acts in the best and long-term interest of its customers and stakeholders and thus intends to make a substantial contribution to society.
2. Exposures are to be scaled, taking into account the LBBW Group’s risk-bearing capacity. Concentration risks are to be identified and deliberately managed using suitable processes. Risks to the Group’s going concern status must be excluded.
3. The overall portfolio is to be actively managed, taking account of concentration risks, to improve resilience during times of crisis. Especially in the credit portfolio, concentration risks are to be managed at sector, size class and country level.
4. Transactions that could hurt the bank’s reputation in the long term are to be avoided. The sustainability policy of the LBBW Group must be observed.
5. LBBW works only with products and on markets whose risks it understands and has mastered.
6. Sustainable transformation is our strategic lever. We ensure that sustainability criteria are met for customer financing. We want to support our customers as they transition to more sustainable business models.
7. In addition to the quantitative goals, LBBW will do the following to help shape the necessary transformation of the economy for the required climate neutrality:
 - ensure transparency in loan applications for the sector pathways in the case of sectors with high emissions
 - regulate any breach of the credit risk strategy on the basis of the individual ESG score
8. When lending and investing money, the LBBW Group takes account of ethical aspects such as human rights, working conditions, environmental protection, and anti-corruption. It naturally does not support illegal actions such as tax evasion, actions conflicting with tax honesty, or crime.
9. Business financing or insuring deliveries of military weapons/armaments to foreign countries, as well as other critical issues from a sustainability perspective, are subject to restrictions that are set out in the bank’s internal regulations. Projects that discernibly contribute to massive destruction of the environment and nature without bringing any environmental added value are not supported.”

In the context of risk appetite, exclusion criteria are defined and clustered in ESG categories (environment, social, and governance). The lending rules with regard to reputation and sustainability risks are regularly supplemented with additional guidelines, or existing guidelines are revised.

LBBW has set the following exclusions for environmental, social and governance criteria.

- LBBW does not consider companies that produce cluster munitions, delivery systems for cluster munitions and/or anti-personnel mines.
- LBBW is also withdrawing from business with the coal industry and no longer lends to companies that build new coal-fired power plants or coal mines.
- In addition, clear thresholds have been set for energy suppliers regarding the share of energy or revenue generated by coal.
- LBBW does not support financing related to pornography, controversial forms of gambling or uranium mining without sufficient environmental and safety standards.
- There are also lending guidelines for agriculture and forestry, which set out rules for the use of the raw materials palm oil, soy, cotton and logging, as well as guidelines for oil and gas, fishing and aquaculture and cattle breeding in South America.
- Furthermore, LBBW does not provide general corporate finance to companies involved in the production of biological or chemical weapons.

The detailed exclusions and ESG criteria are regularly updated throughout the year in LBBW’s sustainability regulations.

To achieve the goal of climate neutrality of the credit portfolio, LBBW has also set sector-specific and scenario-based climate targets for 2030 for the sectors responsible for the most greenhouse gas emissions. These are used in the active dialog on transformation efforts with customers, the results of which are taken into account in the credit decision (see *Template 3: Banking book - Indicators of potential climate change transition risk: Alignment metrics*).

Since 2022, there have been uniform ESG investment guidelines for the entire proprietary securities portfolio of LBBW (Bank). These are based on recognized standards and voluntary commitments by LBBW (such as the UN’s human rights standards and the ILO’s core labor standards) and are set out in the “LBBW sustainability regulations.” In addition to a blacklist of countries, they particularly include sector-specific regulations that adopt the standards applicable in customer business for the investment book too, thereby harmonizing the requirements in both areas.

The implementation of the EU Taxonomy Regulation throughout the bank is being advanced as part of the Group-wide "Sustainability Project" launched in 2021. As at 31 December 2023, LBBW is required to examine and report taxonomy compliance for the first time in addition to taxonomy eligibility. To support the review of individual economic activities in the context of disclosing the green asset ratio, the Taxo tool from the VÖB (Verband Öffentlicher Banken, Association of German Public Banks) was introduced. Its use is currently focused on the real estate finance, corporate customers, and development business segments. In the DNSH review, data from MunichRE are used to assess physical risks.

LBBW supports the sustainable transformation and the EU's climate protection and environmental goals with a wide range of sustainable financial products and services. Sustainable investment offers are available to all customer groups in the relevant categories for them.

- Taking the example of financing the energy transition/decarbonizing the energy system: For years, LBBW has been financing projects in the renewable energy sector such as wind power and photovoltaic plants. In 2023, financing for renewable energy was increased by 12% to EUR 3.3bn. Renewable energy thus accounts for 42% of the total project finance portfolio and 92% of financed energy generation plants.
- Taking the example of issuing a taxonomy-compliant bond: LBBW is the first issuer of a bond based on a new concept from the German Structured Securities Association (BSW). Private investors can invest amounts starting from EUR 1,000 in its "fixed-interest climate protection bond (in accordance with EU Taxonomy)." The asset pool comprises sustainable properties and projects in the renewable energy sector.
- Taking the example of issuing a taxonomy-compliant certificate: LBBW is expanding its market position in sustainable products with the product innovation of a taxonomy-compliant retail certificate. Based on the new market standard developed by the German Structured Securities Association (BSW) together with LBBW and competitors, a taxonomy-compliant certificate based on taxonomy-compliant loans (wind farms, commercial real estate) was issued for the first time.

LBBW sees itself not only as a financing provider but also as an advisor and strategic partner to its customers. As such, it focuses not only on offering a sustainable product range, but also deliberately goes further to advance the transformation of the economy.

The goal of LBBW Sustainability Advisory is therefore to support corporate customers in particular, as the bank's main customer group, with the sustainable transformation of their business models. Starting by performing materiality analyses, we advise customers on everything from their strategic focus to the development of individual climate goals in line with existing transformation and decarbonization pathways and the management of their sustainability activities.

Strong demand for this holistic approach has led to a significant expansion of the Advisory units, and the range of services and advice has also been expanded with additional specialist areas and future topics. For example, "LBBW Sustainability Readiness Checks" help corporate customers with setting priorities and targets.

The Sustainability Advisory units at LBBW offer expertise combined with implementation advice and support not only for companies, but also for financial institutions and institutional customers. In addition, the LBBW experts advise banks, savings banks, and institutional customers on structuring their own portfolio in line with ESG criteria and on issuing social and green bonds.

Each year the CEO and the head of HR examine which priorities are to be derived for the HR strategy based on the bank's overall strategy. This is generally done as part of the annual discussions. In a dialog between the Board of Managing Directors, the management of the HR division, and the management of the HR departments, a critical analysis of environment-related changes such as emerging trends is performed. If necessary and if prioritized accordingly, strategic goals may be adjusted or new measures may be devised.

An extensive demographic analysis developed by HR shows specifically for LBBW that effects of demographic change such as an aging population and a growing shortage of specialist staff will pose challenges in the near future. This gives rise to the core task of further developing and purposefully retaining specialist staff at LBBW. Managing capacity and staff costs continues to play an important role in this context. Management of staff risks is also becoming increasingly important.

Staff risks refer to the potential risks to the company's continued existence, triggered by its own staff. A distinction is made between shortage, resignation, demographic, adjustment and motivation risks. Each sub-risk may result in an inability to maintain proper business operations.

The relevant non-financial staff risks are to be minimized by establishing an appropriate risk monitoring and management concept.

The risks are measured in periodic evaluations and analyses and in company-wide comparisons of key staff indicators such as turnover rates, absences, and data on staff development measures.

LBBW already uses a number of measures to tackle potential further risks relating to staff. For example, it pursues task-oriented staff qualification and provides a professional training program that is tailored to the target groups. LBBW has established extensive talent programs for junior staff and succession planning, carries out annual rounds of personnel planning, and has set up a program for active demographic management.

Individual value drivers and strategic targets for key indicators have been defined for the sub-risks. Deviation analyses are performed as part of regular submissions to the Board of Managing Directors, for example, in which critical developments are explicitly addressed and submitted for discussion on the Board of Managing Directors.

