The oak. Its slow growth leads to the particular density and strength of its wood.

Grown stability.
Disclosure report 2016.

Landesbank Baden-Württemberg

LBBW

2016

1 Fundamentals.

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), taking effect from 1 January 2014. 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.

On 29 January 2015, the Basel Committee on Banking Supervision already published further disclosure requirements under the title »BCBS 309« that will probably have to be applied by the banks as at 31 December 2017. In addition to new content included in the requirements, the frequency of disclosing a large number of facts has also been increased.

Landesbank Baden-Württemberg (LBBW) prepares the disclosure report in aggregate form at the Group level in its function as a parent company to comply with the currently applicable requirements pursuant to the CRR. This report is based on the International Financial Reporting Standards (IFRS). In terms of qualitative disclosures, LBBW makes use of the possibility of referring to other disclosure reports to the extent that the information which they contain has already been published under other disclosure requirements.

In contrast to the LBBW Group's annual report, which also includes a risk and opportunity report, this report focuses on the regulatory requirements.

In addition, the separate financial statements prepared in accordance with the German Commercial Code (|Handelsgesetzbuch – HGB) and the remuneration report required under the Remuneration Ordinance for Institutions (Instituts-Vergütungsverordnung), which also includes the disclosures required under Article 450 CRR, as well as the results of the quantitative analysis for global systemically relevant institutions as required by Commission Implementing Regulation (EU) No. 1030/2014, are published on LBBW's website.

The figures published in the disclosure report have been rounded to the next million in accordance with commercial principles. Accordingly, rounding differences may arise through aggregation.

2 Risk management objectives and policies. (Article 435 CRR)

The risk management system is determined by the Board of Managing Directors and the Risk Committee in risk strategies consistent with the business strategy.

Within the Group risk strategy, risk strategy guidelines which apply Group-wide across all risk categories are determined via risk tolerance. It is defined by determining quantitative factors (fundamental conditions underlying risk strategy, strategic limits, liquidity risk tolerance) and qualitative factors (guidelines for risk management) and must be adhered to in all business.

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 create the framework for medium-term planning together with the business strategy The operative implementation of these guidelines is accompanied by variance analyses, monthly earnings analyses as well as strategic and operative limit systems.

Further details on the risk situation (chapter »Risk situation of the LBBW Group«), risk management function (chapter »Risk management processes and reporting«), the strategies and processes for measuring and controlling risks (chapters »Risk strategy« and »Risk management systems«), risk reporting (chapter »Risk management processes and reporting«), and the principles for hedging and mitigating risks (chapters »Risk strategy« and »Risk management systems«, »Risk management processes and reporting«) can be found in the annual report.

The risk declaration of the Board of Managing Directors on the appropriateness of the risk management system in accordance with Article 435 (1e) CRR can be found in the chapter »Risk management systems« of the risk and opportunity report. The entire chapter »Risk management systems« of the risk and opportunity report sets out the risk declaration of the Board of Managing Directors in accordance with Article 435 (1f) CRR. The declarations are approved in the LBBW Annual Report 2016 by the signatures of the members of the Board of Managing Directors in the chapter »Responsibility statement«.

Corporate governance rules.

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 systemically significant CRR 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,

- which belong to one and the same bank group, financial holding group or mixed holding group,
- which belong to the same institutional protection system or
- in which the institution holds a significant share.

A significant share is deemed to arise in particular if at least 10% of the capital and/or voting rights of the company accrue to the CRR institution either directly or indirectly.

Under this definition, the six members of LBBW's Board of Managing Directors hold a total of eight supervisory directorships as at 31 December 2016.

Under Section 25d of the German Banking Act, the members of the supervisory body of a systemically 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 CRR institution.

The members of the Board of Managing Directors of Landesbank Baden-Württemberg hold 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.

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 of LBBW 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. Members of the Board of Managing Directors who have passed the age of 60 may be appointed or re-appointed for a period not extending beyond the month in which they turn 65. 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 amount of time required for performing the task.

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

LBBW's Supervisory Board has 21 members. The Chairman and Deputy Chairman 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 possess expertise in the areas of accounting and the auditing of financial statements.

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 annual general 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. They must be re-appointed no later than one month before the expiry 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. To this end, the Executive Committee takes account of the balance and variety of knowledge, capabilities and experience of all the members of the Supervisory Board, prepares a job description with a candidate profile and specifies the amount of time required for performing the task. The members of the Supervisory Board are elected by the shareholders' meeting unless they are required to be elected by the employees and in the absence of any requirements to the contrary in the Landesbank Baden-Württemberg Act. The owners have the right to submit nominations.

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

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

In addition, the Executive Committee assists the Supervisory Board with the regular evaluation, which must be conducted at least once a year, of the knowledge, skills and experience of the individual members of the Board of Managing Directors and the Supervisory Board as well as of the two boards in their entirety.

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

In a total of nine meetings, the Risk Committee held in-depth discussions on the Bank's risk situation and risk management as well as its exposure requiring disclosure in accordance with the law, the articles of association and the bylaws, granting its approval where this was required in individual cases. Specifically, the Committee dealt with the Bank's credit, market price, liquidity, equity investment, legal, reputation and operational risks, which together with calculations of the Bank's risk-bearing capacity formed part of the regular risk reports of the Board of Managing Directors. Over and above this, the Committee confirmed that the incentives set by the remuneration system take account of the risk, capital and liquidity structure of the Landesbank as well as of the probability and due dates of earnings. The Risk Committee discussed the business strategy and, based on this, the uniform Group, market price and liquidity risk strategy and operational risk strategy with the Board of Managing Directors. Various portfolios were examined in detail in the light of economic or regulatory developments.

The Chairman 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.

3 Scope of application. (Article 436 CRR)

Unless otherwise indicated, all disclosures in this report relate to the regulatory basis of consolidation of the LBBW Group in accordance with Section 10a of the German Banking Act in conjunction with Article 18 et seq. CRR as at 31 December 2016.

Differences from the IFRS basis 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 basis 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 basis of consolidation in accordance with the German Banking Act.

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 reportability 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 for the duration of the waiver. Only IFRS group reporting shall be prepared for this report.

In its audit of the annual financial statements, the external auditor confirmed that, since the adoption of the waiver decision by the ECB, there has been no material change at LBBW or in the Group with regard to meeting the requirements in Article 7 (3) CRR and LBBW continues to meet in full the ECB's requirements for the utilization of the waiver.

There is no materially 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 2016, no non-consolidated subsidiary had less than the prescribed own funds.

In the following table, the main companies included in the regulatory basis 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 basis 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 bases 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.