LBBW has firmly establishing the promotion of gender equality in the guidelines of its HR policy, particularly in the two pillars “work-life balance” and “equal opportunities and diversity.” In 2022, LBBW became one of the first German banks to sign the UN Women’s Empowerment Principles, which particularly promote an equal management culture and gender equality at companies. In addition, LBBW signed the Diversity Charter in 2008, thereby undertaking to ensure a non-discriminatory work environment for all employees.

LBBW has successfully implemented several measures for the advancement of women and achieved its target of having at least 25% women in management positions. The new minimum target for the LBBW Group is 30% by the end of 2025.

LBBW recognizes the United Nations’ Universal Declaration of Human Rights and expects its contractual partners to do the same. Furthermore, LBBW stands for upholding children’s rights without exception and eliminating child labor. In order to identify, prevent, and reduce human rights violations, the review of human rights aspects is integrated in the investment and credit processes.

In accordance with Section 4 (3) of the German Supply Chain Act (LkSG), a human rights officer was appointed for LBBW with effect from 1 January 2023 and is responsible for monitoring risk management. The human rights officer’s tasks include monitoring compliance with due diligence requirements, the effectiveness review, preparing and reviewing the policy statement, the annual risk analysis report, and reviewing tip-offs and other information.

In connection with the LkSG in force since 1 January 2023, an analysis and adjustment of the relevant procurement processes at LBBW was performed in 2022. As part of the standard due diligence process, the questionnaires and the “Sustainability agreement for LBBW suppliers” were examined and adjusted in terms of the content and protection goals of the LkSG. A new risk management module that specifically meets the requirements of the LkSG was also introduced in LBBW’s supplier management system. Both the abstract risk analysis (assessment of country and sector risk and questionnaires) and the specific risk analysis (if indications of risk were identified in the abstract risk analysis) are performed in this module.

With regard to employee rights, LBBW bases its approach on internationally recognized standards, voluntary commitments, and German and European legal requirements and regulations.

Governance

Rigorously applying these to the existing Group structure guarantees systematic sustainability management at LBBW. Responsibility lies with the Group’s Board of Managing Directors. The Board of Managing Directors established the following project and line-based committees to advance systematic sustainability management and establish it in ongoing processes:

- The core responsibilities of the Board of Managing Directors Sustainability Committee include overall management and strategic ongoing development of sustainability at a Group level. It is also responsible for making decisions on recommendations made by the Sustainability Committee. This committee generally meets once per quarter.
- The Sustainability Committee has a coordinating and an advisory role and works on preparing decisions for the Board of Managing Directors Sustainability Committee. The LBBW Sustainability Committee is responsible for creating transparency and networks across business units to further reinforce and expand the importance of sustainability. The Sustainability Committee also acts as the steering committee for relevant flagship projects and substantial overall impact in connection with sustainability.

ESG risks affect all risk types. Accordingly, sustainability risks are monitored and managed on an ongoing basis in business operations using existing risk processes. At Board of Managing Directors level, the Risk Committee (risk monitoring, determining risk methodology), the Asset Liability Committee (interest (banking book), management of FX, liquidity, capital and balance sheet structuring of the LBBW Group) and the Credit Committee (credit decisions in accordance with credit/trade decision-making system) should be noted here.

Responsibility for ongoing consideration of sustainability risk (ESG) is divided among the units in accordance with the three lines of defense.

- Operational responsibility in the first line of defense lies with the areas responsible for the transaction, depending on the type of risk (in particular credit and transaction-related reputation risk), in cooperation with the ESG Group Transformation department. Non-transaction-related risk management within the first LoD is the responsibility of OE 13 “Corporate Communication, Marketing and BMD Office” and department “OE 8550 ESG Group Transformation” together with all divisional managers and managing directors of Group subsidiaries.
- The monitoring function in the second line of defense is split between Risk Control, Group Compliance (second line of defense for compliance and reputation risks) and COO Risk Management.
- As the third line of defense, Internal Auditing monitors the first and second lines and assesses the appropriateness and effectiveness of risk management.

The sustainable approach to financial advisory services and the rules for systematic implementation and review are set out in the “Guidelines for Retail Customer Advice at BW-Bank.” Our consultations take a holistic approach, focusing on the individual needs of each and every customer.

Specific work instructions and process guidelines provide the framework for the advisory process. Product selection guidelines and review mechanisms ensure that we always put our customers’ interests first. LBBW provides detailed and readily understandable information about various forms of investment and any associated risks. Advisors at LBBW are not assigned sales targets for individual securities products. Sales targets must always align with customer interests. LBBW advises on financial matters in every phase of customers’ lives.

LBBW is committed to the United Nation’s Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, the labor standards of the International Labour Organization (ILO), the German General Anti-Discrimination Act (Allgemeines Gleichbehandlungsgesetz (AGG)), the “UK Modern Slavery Act” and the German Supply Chain Act (Lieferkettensorgfaltspflichtengesetz (LkSG)).

Compliance with these commitments in day-to-day business is ensured through binding guidelines, review processes in the lending business and in supplier management:

- The ILO’s eight core labor standards on fair working conditions apply for all LBBW Group employees, provided these have been ratified by the country in question. We also expect our suppliers and their sub-contractors to comply with human rights and workers’ rights.
- We have set binding standards for many company areas and activities as part of our sustainability management. Our suppliers and service providers are also required to meet sustainable criteria. All suppliers must confirm the “Sustainability agreement for LBBW suppliers” at the time of registration and sign it when entering into contracts. The agreement requires them to comply with what LBBW considers essential environmental and social criteria. For example, LBBW expects suppliers to ensure fair working conditions. Suppliers must accept a breach of social or environmental standards set out in the sustainability agreement (e.g. in relation to human rights violations such as child labor) as grounds for extraordinary termination.
- LBBW is committed to its responsibility for human rights and the environment in its own supply chains and requires its own suppliers to uphold human rights and protect the environment as required by the German Supply Chain Act (Lieferkettensorgfaltspflichtengesetz (LkSG)). In addition, LBBW expects its suppliers to suitably address this expectation throughout the supply chain. The LBBW human rights officer appointed as at 1 January 2023 reports directly to the Board of Managing Directors
- LBBW does not work with companies or institutions that are known to disregard fundamental human rights. This applies to all types of business, transactions, projects, products, operational decisions, strategies, and plans of the LBBW Group.
- All employees are required to complete an e-learning tool to implement the German General Anti-Discrimination Act (Allgemeines Gleichbehandlungsgesetz (AGG)). No form of discrimination is tolerated at LBBW and when working with employees, customers, business partners, suppliers or other persons. LBBW has a zero-tolerance policy for all forms of gender discrimination, including verbal, physical and sexual harassment.
- The topics of diversity and equal opportunities are overseen by a diversity officer at LBBW. In accordance with the “Works Agreement on Protection from Discrimination and a Cooperative Environment in the Workplace,” employees who feel discriminated against can turn to the staff council, the representatives for disabled employees, the responsible manager, the social services department, or the complaints office.
- LBBW expressly encourages its employees to be transparent about any irregularities and has established a whistleblowing process for this purpose: breaches of statutory regulations or internal guidelines and punishable offenses within LBBW can be anonymously reported to the Compliance department or to an external, independent ombudsman appointed by LBBW. This is possible across the Group at branches and downstream companies of the LBBW Group.

As well as compliance with statutory requirements and a focus on internationally recognized standards, LBBW is also committed to responsible corporate governance with effective and transparent governance processes, the protection of international human rights and freedom of association and the elimination of discrimination through its membership in the UN Global Compact and its adherence to the German Sustainability Code, the UN Women Empowerment Principles and the UN Principles for Responsible Banking (UN PRB).

Risk management

The risk management process consists of identifying, measuring, monitoring and managing risks. Material ESG risks are identified in the risk inventory. They are subsequently measured and incorporated in the risk management process. Potential effects of ESG risks on the portfolio are examined for several medium and long-term time periods in scenario analyses.

Risk inventory

ESG risks that arise in connection with LBBW's business model are systematically evaluated as part of the Group risk inventory. ESG risks are cross-sectional risks that can affect different risk types as risk drivers. In 2023 another detailed analysis of these ESG risk drivers was performed.

Environmental risk covers transitory and physical climate risks, physical environmental risks, and biodiversity risks. Criteria are selected for each risk driver, which can be used to evaluate the credit portfolio's vulnerability. Depending on the risk type, data calculated internally by the bank (e.g. greenhouse gas intensity) or publicly available data (e.g. Human Freedom Index, the World Bank's hazard maps of physical risks and the Sustainability Accounting Standards Board (SASB) Materiality Map) are used to assess the impact of ESG risk drivers on the portfolio. If the share of the portfolio affected exceeds materiality thresholds, this risk driver is classified as material.

As a result, the effects of transitory and physical climate risks on credit risk in particular were deemed material in the short, medium and long term. It can be assumed that transitory and physical risks result in increased investment and changes to the business models of LBBW's customers and could thus primarily hurt their operating income.

The potential impact of physical climate risks on real estate risk is considered high, but is rated as immaterial due to the building insurance policies in place.

Changes in biodiversity have also been examined in detail, but are currently considered less relevant. LBBW also believes the impact of ESG risk drivers on market risks, liquidity risks and operational risks, as well as on real estate, development, investment and model risks, is less relevant currently.

Social and governance risks do not have a material impact on risk exposures, as the portfolio is diversified and is focused on Germany and Europe. By contrast, the impact of ESG risks in general on reputation risk was considered relevant. Events in our customers' environment (e.g. labor conditions, breaches of applicable laws, environmental standards) can also affect LBBW's reputation. Risk management therefore places particular focus on these channels.

Risk management and monitoring

ESG analyses are already an integral part of the entire risk management, from the risk inventory and methods to measurement, reporting and scenario analyses.

To give due consideration to ESG as an interdisciplinary topic, employees work in agile teams across departments and divisions. The internal "ESG Manual in Risk Management" provides a brief overview of the methods and processes with references to the relevant detailed regulations. Interested employees can view the document on a sustainability page of the intranet, alongside links to all relevant regulations.

LBBW employs various methods and tools to systematically evaluate ESG risks in relation to individual transactions and portfolios and to determine the impact on relevant divisions and segments. The carbon tool, physical risk tool and ESG check list are solutions developed in-house that are constantly being expanded.

Transition risks are material factors affecting LBBW's credit risk. Transition risks can be countered by a variety of measures; for example, investments can prepare a company for anticipated changes in conditions. One approximation of transition risks is the respective customer's emissions intensity. To calculate the greenhouse gas footprint, LBBW uses customers' published Scope 1 and Scope 2 greenhouse gas emissions wherever possible. However, these data were published in only a few cases in the reporting year. If no individual customer data are available, aggregate sector data

based on EUROSTAT are used instead. These sector data are calculated in an external report and prepared by the consulting firm MACS Energy & Water GmbH, which specializes in sustainability in the financial sector. This process ensures full coverage of the credit portfolio.

Using the carbon accounting method applied, the financed share of the reported or estimated Scope 1 and Scope 2 greenhouse gas emissions is calculated for each counterparty (Scope 3.1 and 3.2 for LBBW)¹. Portfolio emissions are calculated as the sum of the pro-rata financed customer emissions; this is also done as part of the MACS report. The calculation methods are currently based on the Partnership for Carbon Accounting Framework (PCAF) standard. LBBW is working intensively on further refining its methods and aims to increase the coverage of published customer data further.

The financed emissions to be published here under Article 449a of the Capital Requirements Regulation (CRR) relate to the sub-portfolio of credit exposures in the banking book towards corporate customers (in particular excluding derivatives and line agreements). As at 31 December 2023, financed emissions calculated in this way totaled 5.7 million tons of CO₂e. A breakdown of these financed emissions by sector can be found in *Template 1: Banking book- Indicators of potential climate change transition risk: Credit quality of exposures by sector, emissions and residual maturity*.

Using hazard maps from the World Bank, LBBW developed the physical risk tool to analyze the impact of chronic and acute physical climate risks on credit risk. Depending on the characteristics of the exposure being assessed, a local, regional, or sector approach is applied: For real estate, the impact of individual physical risk drivers (including flooding) on the status quo is assessed for individual locations using a four-point scale. Companies with a regional focus are evaluated using hazard maps aggregated for the company headquarters' region. Major international companies often have many regionally diversified production locations. Physical risks at these companies are therefore assessed on a sector basis using the Sustainability Accounting Standard Board (SASB) Materiality Map and the Intergovernmental Panel on Climate Change Fifth Assessment Report (IPCC AR5). The most frequently observed type of impact relates to the risk of flooding. This particularly applies to addresses in portfolios for corporates and collateral in Germany. A breakdown of the portfolios affected by high physical risks by region can be found in the disclosure report as at 31 December 2023 in *Template 5: Banking book - Indicators of potential climate change physical risk: Exposures subject to physical risk*.

The Board of Managing Directors is informed about transition risks once a quarter and about physical risks every six months by way of risk reports. These reports explain and discuss the most important developments in transitory and physical risks at portfolio, sector, division and customer level. In addition, the half-yearly internal sector reports include a qualitative assessment of ESG risks at portfolio level and present the development of the average greenhouse gas intensity of the most relevant customers in the respective sector.

ESG scenarios already constitute a separate scenario class in LBBW's conceptual framework for stress tests and scenarios. ESG scenario analyses are prepared for several medium and long-term time periods and serve primarily as an early warning and way of identifying where action is required in the long term, as well as a basis for strategic discussions.

To identify and assess ESG-related credit risks and reputation risks, LBBW applies sustainability-related review criteria in the loan application process.

LBBW uses portfolio-specific ESG check lists to evaluate potential ESG risks in credit exposures. In environmental (E), social (S) and governance (G) risk clusters, it has identified qualitative and quantitative questions that support Sales and Risk Management in identifying and evaluating potential ESG risks. Clear guidelines are specified to ensure a comparable evaluation of qualitative criteria. Based on the standardized evaluation of questions on a five-point scale, sub-scores and an overall ESG score are calculated in the ESG check list. If material risks have already been identified for the customers in the credit process, these are taken into account in the internal rating procedure.

The calculated ESG scores and a risk-oriented assessment by Sales and Risk Management are incorporated in the loan application and taken into account when making credit decisions. If the thresholds for the ESG score set out in the credit risk strategy are exceeded, then since 2023 the next-highest person responsible must make a decision on whether to grant loans in accordance with the decision-making system for lending and trading transactions.

Loan applications are also examined in terms of compliance-related and sustainability-related reputation risks based on internal lending rules. If certain criteria arise, Group Compliance and the ESG Group Transformation department are required to be involved.

¹ Scope X.Y refers to the X scope of LBBW in relation to the underlying Y scope of its customers.

In addition to the sustainability-related review criteria in the loan application process, LBBW also has a product certification process for derivatives and a reputation risk review for new products as part of the “New Product Process” (NPP).

The stipulated NPP in accordance with MaRisk for banks ensures that all relevant risks of a new product are analyzed and the new product can be presented correctly at LBBW in line with the commercial law and regulatory requirements. All affected divisions (including Finance, Risk Controlling, IT, Back Office, Treasury, Compliance, Internal Auditing, Credit Principles, Risk Management, Sustainability, Banking, and Legal) are involved in the NPP. The results of the coordination and approval process and the LBBW product list are documented centrally in an NPP tool. At management level, the Product Approval Committee set up by the Board of Managing Directors is responsible for the NPP and for product approvals. Products and product approval processes are subject to an annual review. The results are reported to the Product Approval Committee.

The media, relevant news agencies and selected social media channels have been continuously screened for a long time and the Board of Managing Directors and key decision-makers are specifically informed of potential implications for LBBW's reputation. Where necessary, the bank responds with an active communication strategy.

Data management and quality

In view of the increased demand for information about sustainability aspects and to facilitate efficient data management, LBBW has developed a centralized ESG database, known as the ESG core, as a “single point of truth” under the guidance of the Data Management and Architecture department. The ESG core is the leading system for ESG data – this applies both to existing ESG data and ESG data from external providers, as well as data on ESG results. To monitor the data quality, the data in the ESG core are integrated in the existing central data quality framework at LBBW. The respective data controller is responsible for the data quality and for setting up monitoring.