Description	Name	Regulatory consolidation		Consolidation in accordance with accounting standard	
		Full	Proportional	Full	Accounted for using the equity method
Banks					
	Landesbank Baden-Württemberg	X		X	
	MKB Mittelrheinische Bank GmbH	X		X	
	Vorarlberger Landes- und Hypothekenbank AG				X
Financial institutions					
	ALVG Anlagenvermietung GmbH	X		X	
	BWK GmbH Unternehmensbeteiligungsgesellschaft				X
	BWK Holding GmbH Unternehmensbeteiligungsgesellschaft				X
	CFH Beteiligungsgesellschaft mbH	X		X	
	LBBW Asset Management Investmentgesellschaft mbH	X		X	
	LBBW México	X		X	
	LBBW Venture Capital GmbH	X		X	
	LRP Capital GmbH			X	
	Süd Beteiligungen GmbH	X		X	
	Süd KB Unternehmensbeteiligungsgesellschaft mbH	X		X	
	SüdFactoring GmbH	X		X	
	Süd-Kapitalbeteiligungs-Gesellschaft mbH	X		X	
	SüdLeasing GmbH	X		X	
	SÜDRENTING ESPANA, S.A.	X			
Providers of ancillary services					
	BW-Immobilien GmbH	X		X	
	LBBW Service GmbH	X		X	

Figure 1: Main consolidated companies (Article 436 (b) CRR).

4 Own funds. (Articles 437 and 438 CRR)

Structure of own funds and applicable transitional provisions.

The following table sets out the LBBW Group's own funds pursuant to IFRS as well as the applicable deductions and transitional provisions in accordance with Commission Implementing Regulation (EU) No. 1423/2013 of 20 September 2013.

The »Reference« column in Figure 2 reconciles the components of the Bank's own funds under CRR with the balance sheet. Figure 3 shows the relevant items of the balance sheet with figures according to IFRS and FINREP (Financial Reporting).

EUR million Capital instruments	Amount on the day of disclosure 31 Dec. 2016	Reference to Articles in Regulation (EU) No. 575/2013	Amounts which come within the scope of Regulation (EU) No. 575/2013 or prescribed residual amount in accordance with Regulation (EU) No. 575/2013	Amount on 31 Dec. 2015	Reference
Common Equity Tier 1: instruments and reserves					
Capital instruments and related premiums	11 724	26 (1), 27, 28, 29, EBA directory in accordance with Article 26 (3)		11 724	j + k
of which share capital [1]	3 484			3 484	
Retained earnings	751	26 (1) (c)		768	l
Cumulative comprehensive income (and other reserves comprising unrealized gains and losses under the applicable accounting standards)	731	26 (1)		760	m + n + o
Fund for general banking risks	0	26 (1) (f)	0	0	
Items as defined in Article 484 (3) plus the related premium no longer eligible for inclusion in CET1	0	486 (2)		0	
Government capital allocations subject to grandfathering rights until 1 January 2018	0	483 (2)		0	
Non-controlling interests (admissible amount in consolidated CET1)	0	84, 479, 480		0	
Independently audited interim gains less all foreseeable charges or dividends	0	26 (2)		0	
Common Equity Tier 1 (CET1) before regulatory adjustments	**13 207**			**13 253**	
Common Equity Tier 1 (CET1): regulatory adjustments					
Additional measurement adjustments (negative amount)	– 184	34, 105		– 151	
Intangible assets (less corresponding tax liabilities) (negative amount)	– 377	36 (1) (b), 37, 472 (4)	– 251	– 216	a + b
Deferred tax assets whose recoverability depends on future profitability, except those arising from temporary differences (less corresponding tax liabilities if the conditions contained in Article 38 (3) are satisfied) (negative amount)	– 129	36 (1) (c), 38, 472 (5)	– 194	– 49	c
Reserves from gains or losses from the fair value measurement of cash flow hedges	0	33 (a)		0	
Negative amounts from the calculation of expected losses	– 103	36 (1) (d), 40, 150	– 69	– 120	
Increase in equity capital arising from securitized assets (negative amount)	0	32 (1)		0	
Gains or losses arising from changes in the Bank's own credit rating from own liabilities measured at fair value	– 12	33 (b)	0	– 77	
Gains and losses from derivative liabilities measured at fair value arising from the Bank's own credit risk	– 76	33 (c)	– 51	– 40	
Defined-benefit pension fund assets (negative amount)	0	36 (1) (e), 41, 472 (7)	0	0	

1) In contrast to the previous year, the share premium is no longer reported in this item.

Capital instruments (EUR million)	Amount on the day of disclosure 31 Dec. 2016	Reference to Articles in Regulation (EU) No. 575/2013	Amounts which come within the scope of Regulation (EU) No. 575/2013 or prescribed residual amount in accordance with Regulation (EU) No. 575/2013	Amount on 31 Dec. 2015	Reference
Direct and indirect holdings by an institution of its own Common Equity Tier 1 instruments (negative amount)	0	36 (1) (f), 42, 472 (8)	0	0	
Holdings of Common Equity Tier 1 instruments of financial sector entities where those entities have a reciprocal cross holding with the institution designed to artificially inflate the institution's own funds (negative amount)	0	36 (1) (g), 44, 472 (9)	0	0	
Direct and indirect holdings by the institution of Common Equity Tier 1 instruments of financial sector entities where the institution does not have a significant investment in those entities (less than 10% and less eligible sales positions) (negative amount)	0	36 (1) (h), 43, 45, 46, 49 (2) (3), 79, 472 (11)	0	0	
Direct, indirect and synthetic holdings by the institution of Common Equity Tier 1 instruments of financial sector entities where the institution has a significant investment in those entities (more than 10% and less eligible sales positions) (negative amount)	0	36 (1) (i), 43, 45, 47, 48 (1) (b), 49 (1) to (3), 79, 470, 472 (11)	0	0	
Exposure amount of the following items which qualify for a risk weight of 1250%, where the institution deducts that exposure amount from the amount of Common Equity Tier 1 items as an alternative	0	36 (1) (k)	0	0	
Deferred tax assets that rely on future profitability arising from temporary differences (in excess of the 10% threshold, less corresponding tax liabilities if the conditions set forth in Article 38 (3) are satisfied) (negative amount)	0	36 (1) (c), 38, 48 (1) (a), 470, 472 (5)	0	0	
Amount in excess of the 17.65% threshold (negative amount)	0	48 (1)		0	
of which direct and indirect holdings by the institution of Common Equity Tier 1 instruments of financial sector entities where the institution has a significant investment in those entities	0	36 (1) (i), 48 (1) (b), 470, 472 (11)		0	
of which deferred tax assets that rely on future profitability arising from temporary differences	0	36 (1) (c), 38, 48 (1) (a), 470, 472 (11)		0	
Losses for the current financial year (negative amount)	0	36 (1) (a), 472 (3)	0	0	
Any foreseeable tax charge relating to Common Equity Tier 1 (negative amount)	0	36 (1) (l)		0	
Regulatory adjustments to Common Equity Tier 1 with respect to amounts subject to pre-CRR treatment	0			0	
Prudential adjustments in connection with unrealized gains and losses in accordance with Article 467 and 468	– 292			– 417	
of which deductions and filters for unrealized losses from debt instruments	31			21	Sub-amount n
of which deductions and filters for unrealized losses from risk exposures to governments classified as »available for sale«	0			99	
of which deductions and filters for unrealized gains from equity investments	– 318			– 529	m
of which deductions and filters for reserves for currency translation differences	– 6			– 8	o
Amount to be deducted from or added to Common Equity Tier 1 in connection with additional deductions and filters and in accordance with the necessary pre-CRR deductions	0	481		0	
Amount of items required to be deducted from Additional Tier 1 items that exceeds the Additional Tier 1 capital of the institution (negative amount)	0	36 (1) (j)		0	
Regulatory adjustments to Common Equity Tier 1 (CET1) as a whole	**– 1 173**			**– 1 071**	
Common Equity Tier 1 (CET1)	**12 033**			**12 181**	