The development of the ESG core began in 2022 with the integration of data for disclosure requirements. Then in 2023, the central data model was successively expanded to include additional areas such as transitory risks.

Data availability and quality, as well as the fact that there is still not a fully developed market standard for all aspects of ESG risk and measurement, continue to pose challenges. Despite making increasingly extensive use of external data providers and stepping up the use of specific customer data where available, LBBW will remain reliant on estimates, developing models and approximations in many areas for the next few years. Accordingly, fluctuations in results and changes in estimates over time cannot be ruled out.

20.2 Template 1: Banking book– Indicators of potential climate Change transition risk: Credit quality of exposures by sector, emissions and residual maturity

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
	Gross carrying amount (EUR million)				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions (EUR million)			GHG financed emissions (Scope 1, Scope 2 and Scope 3 emissions of the counterparty) (in tons of CO2 equivalent)		GHG emissions: Percentage based on company-specific reporting***						
Sector/subsector		Of which exposures towards companies excluded from EU Paris-aligned Benchmarks**	Of which environmentally sustainable (CCM)	Of which Stage 2 exposures	Of which non-performing exposures		Of which Stage 2 exposures	Of which non-performing exposures		Of which Scope 3 financed emissions		<= 5 years	> 5 years <= 10 years	> 10 years <= 20 years	> 20 years	Average weighted maturity
1 Exposures towards sectors that highly contribute to climate change*	88,860	2,092	468	22,057	1,612	– 1,150	– 346	– 508	5,748,732		15%	55,703	19,513	7,477	6,166	3.71
2 A - Agriculture, forestry and fishing	114			17	6	– 2	– 0	– 1	70,772		4%	82	31	1		4.00
3 B - Mining and quarrying	521	70		71	8	– 3	– 0	– 0	279,444		76%	336	185			3.95
4 B.05 - Mining of coal and lignite	8	8			8	– 0		– 0	4,907		0%	4	5			5.99
5 B.06 - Extraction of crude petroleum and natural gas	61	61				– 0			41,064		100%	61				4.83
6 B.07 - Mining of metal ores	10			0		– 0	– 0		5,121		0%	10				3.50
7 B.08 - Other mining and quarrying	63			22	0	– 0	– 0	– 0	34,038		0%	50	13			3.37
8 B.09 - Mining support service activities	378			50	1	– 2	– 0	– 0	194,314		89%	210	168			3.87
9 C - Manufacturing	16,743	704	58	5,745	755	– 405	– 120	– 232	1,785,023		14%	13,072	3,309	357	4	3.01
10 C.10 - Manufacture of food products	1,640		1	231	13	– 19	– 6	– 3	58,722		4%	1,160	410	70		4.06
11 C.11 - Manufacture of beverages	311			104	104	– 12	– 2	– 9	10,771		0%	210	101			3.31
12 C.12 - Manufacture of tobacco products	3	1		0		– 0	– 0		104		0%	3	0			2.61
13 C.13 - Manufacture of textiles	532			329	11	– 8	– 6	– 0	9,660		0%	227	300	5		5.92
14 C.14 - Manufacture of wearing apparel	60			28	9	– 6	– 0	– 6	2,379		20%	54	7			2.06
15 C.15 - Manufacture of leather and related products	7			6		– 0	– 0		132		0%	7	0			0.24
16 C.16 - Manufacture of wood and of products of wood and cork,	791			476	2	– 10	– 6	– 1	95,650		18%	363	386	41		5.67

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
	Gross carrying amount (EUR million)				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions (EUR million)			GHG financed emissions (Scope 1, Scope 2 and Scope 3 emissions of the counterparty) (in tons of CO2 equivalent)		GHG emissions: Percentage based on company-specific reporting***		<= 5 years	> 5 years <= 10 years	> 10 years <= 20 years	> 20 years	Average weighted maturity
Sector/subsector		Of which exposures towards companies excluded from EU Paris-aligned Benchmarks**	Of which environmentally sustainable (CCM)	Of which Stage 2 exposures	Of which non-performing exposures		Of which Stage 2 exposures	Of which non-performing exposures		Of which Scope 3 financed emissions						
except furniture; manufacture of articles of straw and plaiting materials																
17 C.17 - Manufacture of paper and paper products	587			335	5	- 14	- 12	- 0	199,322		4%	406	174	7		3.59
18 C.18 - Printing and reproduction of recorded media	135			13	3	- 2	- 0	- 2	5,475		0%	103	30		2	3.55
19 C.19 - Manufacture of coke and refined petroleum products	97	97		64		- 0	- 0		61,589		0%	93	4			1.94
20 C.20 - Manufacture of chemicals and chemical products	884	140	0	208	255	- 24	- 7	- 14	229,154		24%	507	307	70		5.14
21 C.21 - Manufacture of basic pharmaceutical products and pharmaceutical preparations	624	37	0	378	11	- 9	- 7	- 0	5,996		14%	601	20	2		2.70
22 C.22 - Manufacture of rubber products	1,292		0	285	28	- 18	- 7	- 8	137,394		2%	1,021	267	4		2.58
23 C.23 - Manufacture of other non-metallic mineral products	558		0	244	2	- 10	- 5	- 1	449,571		21%	393	165			3.46
24 C.24 - Manufacture of basic metals	534			139	8	- 13	- 4	- 6	285,689		14%	460	36	39		2.48
25 C.25 - Manufacture of fabricated metal products, except machinery and equipment	1,041	35	0	384	56	- 38	- 3	- 33	44,710		0%	819	208	13	1	2.98
26 C.26 - Manufacture of computer, electronic and optical products	772	11	1	171	8	- 9	- 3	- 3	16,522		14%	597	136	39	0	3.23
27 C.27 - Manufacture of electrical equipment	394	1		66	1	- 3	- 1	- 1	5,634		13%	344	46	4		2.19
28 C.28 - Manufacture of machinery and equipment n.e.c.	2,173	7	19	774	80	- 62	- 10	- 46	31,693		20%	1,965	181	26	1	2.05
29 C.29 - Manufacture of motor vehicles, trailers and semi-trailers	2,797	373	14	944	143	- 124	- 31	- 89	109,051		18%	2,480	310	6		1.57
30 C.30 - Manufacture of other transport equipment	552		22	299	2	- 11	- 7	- 0	8,414		8%	437	106	8		2.46

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
	Gross carrying amount (EUR million)					Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions (EUR million)			GHG financed emissions (Scope 1, Scope 2 and Scope 3 emissions of the counterparty) (in tons of CO2 equivalent)							
Sector/subsector		Of which exposures towards companies excluded from EU Paris-aligned Benchmarks**	Of which environmentally sustainable (CCM)	Of which Stage 2 exposures	Of which non-performing exposures		Of which Stage 2 exposures	Of which non-performing exposures		Of which Scope 3 financed emissions	GHG emissions: Percentage based on company-specific reporting***	<= 5 years	> 5 years <= 10 years	> 10 years <= 20 years	> 20 years	Average weighted maturity
31 C.31 - Manufacture of furniture	118	2		42	5	- 2	- 1	- 1	1,418		0%	69	50			4.36
32 C.32 - Other manufacturing	770	1		216	9	- 9	- 2	- 6	14,945		3%	690	56	23		2.60
C.33 - Repair and installation of machinery and equipment	71			9	0	- 1	- 0	- 0	1,027		0%	62	9			2.78
34 D - Electricity, gas, steam and air conditioning supply	5,482	798	19	942	32	- 64	- 24	- 18	1,975,582		7%	1,525	1,232	2,500	226	8.92
D35.1 - Electric power generation, transmission and distribution	5,269	704	19	874	31	- 60	- 23	- 18	1,864,872		7%	1,470	1,180	2,393	226	8.91
36 D35.11 - Production of electricity	4,162	521	5	815	31	- 37	- 18	- 18	1,101,256		4%	1,045	939	2,034	143	9.95
D35.2 - Manufacture of gas; distribution of gaseous fuels through mains	94	94		3		- 1	- 0		49,481		0%	28	30	36		8.28
38 D35.3 - Steam and air conditioning supply	119			65	1	- 3	- 1	- 1	61,229		0%	27	22	71		9.76
39 E - Water supply; sewerage, waste management and remediation activities	2,663		0	203	3	- 7	- 5	- 0	200,181		0%	577	587	698	801	6.23
40 F - Construction	2,488		0	900	104	- 76	- 9	- 31	62,969		6%	1,894	267	107	219	2.56
41 F.41 - Construction of buildings	1,347		0	621	78	- 23	- 4	- 16	32,484		0%	1,034	92	74	146	1.88
42 F.42 - Civil engineering	474			122	15	- 40	- 1	- 12	13,326		0%	324	59	24	67	3.49
43 F.43 - Specialized construction activities	667			157	11	- 13	- 4	- 4	17,159		22%	536	116	9	5	3.26
44 G - Wholesale and retail trade; repair of motor vehicles and motorcycles	6,576	298	9	1,287	155	- 134	- 12	- 110	237,479		10%	5,659	646	270	1	2.58
45 H - Transportation and storage	3,646	200	244	447	27	- 27	- 8	- 2	553,104		40%	1,658	1,469	215	304	5.01
46 H.49 - Land transport and transport via pipelines	1,258	200	165	114	26	- 6	- 1	- 2	120,191		24%	618	221	138	282	4.43
47 H.50 - Water transport	102			39		- 3	- 1		69,842		38%	39	64			5.15
48 H.51 - Air transport	448		0	135	0	- 2	- 2	- 0	269,324		47%	185	263			5.12

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
	Gross carrying amount (EUR million)				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions (EUR million)			GHG financed emissions (Scope 1, Scope 2 and Scope 3 emissions of the counterparty) (in tons of CO2 equivalent)		GHG emissions: Percentage based on company-specific reporting***						
Sector/subsector		Of which exposures towards companies excluded from EU Paris-aligned Benchmarks**	Of which environmentally sustainable (CCM)	Of which Stage 2 exposures	Of which non-performing exposures		Of which Stage 2 exposures	Of which non-performing exposures		Of which Scope 3 financed emissions		<= 5 years	> 5 years <= 10 years	> 10 years <= 20 years	> 20 years	Average weighted maturity
49 H.52 - Warehousing and support activities for transportation	1,812		77	157	1	- 16	- 4	- 1	90,969		44%	805	907	77	22	5.38
50 H.53 - Postal and courier activities	27		2	2	0	- 0	- 0	- 0	2,777		77%	11	15			4.94
51 I - Accommodation and food service activities	118			20	0	- 1	- 0	- 0	1,603		0%	42	73	3		5.54
52 L - Real estate activities	50,509	23	138	12,425	522	- 430	- 166	- 113	582,575		5%	30,858	11,714	3,326	4,611	3.35
53 Exposures towards sectors other than those that highly contribute to climate change*	128,913	103	36	5,714	319	- 437	- 117	- 153				83,161	23,534	12,600	9,619	3.78
54 K - Financial and insurance activities	109,824			1,805	130	- 149	- 38	- 38				68,895	20,350	11,215	9,363	3.80
55 Exposures to other sectors (NACE codes J, M – U)	19,090	103	36	3,910	189	- 288	- 79	- 116				14,265	3,184	1,385	256	3.72
56 TOTAL	217,773	2,195	503	27,771	1,931	- 1,587	- 463	- 661	5,748,732		15%	138,864	43,047	20,077	15,785	3.76

* In accordance with the Commission Delegated Regulation (EU) 2020/1818 supplementing Regulation (EU) 2016/1011 as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks -Climate Benchmark Standards Regulation - Recital 6: Sectors listed in Sections A to H and Section L of Annex I to Regulation (EC) No 1893/2006

** Of which exposures towards companies excluded from EU Paris-aligned Benchmarks in accordance with Article 12(1) points (d) to (g) and Article 12(2) of Regulation (EU) 2020/1818

*** GHG emissions (column i): gross carrying amount percentage of the portfolio derived from company-specific reporting

Figure 60: Template 1: Banking book – indicators of potential climate change transition risk: Credit quality of exposures by sector, emissions and residual maturity

Gross carrying amounts are reported in the maturity column (years) in EUR million. Column C “Of which environmentally sustainable (CCM)” is disclosed for the first time as at 31 December 2023. Column J “Of which Scope 3 financed emissions” is shown only for the sake of completeness. As per the law, the corresponding values will be disclosed for the first time as at 30 June 2024.

The carbon accounting developed by LBBW is used to calculate emissions of greenhouse gases (GHG) financed by LBBW for the entire credit portfolio. The carbon accounting calculates financed emissions in tons of CO2 equivalents for each customer that are attributable to LBBW based on the Partnership for Carbon Accounting Financials (PCAF) method. Here, a customer's total emissions are weighted by the ratio of LBBW's exposure relative to the customer's enterprise value. Where possible, the calculation is based on customer-specific data. These are either obtained from external providers or determined internally on the basis of company publications. If no customer-specific data are available, sector intensity is used to estimate GHG emissions per financing volume. This intensity is based on aggregate sector data from EUROSTAT and is made available to LBBW by the consulting firm MACS Energy & Water GmbH. The sector intensities were updated as scheduled as at 31 December 2023. Only financed Scope 1 and 2 emissions are considered at present, but the calculation will be expanded to include customers' Scope 3 emissions as at 30 June 2024. The potential impact of the risk exposures on credit, market, operating, reputation and liquidity risks is explained in more detail in *section 3.1 Institution's risk management approach*.

20.3 Template 2: Banking book – Indicators of potential climate change transition risk: Loans collateralized by immovable property – Energy efficiency of the collateral

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
	Total gross carrying amount (in EUR million)															
	Level of energy efficiency (EP score in kWh/m ² of collateral)							Level of energy efficiency (EPC label of collateral)							Without EPC label of collateral	
Counterparty sector		0; <= 100	> 100; <= 200	> 200; <= 300	> 300; <= 400	> 400; <= 500	> 500	A	B	C	D	E	F	G		of which estimated*
1 Total EU area	61,436	40,355	10,496	2,403	70	486	138	15,015	4,819	4,246	4,749	2,734	1,035	1,363	27,474	73%
2 of which loans collateralized by commercial immovable property	43,544	29,774	7,016	1,025	64	382	133	13,601	2,881	2,190	2,946	1,822	565	1,037	18,501	72%
3 of which loans collateralized by residential immovable property	17,892	10,581	3,480	1,378	6	104	5	1,414	1,938	2,056	1,803	912	470	326	8,973	74%
4 of which collateral obtained by taking possession: residential and commercial immovable properties																
5 of which with estimated level of energy efficiency (EP score in kWh/m ² of collateral)	19,985	12,812	4,841	2,333											19,985	100%
6 Total non-EU area	6,498	1,920	2,232	357	6	514									6,498	77%
7 of which loans collateralized by commercial immovable property	6,044	1,766	2,043	343	6	514									6,044	77%
8 of which loans collateralized by residential immovable property	454	154	189	14											454	79%
9 of which collateral obtained by taking possession: residential and commercial immovable properties																
10 of which with estimated level of energy efficiency (EP score in kWh/m ² of collateral)	5,029	1,920	2,232	357	6	514									5,029	100%

* of which with estimated level of energy efficiency (EP score in kWh/m² of collateral)

Figure 61: Template 2: Banking book – Indicators of potential climate change transition risk: Loans collateralized by immovable property – Energy efficiency of the collateral

Template 2 discloses aggregated information on the energy efficiency of properties from loans backed by real estate. The gross carrying amount (in EUR million) of the loan exposures is broken down into the energy efficiency ranges of different energy performance scores, stated in kWh/m², and the individual energy performance certificate (EPC) categories, stated as Labels A to G.

The table includes both a distinction between commercial and residential real estate and the location of the property in either EU or non-EU territories. In addition, it is specified whether the data on the energy efficiency level are real or estimated. They are classified as estimated values if no energy performance certificate is available. For these properties, an internal model has been developed that uses information from external real estate databases. Changes in EPC categories result from an increase in real data in relation to commercial properties.