EUR million Capital instruments	Amount on the day of disclosure 31 Dec. 2016	Reference to Articles in Regulation (EU) No. 575/2013	Amounts which come within the scope of Regulation (EU) No. 575/2013 or prescribed residual amount in accordance with Regulation (EU) No. 575/2013	Amount on 31 Dec. 2015	Reference
Additional Tier 1 (AT1): instruments					
Capital instruments and related premiums	0	51, 52		0	
Amount of items as defined in Article 484 (4) plus the related premium no longer eligible for inclusion in AT1	1 074	486 (3)		1 164	h
Government capital allocations subject to grandfathering rights until 1 January 2018	0	483 (3)		0	
Qualifying CET1 instruments counting towards consolidated AT1 (including the non-controlling interests not already mentioned above) which have been issued by subsidiaries and are held by third parties	0	85, 86, 480	0	0	
Additional Tier 1 (AT1) before regulatory adjustments	**1 074**			**1 164**	
Additional Tier 1 (AT1): regulatory adjustments					
Direct and indirect holdings by an institution of its own Additional Tier 1 instruments (negative amount)	0	52 (1) (b), 56 (a), 57, 475 (2)	0	0	
Holdings of Additional Tier 1 instruments of financial sector entities where those entities have a reciprocal cross holding with the institution designed to artificially inflate the institution's own funds (negative amount).	0	56 (b), 58, 475 (3)	0	0	
Direct and indirect holdings by the institution of Additional Tier 1 instruments of financial sector entities where the institution does not have a significant investment in those entities (less than 10% and less eligible sales positions) (negative amount)	0	56 (c), 59, 60, 79, 475 (4)	0	0	
Direct and indirect holdings by the institution of Additional Tier 1 instruments of financial sector entities where the institution has a significant investment in those entities (more than 10% and less eligible sales positions) (negative amount)	0	56 (d), 59, 79, 475 (4)	0	0	
Regulatory adjustments to Additional Tier 1 with respect to amounts subject to pre-CRR treatment and treatment during the transition period for which transitional provisions apply under Regulation (EU) No. 575/2013 (i.e. CRR residual amounts)	0			0	
Residual amounts to be deducted from Additional Tier 1 with respect to items to be deducted from Common Equity Tier 1 during the transition period provided for in Article 472 of Regulation (EU) No. 575/2013	– 286	472, 472 (3) (a), 472 (a), 472 (6), 472 (8) (a), 472 (9), 472 (10) (a), 472 (11) (a)		– 415	
of which material interim losses (net)	0			0	
of which intangible assets	– 251			– 325	Partial amount (a + b)
of which shortfall of provisions for expected losses	– 34			– 90	
Residual amounts to be deducted from Additional Tier 1 capital with respect to items to be deducted from CET1 capital during the transition period provided for in Article 475 of Regulation (EU) No. 575/2013	0	477, 477 (3), 477 (4) (a)		0	
Amount to be deducted from or added to Additional Tier 1 in connection with additional deductions and filters and in accordance with the necessary pre-CRR deductions	0	467, 468, 481		0	
Amount of items required to be deducted from Tier 2 items that exceeds the Tier 2 capital of the institution (negative amount)	0	56		0	
Regulatory adjustments to Additional Tier 1 (AT1) as a whole	**– 286**			**– 415**	
Additional Tier 1 (AT1)	**789**			**749**	
Tier 1 (T1 = CET1 + AT1)	**12 822**			**12 931**	

EUR million Capital instruments	Amount on the day of disclosure 31 Dec. 2016	Reference to Articles in Regulation (EU) No. 575/2013	Amounts which come within the scope of Regulation (EU) No. 575/2013 or prescribed residual amount in accordance with Regulation (EU) No. 575/2013	Amount on 31 Dec. 2015	Reference
Tier 2 (T2): Instruments and reserves					
Capital instruments and related premiums	**4 051**	**62, 63**		**3 471**	**e+f+g+i**
Amount of items as defined in Article 484 (5) plus the related premium no longer eligible for inclusion in T2	0	486 (4)		0	
Government capital allocations subject to grandfathering rights until 1 January 2018	0	483 (4)		0	
Qualifying own funds instruments counting towards consolidated Tier 2 (including the non-controlling interests and AT1 instruments not already mentioned above) which have been issued by subsidiaries and are held by third parties	0	87, 88, 480	0	0	
Credit risk adjustments	0	62 (c) and (d)		0	
Tier 2 (T2) before regulatory adjustments	**4 051**			**3 471**	
Tier 2 (T2): regulatory adjustments					
Direct and indirect holdings by an institution of its own Tier 2 instruments and subordinated loans (negative amount)	– 25	63 (b) (i), 66 (a), 67, 477 (2)	– 10	– 25	
Holdings of Tier 2 instruments and subordinated loans of financial sector entities where those entities have a reciprocal cross holding with the institution designed to inflate artificially the institution's own funds (negative amount)	0	66 (b), 68, 477 (3)	0	0	
Direct and indirect holdings by the institution of Tier 2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (less than 10% and less eligible sales positions) (negative amount)	0	66 (c), 69, 70, 79, 477 (4)	0	0	
Direct and indirect holdings by the institution of Tier 2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (less eligible sales positions) (negative amount)	0		0	0	
Regulatory adjustments to Tier 2 with respect to amounts subject to pre-CRR treatment and treatment during the transition period subject to phase out arrangements as described in Regulation (EU) No. 575/2013 (i.e. CRR residual amounts)	0			0	
Residual amounts to be deducted from Tier 2 with respect to items to be deducted from CET1 items during the transition period provided for in Article 472 of Regulation (EU) No. 575/2013	– 34			– 90	
of which material interim losses (net)	0			0	
of which intangible assets	0			0	
of which shortfall of provisions for expected losses	– 34			– 90	
Residual amounts to be deducted from Tier 2 with respect to items to be deducted from CET1 items during the transition period provided for in Article 475 of Regulation (EU) No. 575/2013	0			0	
Amount to be deducted from or added to Tier 2 in connection with additional deductions and filters and in accordance with the necessary pre-CRR deductions	0			0	
Regulatory adjustments to Tier 2 (T2) as a whole	**– 59**			**– 115**	
Tier 2 (T2) as a whole	**3 992**			**3 356**	
Total capital (TC = T1 + T2)	**16 814**			**16 287**	
Risk-weighted assets with respect to amounts subject to pre-CRR treatment and treatment during the transition period which are subject to phase out arrangements as described in Regulation (EU) No. 575/2013 (i.e. CRR residual amounts)	0			0	
of which items not deducted from Tier 2	0		0	0	
of which indirect holdings in the institution's own Tier 2 instruments	0			0	
Total risk-weighted assets	**77 406**			**74 460**	

Capital instruments (EUR million)	Amount on the day of disclosure 31 Dec. 2016	Reference to Articles in Regulation (EU) No. 575/2013	Amounts which come within the scope of Regulation (EU) No. 575/2013 or prescribed residual amount in accordance with Regulation (EU) No. 575/2013	Amount on 31 Dec. 2015	Reference
Capital ratios and buffers					
CET1 capital ratio (expressed as a percentage of the total risk exposure amount)	15.5	92 (2) (a), 465		16.4	
T1 capital ratio (expressed as a percentage of the total risk exposure amount)	16.6	92 (2) (b), 465		17.4	
Total capital ratio (expressed as a percentage of the total risk exposure amount)	21.7	92 (2) (c)		21.9	
Institution-specific capital buffer requirement (minimum required CET1 capital ratio in accordance with Article 92 (1) (a) plus the required capital conservation buffer and countercyclical capital buffer, systemic risk buffer and buffer for systemically relevant institutions (G-SRI or A-SRI), expressed as a percentage of the total risk exposure amount)	5.1	CRD 128, 129, 130		0	
of which capital conservation buffer	0.6			0	
of which countercyclical capital buffer	0.0			0	
of which systemic risk buffer	0.0			0	
of which buffer for global systemically relevant institutions (G-SRIs) or other systemically relevant institutions (A-SRIs)	0.0			0	
CET1 available for the buffers (expressed as a percentage of the total risk exposure amount)	11.1	CRD 128		11.9	
Amounts below the thresholds for deductions (before risk weighting)					
Direct and indirect holdings by the institution of instruments of financial sector entities where the institution does not have a significant investment in those entities (less than 10% and less eligible sales positions)	546	36 (1) (h), 45, 46, 472 (10), 56 (c), 59, 60, 475 (4), 66 (c), 69, 70, 477 (4)		586	
Direct and indirect holdings by the institution of CET1 instruments of financial sector entities where the institution has a significant investment in those entities (more than 10% and less eligible sales positions)	746	36 (1) (i), 45, 48, 470, 472 (11)		785	
Deferred tax assets that rely on future profitability arising from temporary differences (under the 10% threshold, less corresponding tax liabilities if the conditions set forth in Article 38 (3) are satisfied) (negative amount)	717	36 (1) (c), 38, 48, 470, 472 (c)		537	d
Applicable caps for the inclusion of impairments in Tier 2					
Credit risk adjustments eligible for inclusion in Tier 2 for risk exposure values to which the standard approach is applied (before application of the cap)	0	62		0	
Cap for the inclusion of credit risk adjustments in Tier 2 under the standard approach	159	62		154	
Credit risk adjustments eligible for inclusion in Tier 2 for risk exposure values to which the approach based on internal assessments is applied (before application of the cap)	0	62		0	
Cap on the inclusion of credit risk adjustments in Tier 2 under the approach based on internal assessments	294	62		287	
Own funds instruments subject to phase out arrangements (only applicable from 1 January 2014 until 1 January 2022)					
Current cap on CET1 instruments subject to phase out arrangements	0	484 (3), 486 (2) and (5)		0	
Amount excluded from CET1 due to cap (amount in excess of the cap after repayments and maturities)	0	484 (3), 486 (2) and (5)		0	
Current cap on AT1 instruments subject to phase out arrangements	1 446	484 (4), 486 (3) and (5)		1 687	
Amount excluded from AT1 due to cap (amount in excess of the cap after repayments and maturities)	0	484 (4), 486 (3) and (5)		0	
Current cap on T2 instruments subject to phase out arrangements	0	484 (5), 486 (4) and (5)		0	
Amount excluded from T2 due to cap (amount in excess of the cap after repayments and maturities)	0	484 (5), 486 (4) and (5)		0	

Figure 2: Capital instruments and deductions pursuant to Implementing Regulation (EU) 1423/2013.

The LBBW Group's own funds are made up of

- Common Equity Tier 1 (CET1) capital, which comprises the following items:
  - paid-in capital
  - share premiums (capital reserves)
  - retained earnings
  - other eligible reserves (including revaluation reserves)

- Additional Tier 1 (AT1) capital, which comprises the following items:
  - silent partners' contributions

- and Tier 2 (T2) capital, which comprises the following items:
  - non-current subordinated liabilities (and related premiums)
  - profit-participation rights (and related premiums)
  - positive amounts arising from the reconciliation of impairments.

Under the applicable transitional rules, Additional Tier 1 capital is eligible for full inclusion.

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

The disclosures required under Article 437 (1) (b) CRR on the main features of all capital instruments issued are set out in a separate document entitled »Main features of capital instruments«, which is also found under »Investor Relations – Financial Information and Reports – Disclosure Reports« on the LBBW website. Unlike in previous years, the presentation of the ability to convert and write-down also takes into account the legal provisions that are now applicable and is no longer exclusively subject to the contractual regime. The full terms and conditions of subordinated bearer instruments pursuant to Article 437 (1)(c) CRR are published in the »LBBW Markets Portal« under »Nachrang-Emissionen – Endgültige Bedingungen« (available in German only). The relevant terms and conditions for subordinated registered securities can be viewed at LBBW's main offices in Stuttgart during normal office hours.

Common equity Tier 1 capital of the LBBW Group decreased primarily on account of actuarial losses and the transitional provisions according to CRR that were adjusted for 2016. Due to these transitional provisions, a higher amount must be reported at the expense of the Common Equity Tier 1 capital. In return, for some positions lower deductions are made from additional Tier 1 capital and from Tier 2 (T2) capital. Additional Tier 1 capital increased despite maturities of silent partners' contributions and the repayment of the preference shares approved by the ECB on account of the transitional provisions pursuant to the CRR. Tier 2 capital was strengthened in September 2016 through the new issue of a subordinated bond as part of the MTN program totaling EUR 500 million and the placement of further subordinated bonds and subordinated debentures amounting to EUR 289 million in the fourth quarter. Another positive effect for subordinated capital results from the changes in the transitional provisions. The amortization of Tier 2 capital components on the basis of the number of days that have passed had the opposite effect.

The changes impacting on CET1 capital have an effect on all capital ratios. The issue of Tier 2 capital had a positive effect only on the total capital ratio.

Due to the aforementioned facts and the increase in risk-weighted assets, LBBW's CET1 ratio and the Tier 1 ratio fell compared with the previous year. The calculation of capital ratios does not include any elements of own funds calculated on a basis other than that stipulated in the CRR (Article 437 (1) (f) CRR).

The following table sets out the treatment of the deductions including the applicable transitional rules. Under the applicable transitional rules, a partial deduction from Additional Tier 1 or Tier 2 capital is possible during the transition period. Unlike the previous year, since October 2016 deductions for unrealized losses from debt instruments towards central governments must also be taken into account within the scope of the transitional rules.