As at the reporting date, there is no collateral obtained by taking possession for commercial or residential properties.

20.4 Template 3: Banking book – Indicators of potential climate change transition risk: Alignment metrics

Disclosure of this template is not mandatory at present. The following table reports information voluntarily based on current knowledge. The tables and related information will be disclosed in line with CRR for the first time as at 30 June 2024 as scheduled.

LBBW (Bank) measures and analyzes the alignment of its portfolio in high-carbon sectors with the Paris climate targets. Seven sectors have been defined as high-carbon (electricity; automotive manufacturers; automotive suppliers; aviation; cement, clinker and lime production; iron and steel, coke, and metal ore production; and commercial real estate finance).

The alignment of a sector is measured based on physical carbon intensity (CO₂/output: electricity, automotive manufacturers, aviation, cement, steel, and commercial real estate) or a technology mix (revenue share attributable to components for combustion engines; automotive suppliers). In each sector, only the CO₂-relevant part of the value chain is considered. In the electricity sector, for example, only companies that produce electricity in their own plants are considered. This approach reflects the focus on the main sectors and, in turn, the information in the “NACE sector” column. Commercial real estate finance is not limited to a specific sector, so no NACE sector has been selected here. Allocation to a sector pathway is based on the type of finance.

No comparative value can be derived from the IEA NZE scenario for the automotive supplier sector and so no information on the difference can be shown in the corresponding column.

	a	b	c	d	e	f	g
	Sector	NACE sectors (a minima)	Portfolio gross carrying amount (EUR million)	Alignment metric	Year of reference	Distance to IEA NZE2050 in % *	Target (year of reference + 3 years)
1	Electricity	D35.11	4,549	214 kg CO ₂ /MWh	2022	55%	-
2	Motor vehicles manufacturers	C29.1	1,361	157 g CO ₂ /km	2022	52%	-
3	Motor vehicles suppliers	C29.32	2,056	22% revenue share attributable to components for combustion engines	2022	-	-
4	Aviation	H51.1	1,204	80 g CO ₂ /pkm	2022	5%	-
5	Cement, clinker and lime production	C23.51	166	563 kg CO ₂ /t cement	2022	26%	-
6	Iron and steel, coke, and metal ore production	C24.1	111	1,314 kg CO ₂ /t steel	2022	43%	-
7	Commercial real estate finance	-	16,300	37 kg CO ₂ /m ² *a	2022	106%	-

* Point in Time (PiT) distance to 2030 NZE2050 scenario in % (for each metric)

Figure 62: Template 3: Banking book – Indicators of potential climate change transition risk: Alignment metrics

To calculate the alignment metrics, companies' CO₂ and output data are collected and added together on an exposure-weighted basis. If no real data are available, estimates are used. The most recent available company data (CO₂ and output) relate to the reporting date 31 December 2022. The exposure as at 31 December 2023 is used for the calculation so as to reflect changes in the scope of business.

At present, the analysis only includes LBBW (Bank) business. Differences from the reporting for the first half of the year are primarily due to new real data, as some companies do not publish necessary sustainability data until the second half of the year.

At present, LBBW (Bank) has only set and published sector-specific targets to be met by 2030. For this reason, no information is currently available for the 3-year target in the “Target (year of reference + 3 years)” column in the template.

20.5 Template 4: Banking book - Indicators of potential climate change transition risk: Exposures to top 20 carbon-intensive firms

	a	b	c	d	e
	Gross carrying amount in EUR million (aggregate)	Gross carrying amount towards the counterparties compared to total gross carrying amount (aggregate)*	Of which environmentally sustainable (CCM)	Weighted average maturity in years	Number of top 20 polluting firms included
1	170	0.08%		1.84	6

*For counterparties among the top 20 carbon emitting companies in the world

Figure 63: Template 4: Banking book – Indicators of potential climate change transition risk: Exposures to top 20 carbon-intensive firms

The top 20 list from the Climate Accountability Institute (2018 / www.climateaccountability.org) was used to determine exposure to the top carbon emitting companies.

Column C “Of which environmentally sustainable (CCM)” is disclosed for the first time as at 31 December 2023. However, there is no exposure here as at the reporting date.

20.6 Template 5: Banking book – Indicators of potential climate change physical risk: Exposures subject to physical risk

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		Gross carrying amount (EUR million)													
		Of which exposures sensitive to impact from physical climate change events													
		Breakdown by maturity bucket					Of which exposures sensitive to impact from chronic climate change events	Of which exposures sensitive to impact from acute climate change events	Of which exposures sensitive to impact both from chronic and acute climate change events	Of which Stage 2 exposures	Of which non-performing exposures	Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			
		<= 5 years	> 5 years <= 10 years	> 10 years <= 20 years	> 20 years	Average weighted maturity						Of which Stage 2 exposures	Of which non-performing exposures	Of which Stage 2 exposures	Of which non-performing exposures
	Germany														
1	A - Agriculture, forestry and fishing	108	28	10	1		4.59	29	3	7	3	1	- 1	- 0	- 1
2	B - Mining and quarrying	69	8	1			5.51		7	2	2		- 0	- 0	
3	C - Manufacturing	10,646	829	282	18		6.38	989	118	22	173	11	- 8	- 0	- 5
4	D - Electricity, gas, steam and air conditioning supply	2,785	95	100	296	76	21.19		461	107	1		- 0	- 0	
5	E - Water supply; sewerage, waste management and remediation activities	2,607	98	129	171	159	13.73	102	442	14	3	0	- 0	- 0	- 0
6	F - Construction	1,953	85	11	13		6.05		99	10	6	1	- 1	- 0	- 0
7	G - Wholesale and retail trade; repair of motor vehicles and motorcycles	5,369	532	35			2.63	386	169	11	62	1	- 1	- 0	- 1
8	H - Transportation and storage	2,397	105	29	10	0	8.60	50	71	24	45	0	- 1	- 0	- 0
9	L - Real estate activities	30,275	1,404	1,089	204	63	6.08	18	2,537	204	305	0	- 15	- 3	- 0
10	Loans collateralized by residential immovable property	15,561	804	398	47	51	5.45	6	1,293	1	60	1	- 5	- 0	- 0
11	Loans collateralized by commercial immovable property	30,477	1,008	1,232	168	21	6.85	144	2,076	210	263	4	- 14	- 2	- 2
12	Reposessed collaterals														
13	Other relevant sectors (breakdown below where relevant)														

Figure 64: Template 5: Banking book – Indicators of potential climate change physical risk: Exposures subject to physical risk – Germany

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		Gross carrying amount (EUR million)													
		Of which exposures sensitive to impact from physical climate change events													
		Breakdown by maturity bucket					Of which exposures sensitive to impact from chronic climate change events	Of which exposures sensitive to impact from acute climate change events	Of which exposures sensitive to impact both from chronic and acute climate change events	Of which Stage 2 exposures	Of which non-performing exposures	Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			
		<= 5 years	> 5 years <= 10 years	> 10 years <= 20 years	> 20 years	Average weighted maturity								Of which Stage 2 exposures	Of which non-performing exposures
	European Union (excluding Germany)														
1	A - Agriculture, forestry and fishing	0	0			0.04	0						- 0		
2	B - Mining and quarrying	0													
3	C - Manufacturing	2,180	81			4.47	47	23	10	1	5	- 0	- 0	- 0	
4	D - Electricity, gas, steam and air conditioning supply	1,217	21	31	231	41	19.93	35	289	8		- 0	- 0		
5	E - Water supply; sewerage, waste management and remediation activities	0													
6	F - Construction	230	54		23	67	7.42	0	144	0		- 0	- 0		
7	G - Wholesale and retail trade; repair of motor vehicles and motorcycles	693	147			2.39	146	1	0	56		- 0	- 0		
8	H - Transportation and storage	483	0			0.06		0				- 0			
9	L - Real estate activities	12,942	1,734	480	44	75	1.63	251	1,143	940	282	- 12	- 1		
10	Loans collateralized by residential immovable property	2,331	407	207		3.71	60	232	322	28		- 11	- 0		
11	Loans collateralized by commercial immovable property	13,067	1,690	492	44	75	1.33	218	1,136	949	384	- 11	- 1		
12	Reposessed collaterals														
13	Other relevant sectors (breakdown below where relevant)														