Deductions	Current 100% inclusion	Transitional rules
Revaluation reserve		
Deductions for unrealized losses from debt instruments		in 2016: 60% from 2018: 100%
Deductions for unrealized gains from equity investments (including currency translation reserve)		in 2016: 60% from 2018: 100%
Prudential filters		
Reserves from gains or losses from the fair-value measurement of cash flow hedges	x	
Gains or losses arising from changes in the Bank's own credit rating from own liabilities measured at fair value	x	
Gains and losses from derivative liabilities measured at fair value arising from the Bank's own credit risk		in 2016: 60% from 2018: 100%
Additional measurement adjustments in accordance with the principles of cautious measurement	x	
Other deductions		
Current losses		in 2016: 60% from 2018: 100%
Intangible assets and goodwill		in 2016: 60% from 2018: 100%
Deferred tax assets that rely on future profitability except those arising from temporary differences		in 2016: 40% from 2019: 100%
Negative amounts from the calculation of expected losses		in 2016: 60% from 2018: 100%

Figure 3: Transitional rules for deductions (Article 437 (1) (e) CRR).

Reconciliation of own funds components.

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 bases of consolidation. It only includes 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.

At the end of the 2016 financial year, impairment testing resulted in a complete on-balance-sheet write-down of goodwill in the amount of EUR 379 million. Originally this resulted mainly from the acquisition of Sachsen LB in 2008. In the course of preparing the regulatory reporting as at the balance sheet date of 31 December 2016, goodwill was still shown as a deduction.

EUR million Assets as at 31 Dec. 2016	In accordance with the IFRS consolidated financial statements	In accordance with FINREP	Reference
Intangible assets	**249**	**249**	
of which goodwill	0	0	a
of which other intangible assets	249	249	b
Deferred tax assets	**1 040**	**1 069**	
of which from unused tax losses	323	312	c
of which from temporary differences	717	757	d

EUR million Equity and liabilities as at 31 Dec. 2016	In accordance with the IFRS consolidated financial statements	In accordance with FINREP	Reference
Financial liabilities measured at fair value through profit or loss	**69 846**	**69 849**	
of which subordinated liabilities	154	154	e
of which capital generated from profit-participation rights	124	124	f
Subordinated capital	**5 895**	**5 895**	
of which subordinated liabilities	4 532	4 532	g
of which typical silent partners' contributions	1 246	1 246	h
of which capital generated from profit-participation rights	117	117	i
Equity	**13 119**	**13 254**	
of which share capital	3 484	3 484	j
of which capital reserve	8 240	8 240	k
of which retained earnings	999	746	l
of which other comprehensive income	348	755	
of which revaluation reserve	289	716	
of which revaluation reserve for equity investments	368	795	m
of which revaluation reserve for debt instruments	– 79	– 79	n
of which currency translation reserve	35	15	o

Figure 4: Reconciliation of the Bank's own funds (Article 437 (1) (a) CRR).

Internal capital management.

Capital management at LBBW is designed to ensure solid capitalization within the LBBW Group. The Bank analyzes capital ratios and structures in the light of regulatory, economic and accounting requirements in order to guarantee adequate capital from various perspectives. Capital management at LBBW is imbedded in the integrated performance and risk management, the strategies, regulations, monitoring processes and organizational structures of the LBBW Group.

The integrated risk and capital management is carried out by the Group's Board of Managing Directors. Among other things, the Asset Liability Committee (ALCo) supports the Board of Managing Directors in structuring the balance sheet, managing capital and liquidity, in funding and in managing market price risks. The ALCo prepares decisions in this respect that are subsequently met by the Group's Board of Managing Directors.

On matters relating to risk management and capital management under economic aspects, the Risk Committee (RiskCom) helps prepare decisions for the Board of Managing Directors with regard to risk monitoring, the risk methodology and the risk strategy for the Group as a whole.

In view of the large number of requirements in regulatory banking law and accounting, a coordinating Regulatory/Accounting Committee has been established to ensure an early assessment of the requirements of relevance to managing the Bank and to take appropriate measures.

Capital allocation and longer-term strategic capital management is performed during the integrated annual planning process (with a five-year planning horizon). The plans are approved by the Group's Board of Managing Directors and backed by an ongoing monitoring process and intra-year forecasts. The Supervisory Board ultimately decides on the business plan.

Regulatory management.

The LBBW Group's regulatory capital management is based on the requirements of CRR/CRD IV.

Observance of the internal regulatory capital ratios (which far exceed the regulatory minimum requirements) is regularly monitored on the basis of actual developments and forecasts, including any new regulatory developments/requirements. In addition, compliance with the minimum regulatory requirements in case of adverse developments is ensured by an analysis of stress scenarios.

The LBBW Group particularly bases the coordination and definition of its internal targets on its CET1 capital ratio (ratio of Tier 1 capital net of Additional Tier 1 capital to risk exposure values) and the total capital ratio after full implementation of the CRR/CRD IV requirements (»fully loaded«).

Economic management.

LBBW safeguards risk-bearing capacity by means of a Group-wide compilation of risks across all major types of risk and subsidiaries, and the comparison of this with the capital required for economic purposes (aggregate risk cover).

At LBBW, aggregate risk cover (corresponds to risk coverage potential as per MaRisk (Minimum Requirements for Risk Management)) denotes the capital identified according to economic criteria which is available for the coverage of unexpected losses. Subordinated capital and realized profit/loss in accordance with IFRS are included as components in addition to consolidated equity in accordance with IFRS including revaluation reserves. Extensive conservative deductions are also taken into account in aggregate risk cover due to regulatory requirements.

Economic capital is calculated as a uniform risk measure at the highest level. This equals the amount of economic capital necessary to cover the risk exposure resulting from LBBW's business. In contrast to the necessary regulatory capital backing, it therefore represents the capital backing required from LBBW's point of view for economic purposes, which is calculated using its own risk models. It is quantified as value-at-risk (VaR) at a confidence level of 99.93% and a one-year holding period for credit, market price, real estate, development, investment and operational risks, and using simplified procedures for other risks.

By contrast, the liquidity risks are managed and limited by the quantitative and procedural rules stipulated in accordance with liquidity risk tolerance.

The upper risk limit for economic capital (economic capital limit) represents the Group-wide overarching limit for all relevant quantified risk types. This limit reflects LBBW Group's maximum willingness to accept risk. In keeping with the conservative principle underlying risk tolerance it is substantially below the aggregate risk cover and thus provides scope for risks arising from unforeseeable stress situations. In addition, the economic capital limit is verified on the basis of target figures. On the one hand, limits are derived from the upper risk limit for economic capital for various types of risk that are directly quantifiable:

- Credit risks (including risk of default by borrower or issuer, issuer risk, counterparty and country risks)
- Market price risks
- Operational risks
- Real estate risks
- Development risks
- Investment risks.

On the other hand, an additional limit is derived for other types of risk that are not quantifiable in a model approach:

- Business risks
- Reputation risks
- Pension risks
- Funding risks
- Model risks
- Dilution risks
- Fund placement risks.

The risk-bearing capacity is monitored by Group Risk Control by means of a traffic light system, including stress scenarios and forecasts. The respective traffic light thresholds are connected with the restructuring plan in line with the Recovery and Resolution Act (SAG) and linked to an escalation process.

Further details on risk-bearing capacity are provided in the »Risk management systems« chapter of LBBW Group's risk and opportunity report.

Countercyclical capital buffer.

Pursuant to Commission Delegated Regulation (EU) No. 2015/1555, the institution-specific countercyclical capital buffer shall be published for the first time in this year's disclosure report.

The countercyclical capital buffer may be imposed by a duly authorized authority of member states of the European Economic Area (EEA) and by non-member countries. The buffer is generally 0% to 2.5% of the own funds requirements resulting from this country. When calculating the countercyclical capital buffer, the own funds requirements allocated to the exposure classes central governments, regional governments and local authorities, other public-sector agencies, multilateral development banks, international organizations and banks, are excluded. With this buffer, the risk exposures located in this country and not covered by the exemption must also be backed by CET1 capital.

Under the applicable transitional rules pursuant to Section 64r of the German Banking Act, the CET1 capital cover of the total countercyclical capital buffer of all relevant countries is capped at 0.625% in 2016.

The countries with the greatest risk exposure and those that imposed a countercyclical capital buffer in 2016 are shown in the following table. The following countries had declared a countercyclical capital buffer for 2016:

- Norway – 1.5%
- Sweden – 1.5%
- Hong Kong – 0.625%

EUR million	General credit risk exposures		Risk exposures in the trading book									
Breakdown by country	Risk exposure value CRSA	Risk exposure value IRB	Total of purchase and sales positions in the trading book	Values of the risk exposures in the trading book (internal models)	Risk exposure value CRSA	Risk exposure value IRB	Of which: general credit risk exposures	Of which: risk exposures in the trading book	Of which: securitization positions	Total	Weighting of the own fund requirements per country	Countercyclical capital buffer ratio
Germany	16 415	67 927	4 602		53	2 570	3 277	89	40	3 406	0.75518	
USA	102	13 095	1 499		0	169	251	15	8	274	0.06079	
United Kingdom	19	1 158	2 676			39	47	10	39	96	0.02127	
Netherlands	29	1 876	451				69	7		76	0.01687	
Luxembourg	4	2 148	503				58	18		75	0.01670	
Switzerland	107	1 648	49			22	57	2	0	59	0.01304	
Norway	2	836	970				7	6		13	0.00289	0.00004
Sweden	2	46	292				1	3		4	0.00098	0.00001
Hong Kong	1	39	24				1	2		3	0.00066	0.00000
Other	694	7 857	4 278		0	161	432	69	2	503	0.11161	
Total	**17 374**	96 631	**15 342**		53	2 960	**4 199**	221	89	4 510	**1.00000**	0.00006

Figure 5: Determining the institution-specific countercyclical capital buffer (pursuant to Article 140 CRD).

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

Institution-specific countercyclical capital buffer	
Total risk exposure in EUR million	77 406
Institution-specific ratio of countercyclical capital buffer in percent	0.006
Requirements of the institution-specific countercyclical capital buffer in EUR million	5

Figure 6: Institution-specific countercyclical capital buffer (Article 140 CRD).

Own funds requirements.

Own funds requirements for counterparty risks are reported in accordance with the exposure classes specified for the credit risk standard approach (CRSA) or for the internal ratings-based approach (IRBA).

LBBW uses the internal ratings-based approach (basis IRB approach) approved by the Federal Financial Supervisory Authority (BaFin) to calculate the capital backing of counterparty risks from material exposure classes.

The own funds backing for the general interest rate risk, the general share price risk and the associated option price risks of LBBW (Bank) are determined on the basis of an internal market price risk model also approved by the regulatory authority. Since 31 December 2011, this has also included own funds backing for stress VaR. The other market price risks are calculated using the standard approach.

Own funds backing for operational risks is calculated using the standard approach.

A distinction is also drawn between CRSA and IRBA securitization in the case of own funds backing for securities transactions.

The own funds requirements for investments which were acquired before 1 January 2008 are exempt from the application of the IRB approach in accordance with Article 495 CRR (grandfathering rule) until 31 December 2017 and may continue to be reported under the CRSA with a risk weight of 100%. Investments acquired after that date are backed according to the internal rating, if available. Otherwise, the simple risk weight approach is applied with a corresponding fixed risk weight.

The following table summarizes the own funds requirements in terms of the risk types that are relevant under the regulatory framework (counterparty risk, market price risk and operational risks).

The risk-weighted exposure values increased slightly over the previous year, which is mainly attributable to the growth in the operating segments.

EUR million	Risk-weighted exposure value 31 Dec. 2016	Own funds requirements 31 Dec. 2016	Risk-weighted exposure value 31 Dec. 2015	Own funds requirements 31 Dec. 2015
1 Credit risks				
1.1 Credit risk standard approach				
Central governments	6	0	2	0
Regional governments and local authorities	0	0	1	0
Other public-sector agencies	44	4	50	4
Multilateral development banks	0	0	0	0
International organizations	0	0	0	0
Banks	843	67	653	52
Corporates	4 936	395	4 151	332
Retail business	3 595	288	3 916	313
Items secured by real estate	1 990	159	2 030	162
Past due items	209	17	276	22
Items exposed to particularly high risk	0	0	0	0
Covered bonds issued by banks	0	0	0	0
Risk exposure to banks and corporates with a short-term credit rating	0	0	0	0
Undertakings for collective investment (UCI)	0	0	0	0
Other items	84	7	64	5
Total credit risk standard approach	**11 707**	**937**	**11 143**	**891**
1.2 IRB approaches				
Central governments	3 101	248	3 066	245
Banks	4 561	365	3 675	294
Corporates – SMEs	2 531	202	2 433	195
Corporates – specialized lending exposures	9 279	742	9 264	741
Corporates – other	23 882	1 911	24 050	1 924
Retail business – of which secured with real estate liens, SMEs	0	0	0	0
Retail business – of which secured with real estate liens, non-SMEs	0	0	0	0
Retail business – of which qualified, revolving	0	0	0	0
Retail business – of which other, SMEs	0	0	0	0
Retail business – of which other, non-SMEs	0	0	0	0
Other assets not relating to credit	2 171	174	1 775	142
Total IRB approaches	**45 525**	**3 642**	**44 263**	**3 541**
1.3 Securitization positions				
Securitization positions under CRS approach	11	1	10	1
of which resecuritizations	0	0	0	0
Securitization positions under IRB approach	1 104	88	685	55
of which resecuritizations	0	0	0	0
Total securitization positions	**1 115**	**89**	**695**	**56**
1.4 Equity investments				
Equity investments under IRB approach	2 828	226	2 867	229
of which Internal Model Method	0	0	0	0
of which PD/LGD approach	94	8	112	9
of which simple risk weight approach	1 772	142	1 778	142
of which exchange-traded equity investments	53	4	58	5
of which not exchange-traded but forming part of a sufficiently diversified equity investment portfolio	1 705	136	1 706	136
of which other equity investments	14	1	14	1
Equity investments under CRSA	988	79	1 190	95
of which investments held with method continuation/grandfathering	988	79	1 190	95
Total equity investments	**3 816**	**305**	**4 057**	**325**
1.5 Risk position amount for contributions to a default fund for a CCP	**224**	**18**	**326**	**26**
Total credit risks	**62 387**	**4 991**	**60 483**	**4 839**
2. Settlement/delivery risks				
Settlement/delivery risks in the banking book	0	0	0	0
Settlement/delivery risks in the trading book	0	0	0	0
Total settlement/delivery risks	**0**	**0**	**0**	**0**