Figure 65: Template 5: Banking book – Indicators of potential climate change physical risk: Exposures subject to physical risk – European Union (excluding Germany)

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		Gross carrying amount (EUR million)													
		Of which exposures sensitive to impact from physical climate change events													
		Breakdown by maturity bucket						Of which exposures sensitive to impact from chronic climate change events	Of which exposures sensitive to impact from acute climate change events	Of which exposures sensitive to impact both from chronic and acute climate change events	Of which Stage 2 exposures	Of which non-performing exposures	Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		
		<= 5 years	> 5 years <= 10 years	> 10 years <= 20 years	> 20 years	Average weighted maturity								Of which Stage 2 exposures	Of which non-performing exposures
Rest of world															
1 A - Agriculture, forestry and fishing	6	6				8.28	6	0			3	3	- 0	- 0	
2 B - Mining and quarrying	451														
3 C - Manufacturing	3,916	309	187			6.61	263	233	0		167	113	- 9	- 3	- 6
4 D - Electricity, gas, steam and air conditioning supply	1,480		120	79		18.35	55	143			117		- 0	- 0	
5 E - Water supply; sewerage, waste management and remediation activities	56	38				0.89	35	2			1	2	- 0	- 0	- 0
6 F - Construction	304	30				6.94	3	27			29	0	- 0	- 0	- 0
7 G - Wholesale and retail trade; repair of motor vehicles and motorcycles	514	120				0.20	21	98	0		1	0	- 0	- 0	- 0
8 H - Transportation and storage	766	18				0.67		18			17		- 0	- 0	
9 L - Real estate activities	7,292	135	7			4.64		142			8		- 0	- 0	
10 Loans collateralized by residential immovable property	454	0	0	0		11.35		0							
11 Loans collateralized by commercial immovable property	6,044	37	7			6.98		15	29		8		- 0	- 0	
12 Repossessed collaterals															
13 Other relevant sectors (breakdown below where relevant)															

Figure 66: Template 5: Banking book – Indicators of potential climate change physical risk: Exposures subject to physical risk – Rest of world

The three tables show the gross carrying amounts that are qualitatively highly impacted by physical risks according to the physical risk tool developed by LBBW for the regions of Germany, the European Union (excluding Germany) and the rest of the world. Three different approaches are taken here:

- Location-based valuation of real estate collateral,
- Regional valuation of companies with a regional focus,
- Sector valuation for geographically diversified companies.

The acute climate risks of inland and coastal flooding, heavy rain, forest fires, landslides and tropical cyclones and the chronic climate risks of drought, heat and rising sea levels are considered in all approaches. If impact is high for at least one of these risk aspects, the related gross carrying amounts in the table are classified as high impact. The individual approaches are described in more detail in the following section.

Location-based valuation of real estate collateral

Real estate is affected only by physical risks at its location. Accordingly, real estate collateral is valued using highly accurate access to hazard maps. Here, LBBW uses publicly available hazard maps from the World Bank and the European Joint Research Centre that depict a potentially catastrophic event for each of the selected risk types (e.g. a 100-year event). LBBW converts the hazard values obtained here into a qualitative assessment for high impact.

Regional valuation of companies with a regional focus

LBBW initially classifies its customers on the basis of their regional dependency. For this, it prefers to use granular information from the rating systems. If this is unavailable, company size is used as an approximation. In the case of companies with a regional focus identified here, it is assumed that the production sites, supply chains and customer groups are located predominantly in a single region and so the physical risk of the company can also be assessed via this region. For this purpose, the companies are first located in the appropriate region on the basis of their headquarters. The European Union's NUTS 3 classification is used in Europe. Counties are considered in the US and the highest sub-national units for the rest of the world. The second stage is to estimate the extent to which physical risks are affected for all of these regions. A region is considered highly impacted if at least 10% of its area is highly impacted.

Sector valuation for geographically diversified companies

Companies without a strong regional dependency are assumed to be geographically diversified. As production sites, supply chains and customers are distributed across many locations, these companies are not fundamentally affected by acute climate risks, which always relate to a clearly defined region. By contrast, they can be highly impacted by chronic climate risks as these can create systematic problems for certain sectors. Accordingly, geographically diversified companies are assessed via their sector. The basis for assessing individual sectors is the Sustainability Accounting Standards Board (SASB)'s Materiality Map and the Intergovernmental Panel on Climate Change (IPCC Ar5)'s Fifth Assessment Report.

20.7 Template 6. Summary of GAR KPIs

	KPI			% coverage (over total assets)*
	Climate change mitigation	Climate change adaptation	Total (climate change mitigation + climate change adaptation)	
GAR stock	0.33%	0.00%	0.33%	19.66%
GAR flow	0.90%	0.00%	0.91%	20.35%

* % of assets covered by the KPI over banks' total assets
Figure 67 Template 6. Summary of GAR KPIs

Templates 6 to 8 on the green asset ratio (GAR) in accordance with Article 449 a CRR are required to be disclosed for the first time as at 31 December 2023.

These templates serve to illustrate the form and scope of economic activities that can be classified as environmentally sustainable in terms of the first two environmental objectives – climate change mitigation (CCM) and climate change adaptation (CCA) – under the EU Taxonomy Regulation.

20.8 Template 7 - Mitigating actions: Assets for the calculation of GAR

EUR million	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
	Disclosure reference date T															
	Climate change mitigation (CCM)						Climate change adaptation (CCA)						TOTAL (CCM + CCA)			
	Of which towards taxonomy relevant sectors (Taxonomy-eligible)						Of which towards taxonomy relevant sectors (Taxonomy-eligible)						Of which towards taxonomy relevant sectors (Taxonomy-eligible)			
	Of which environmentally sustainable (Taxonomy-aligned)						Of which environmentally sustainable (Taxonomy-aligned)						Of which environmentally sustainable (Taxonomy-aligned)			
	Total gross carrying amount			Of which specialized lending	Of which transitional	Of which enabling			Of which specialized lending	Of which adaptation	Of which enabling			Of which specialized lending	Of which transitional/adaptation	Of which enabling
GAR - Covered assets in both numerator and denominator																
1	Loans and advances, debt securities and equity instruments not HfT eligible for GAR calculation	65,335	24,434	792		200	166	2	0				24,437	792	200	166
2	Financial corporations	50,412	15,148	35		2	0						15,148	35	2	0
3	Credit institutions	44,089	9,929										9,929			
4	Loans and advances	34,104	7,009										7,009			
5	Debt securities, including UoP	9,985	2,920										2,920			
6	Equity instruments															
7	Other financial corporations	6,324	5,219	35		2	0						5,219	35	2	0
8	of which investment firms															
9	Loans and advances															
10	Debt securities, including UoP															
11	Equity instruments															
12	of which management companies															
13	Loans and advances															
14	Debt securities, including UoP															
15	Equity instruments															
16	of which insurance undertakings	49	21										21			
17	Loans and advances	1	0										0			
18	Debt securities, including UoP	48	21										21			
19	Equity instruments															
20	Non-financial corporations (subject to NFRD disclosure obligations)	6,803	2,070	503		198	166	0	0				2,070	504	198	166

[illegible]

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
		Disclosure reference date T															
		Total gross carrying amount	Climate change mitigation (CCM)					Climate change adaptation (CCA)					TOTAL (CCM + CCA)				
			Of which towards taxonomy relevant sectors (Taxonomy-eligible)					Of which towards taxonomy relevant sectors (Taxonomy-eligible)					Of which towards taxonomy relevant sectors (Taxonomy-eligible)				
			Of which environmentally sustainable (Taxonomy-aligned)					Of which environmentally sustainable (Taxonomy-aligned)					Of which environmentally sustainable (Taxonomy-aligned)				
					Of which specialized lending	Of which transitional	Of which enabling			Of which specialized lending	Of which adaptation	Of which enabling			Of which specialized lending	Of which transitional/ adaptation	Of which enabling
EUR million																	
42	On demand interbank loans	2,293															
43	Cash and cash-related assets	153															
44	Other assets (e.g. Goodwill, commodities etc.)	71,171															
45	TOTAL ASSETS IN THE DENOMINATOR (GAR)	241,385															
	Other assets excluded from both the numerator and denominator for GAR calculation																
46	Sovereigns	15,528															
47	Central banks exposure	40,029															
48	Trading book	35,349															
49	TOTAL ASSETS EXCLUDED FROM NUMERATOR AND DENOMINATOR	90,906															
50	TOTAL ASSETS	332,291															