EUR million	Risk-weighted exposure value 31 Dec. 2016	Own funds requirements 31 Dec. 2016	Risk-weighted exposure value 31 Dec. 2015	Own funds requirements 31 Dec. 2015
3 Market price risks				
Standard approach	3 163	253	2 545	204
of which interest rate risks	1 816	145	1 803	144
of which general and special price risks (net interest position)	1 816	145	1 803	144
of which securitization positions with special price risk in trading book	0	0	0	0
of which special price risk in correlation trading portfolio	1	0	14	1
of which particular approach for exposure risks in UCI	257	21	0	0
of which equity risks	50	4	364	29
of which currency risks	880	70	337	27
of which risks from commodities positions	160	13	41	3
Internal Model Method	5 262	421	4 653	372
Total market price risks	**8 425**	**674**	**7 198**	**576**
4 Operational risks				
Basic indicator approach	0	0	0	0
Standard approach	4 715	377	4 787	383
Advanced measurement approach	0	0	0	0
Total operational risks	**4 715**	**377**	**4 787**	**383**
5 Total risk exposure for credit valuation adjustments	**1 879**	**150**	**1 993**	**159**
6 Total risk exposure resulting from large exposure in the trading book	**0**	**0**	**0**	**0**
7 Other	**0**	**0**	**0**	**0**
Other exposure values	0	0	0	0
Total own funds requirements	**77 406**	**6 192**	**74 460**	**5 957**

Figure 7: Own funds requirements (Article 438 CRR).

5 Credit risk adjustments. (Article 442)

Since the CRR took effect on 1 January 2014, reporting on the quantitative information on counterparty risk has been in accordance with the regulatory approach. As a fundamental principle, this approach is based on reportable exposure at default (EaD). Credit risk mitigation techniques and credit conversion factors (CCFs) are not taken into account.

For materiality reasons, the following tables continue to show only the SüdLeasing Group on a consolidated basis in addition to Landesbank Baden-Württemberg.

Breakdown of portfolio by region, industry and residual term.

The following tables 8 through 13 show the LBBW Group's exposure classes in accordance with CRSA and IRBA broken down by region, industry and residual term.

The average risk exposure values have been calculated on the basis of quarterly closing dates.

In the CRSA, the exposure classes »Central governments«, »Multilateral development banks«, »International organizations«, »Covered bonds«, »Risk exposure to banks and corporates with short-term rating assessment« and »Items exposed to particularly high risk« are not shown, either because the amount in these exposure classes is so small that it is not reported since reporting is in EUR million or because there is no exposure value.

Higher liquidity led to an increase over the previous year in the IRBA in the exposure values reported in the »Central governments« exposure class.

The tables below show the risk exposures by region and exposure class in accordance with CRR.

EUR million Regions	Regional governments and local authorities	Other public-sector agencies	Banks	Corporates	of which SMEs	Retail business	of which retail business SMEs	Items secured by real estate	Past due items	Undertakings for collective investment (UCI)	Other items	Total
Germany	4 655	219	34 326	5 978	723	7 776	588	5 539	131	0	172	58 796
Western Europe	0	0	233	1 783	0	76	0	54	12	0	0	2 160
Eastern Europe	0	0	0	232	0	4	0	3	1	0	0	240
Asia/Pacific	0	0	0	139	0	10	0	14	0	0	0	164
North America	241	0	0	238	0	11	0	18	1	0	0	510
Latin America	0	0	0	22	0	1	0	2	5	0	0	30
Africa	0	0	0	0	0	1	0	1	0	0	0	2
Other	0	0	0	0	0	0	0	0	0	0	0	0
Not allocated to a geographical area	0	0	0	0	0	0	0	0	0	0	0	0
Total	**4 896**	**219**	**34 559**	**8 394**	**723**	**7 879**	**588**	**5 631**	**151**	**0**	**172**	**61 901**
Average total risk exposure in the period under review	**5 792**	**277**	**32 334**	**8 237**	**680**	**7 864**	**586**	**5 672**	**179**	**0**	**119**	**60 474**
Total previous year	**6 131**	**245**	**30 206**	**8 086**	**789**	**7 829**	**509**	**5 686**	**210**	**0**	**127**	**58 522**
Average total risk exposure in the previous year	**6 048**	**297**	**40 877**	**8 115**	**737**	**8 232**	**558**	**5 727**	**247**	**4**	**104**	**69 652**

Figure 8: Breakdown of risk exposure by region under the CRS approach (Article 442 (d) CRR).

EUR million Regions	Central governments	Banks	Corporates – SMEs	Corporates – specialized lending exposures	Corporates – other	Other non-loan-related assets	Total
Germany	37 690	11 748	7 609	10 038	63 963	2 047	133 096
Western Europe	3 945	33 383	95	5 323	8 839	6	51 591
Eastern Europe	210	49	80	405	1 665	0	2 408
Asia/Pacific	614	335	40	85	1 967	0	3 041
North America	7 096	3 537	8	5 995	8 205	0	24 842
Latin America	15	284	17	219	693	1	1 228
Africa	4	0	0	3	326	0	332
Other	4 268	0	0	0	0	0	4 268
Total	**53 842**	**49 335**	**7 849**	**22 069**	**85 657**	**2 054**	**220 806**
Average total risk exposure in the period under review	**50 580**	**55 289**	**7 635**	**22 047**	**83 673**	**1 938**	**221 161**
Total previous year	**41 679**	**43 563**	**7 287**	**21 971**	**82 327**	**1 735**	**198 562**
Average total risk exposure in the previous year	**48 804**	**70 387**	**7 541**	**20 905**	**84 885**	**1 769**	**234 291**

Figure 9: Breakdown of risk exposure by region under the IRB approach (Article 442 (d) CRR).

The following table breaks down risk exposure by industry and CRR exposure class.

The industry breakdown reflects the main sectors within the overall portfolio. A further breakdown is provided where a greater differentiation of the main industries enhances the information contained in the table as a whole (CRSA and IRBA).

»Other industries« includes all Bundesbank industries whose individual volume does not exceed 4% of total risk exposure.