Figure 68: Template 7 - Mitigating actions: Assets for the calculation of GAR

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
		Disclosure reference date T: KPIs on flows															
		Climate change mitigation (CCM)					Climate change adaptation (CCA)					TOTAL (CCM + CCA)					
		Proportion of new eligible assets funding taxonomy relevant sectors					Proportion of new eligible assets funding taxonomy relevant sectors					Proportion of new eligible assets funding taxonomy relevant sectors					
		Of which environmentally sustainable					Of which environmentally sustainable					Of which environmentally sustainable					
% (compared to total covered assets in the denominator)				Of which specialized lending	Of which transitional	Of which enabling			Of which specialized lending	Of which adaptation	Of which enabling			Of which specialized lending	Of which transitional/adaptation	Of which enabling	Proportion of total new assets covered
1	GAR	10.12%	0.33%		0.08%	0.07%	0.00%	0.00%				10.12%	0.33%		0.08%	0.07%	19.66%
2	Loans and advances, debt securities and equity instruments not HFT eligible for GAR calculation	10.12%	0.33%		0.08%	0.07%	0.00%	0.00%				10.12%	0.33%		0.08%	0.07%	19.66%
3	Financial corporations	6.28%	0.01%		0.00%	0.00%						6.28%	0.01%		0.00%	0.00%	15.17%
4	Credit institutions	4.11%										4.11%					13.27%
5	Other financial corporations	2.16%	0.01%		0.00%	0.00%						2.16%	0.01%		0.00%	0.00%	1.90%
6	of which investment firms																
7	of which management companies																
8	of which insurance undertakings	0.01%										0.01%					0.01%
9	Non-financial corporations subject to NFRD disclosure obligations	0.86%	0.21%		0.08%	0.07%	0.00%	0.00%				0.86%	0.21%		0.08%	0.07%	2.05%
10	Households	2.99%	0.11%									2.99%	0.11%				2.44%
11	of which loans collateralized by residential immovable property	2.92%	0.11%									2.92%	0.11%				2.27%
12	of which building renovation loans	0.06%										0.06%					0.05%
13	of which motor vehicle loans	0.01%										0.01%					0.12%
14	Local government financing	0.00%										0.00%					0.00%
15	Housing financing																
16	Other local governments financing	0.00%					0.00%					0.00%					0.00%
17	Collateral obtained by taking possession: residential and commercial immovable properties																

		q	r	s	t	u	v	w	x	y	z	aa	ab	ac	ad	ae	af
		Disclosure reference date T: KPIs on inflows															
		Climate change mitigation (CCM)					Climate change adaptation (CCA)					TOTAL (CCM + CCA)					
		Proportion of new eligible assets funding taxonomy-relevant sectors					Proportion of new eligible assets funding taxonomy-relevant sectors					Proportion of new eligible assets funding taxonomy-relevant sectors					
		Of which environmentally sustainable					Of which environmentally sustainable					Of which environmentally sustainable					
				Of which specialized lending	Of which transitional	Of which enabling			Of which specialized lending	Of which adaptation	Of which enabling			Of which specialized lending	Of which transitional/adaptation	Of which enabling	Proportion of total new assets covered
% (compared to total covered assets in the denominator)																	
1	GAR	23.71%	0.90%		0.01%	0.64%	0.00%	0.00%			0.00%	23.71%	0.91%		0.01%	0.64%	20.35%
2	Loans and advances, debt securities and equity instruments not HFT eligible for GAR calculation	23.71%	0.90%		0.01%	0.64%	0.00%	0.00%			0.00%	23.71%	0.91%		0.01%	0.64%	20.35%
3	Financial corporations	20.71%										20.71%					18.16%
4	Credit institutions	18.12%										18.12%					17.08%
5	Other financial corporations	61.43%										61.43%					1.09%
6	of which investment firms																
7	of which management companies																
8	of which insurance undertakings	42.21%										42.21%					0.00%
9	Non-financial corporations subject to NFRD disclosure obligations	44.35%	10.02%		0.10%	7.20%	0.00%	0.04%			0.00%	44.35%	10.06%		0.10%	7.20%	1.80%
10	Households	68.32%	1.01%									68.32%	1.01%				0.39%
11	of which loans collateralized by residential immovable property	67.41%	1.01%									67.41%	1.01%				0.39%
12	of which building renovation loans																
13	of which motor vehicle loans																
14	Local government financing																
15	Housing financing																
16	Other local governments financing																
17	Collateral obtained by taking possession: residential and commercial immovable properties																

Figure 69: Template 8 - GAR (%)

20.10 Template 10 – Other climate change mitigating actions that are not covered in Regulation (EU) 2020/852

a	b	c	d	e	f
Type of financial instrument	Type of counterparty	Gross carrying amount (EUR million)	Type of risk mitigated (Climate change transition risk)	Type of risk mitigated (Climate change physical risk)	Qualitative information on the nature of the mitigating actions
1	Financial corporations				
2	Non-financial corporations				
3	of which loans collateralized by commercial immovable property				
4	Other counterparties				
5	Financial corporations	72	Yes	No	This relates to wind farm financing. The purpose of the mitigating action is to reduce CO2 emissions and, in turn, protect the climate. The wind farms financed are located outside the EU and are not subject to the NFRD requirement and so they are not taken into account under the Taxonomy Regulation. The term of the loan is used as a timeline for the action.
6	Non-financial corporations	2,328	Yes	No	This relates to project finance for wind and solar farms. The purpose of the mitigating action is to reduce CO2 emissions and, in turn, protect the climate. The companies are not subject to the NFRD requirement. Furthermore, the wind farms financed are located outside the EU and so they are not taken into account under the Taxonomy Regulation. The term of the loan is used as a timeline for the action.
7	of which loans collateralized by commercial immovable property				
8	Households				
9	of which loans collateralized by residential immovable property				
10	of which building renovation loans				
11	Other counterparties				

*No information is disclosed regarding the bonds on account of current discussions regarding the distinction from European green bonds.
Figure 70: Template 10 – Other climate change mitigating actions that are not covered in Regulation (EU) 2020/852

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
BCBS	Basel Committee on Banking Supervision
CCA	Climate change adaptation
CCF	Credit conversion factor
CCM	Climate change mitigation
CCP	Central counterparty
CCR	Counterparty credit risk
CDS	Credit default swap
CET1	Common Equity Tier 1
CLN	Credit linked note
Co2e	CO2 equivalents
COREP	Common solvency ratio reporting
CR	Credit risk
CRD	Capital Requirements Directive
CRM	Credit risk mitigation
CRR	Capital Requirements Regulation
CRSA	Credit risk standardized approach
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
EEA	European Economic Area
EEPE	Effective expected positive exposure
EIF	European Investment Fund
EL	Expected loss
EPC	Energy performance certificate
EPS	Energy performance score
ERBA	External ratings-based approach
ESG	Environmental, social and governance
FBE	Forborne exposure
FCP	Funded credit protection
FINREP	Financial reporting
FX	Foreign exchange
GAR	Green asset ratio
GHG	Greenhouse gas emissions

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
KPI	Key performance indicators
KWG	Kreditwesengesetz (German Banking Act)
LCR	Liquidity coverage ratio
LGD	Loss given default
MTN	Medium term notes
NACE	Nomenclature Générale des Activités Économiques
NFRD	Non-Financial Reporting Directive
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
PCAF	Partnership for Carbon Accounting Financials
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
SASB	Sustainability Accounting Standards Board
SFT	Securities financing transaction
SME	Small and medium-sized enterprises
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 / T2	Tier 1 capital / 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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