EUR million Main industries	Regional govern-ments and local authorities	Other public-sector agencies	Banks	Corporates	of which SMEs	Retail business	of which retail business SMEs	Items secured by real estate	Past due items	Undertakings for collective investment (UCI)	Other items	Total
Provision of financial and insurance services	**0**	**0**	**34 559**	**2 250**	**33**	**34**	**3**	**25**	**2**	**0**	**0**	**36 871**
Banks and central banks	0	0	34 547	1	0	0	0	0	0	0	0	34 548
of which savings banks and Landesbanks	0	0	30 413	0	0	0	0	0	0	0	0	30 413
Other financial institutions	0	0	13	2 046	28	4	0	4	1	0	0	2 068
Other financial and insurance services	0	0	0	202	5	30	3	21	1	0	0	255
Public administration, defense, social security	4 894	0	0	356	0	0	0	5	0	0	0	5 255
Private households	0	0	0	420	0	6 398	0	5 147	76	0	172	12 212
Real estate and housing	0	0	0	438	20	74	18	46	6	0	0	564
Other real estate	0	0	0	187	10	15	5	20	4	0	0	225
Housing companies	0	0	0	251	10	59	14	26	2	0	0	339
Energy supplies	0	0	0	312	9	12	3	1	1	0	0	326
Manufacturing	0	0	0	572	156	205	160	20	15	0	0	813
Mechanical engineering	0	0	0	50	13	15	12	1	1	0	0	67
Automotive production including components	0	0	0	39	1	8	8	1	0	0	0	48
Miscellaneous manufacturing	0	0	0	483	142	182	141	19	14	0	0	697
Other sectors	2	219	0	4 046	506	1 157	403	387	51	0	0	5 861
Total	**4 896**	**219**	**34 559**	**8 394**	**723**	**7 879**	**588**	**5 631**	**151**	**0**	**172**	**61 901**
Average total risk exposure in the period under review	**5 792**	**277**	**32 334**	**8 237**	**680**	**7 864**	**586**	**5 672**	**179**	**0**	**119**	**60 474**
Total previous year	**6 131**	**245**	**30 206**	**8 086**	**789**	**7 829**	**509**	**5 686**	**210**	**0**	**127**	**58 522**
Average total risk exposure in the previous year	**6 048**	**297**	**40 877**	**8 115**	**737**	**8 232**	**558**	**5 727**	**247**	**4**	**104**	**69 652**

Figure 10: Breakdown of risk exposure by industry under the CRS approach (Article 442 (e) CRR).

EUR million Main industries	Central governments	Banks	Corporates – SMEs	Corporates - specialized lending exposures	Corporates – Other	Other non-loan-related assets	Total
Provision of financial and insurance services	23 345	48 946	167	823	17 970	95	91 347
Banks and central banks	18 658	40 030	0	0	2 414	6	61 108
of which savings banks and Landesbanks	0	0	0	0	0	0	0
Other financial institutions	4 686	7 943	16	51	2 730	89	15 515
Other financial and insurance services	1	974	151	772	12 826	0	14 724
Public administration, defense, social security	26 933	222	0	3	372	0	27 530
Private households	0	0	50	34	1 301	312	1 697
Real estate and housing	225	147	3 075	15 694	6 966	9	26 117
Other real estate	75	147	719	13 809	3 697	9	18 457
Housing companies	150	0	2 356	1 885	3 269	0	7 660
Energy supplies	469	0	128	3 336	1 914	0	5 847
Manufacturing	0	1	1 857	317	27 266	4	29 445
Mechanical engineering	0	0	541	71	6 736	0	7 348
Automotive production including components	0	0	55	3	5 751	0	5 809
Miscellaneous manufacturing	0	1	1 262	243	14 779	4	16 288
Other sectors	2 870	20	2 570	1 862	29 869	1 631	38 822
Total	**53 842**	**49 335**	**7 849**	**22 069**	**85 657**	**2 054**	**220 806**
Average total risk exposure in the period under review	**50 580**	**55 289**	**7 635**	**22 047**	**83 673**	**1 938**	**221 161**
Total previous year	**41 679**	**43 563**	**7 287**	**21 971**	**82 327**	**1 735**	**198 562**
Average total risk exposure in the previous year	**48 804**	**70 387**	**7 541**	**20 905**	**84 885**	**1 769**	**234 291**

Figure 11: Breakdown of risk exposure by industry under the IRB approach (Article 442 e CRR).

The following table breaks down risk exposure by residual contractual term and CRR exposure classes.

EUR million Residual contractual term	Regional governments and local authorities	Other public-sector agencies	Banks	Corporates	of which SMEs	Retail business	of which retail business SMEs	Items secured by real estate	Past due items	Undertakings for collective investment (UCI)	Other items	Total
Due daily	308	7	6 649	1 799	24	2 848	1	21	69	0	172	11 873
< 1 year	243	57	3 228	1 131	66	688	184	42	6	0	0	5 394
Up to 5 years	4 338	1	4 903	2 870	451	1 087	369	349	27	0	0	13 576
> 5 years	6	154	19 780	2 594	182	3 255	34	5 220	49	0	0	31 058
Total	**4 896**	**219**	**34 559**	**8 394**	**723**	**7 879**	**588**	**5 631**	**151**	**0**	**172**	**61 901**
Average total risk exposure in the period under review	**5 792**	**277**	**32 334**	**8 237**	**680**	**7 864**	**586**	**5 672**	**179**	**0**	**119**	**60 474**
Total previous year	**6 131**	**245**	**30 206**	**8 086**	**789**	**7 829**	**509**	**5 686**	**210**	**0**	**127**	**58 522**
Average total risk exposure in the previous year	**6 048**	**297**	**40 877**	**8 115**	**737**	**8 232**	**558**	**5 727**	**247**	**4**	**104**	**69 652**

Figure 12: Breakdown of risk exposure by residual term under the CRS approach (Article 442 (f) CRR).

EUR million Residual contractual term	Central governments	Banks	Corporates – SMEs	Corporates – specialized lending exposures	Corporates – Other	Other non-loan-related assets	Total
Due daily	16 583	6 726	799	159	4 083	1 932	30 282
< 1 year	3 857	26 671	753	2 118	20 320	108	53 827
Up to 5 years	6 920	8 493	1 314	9 034	30 936	5	56 700
> 5 years	26 482	7 446	4 984	10 758	30 319	8	79 996
No information	0	0	0	0	0	0	0
Total	**53 842**	**49 335**	**7 849**	**22 069**	**85 657**	**2 054**	**220 806**
Average total risk exposure in the period under review	**50 580**	**55 289**	**7 635**	**22 047**	**83 673**	**1 938**	**221 161**
Total previous year	**41 679**	**43 563**	**7 287**	**21 971**	**82 327**	**1 735**	**198 562**
Average total risk exposure in the previous year	**48 804**	**70 387**	**7 541**	**20 905**	**84 885**	**1 769**	**234 291**

Figure 13: Breakdown of risk exposure by residual term under the IRB approach (Article 442 (f) CRR)

Definitions of impaired performance.

Information on the procedures applied in the recognition of allowances for losses on loans and advances is disclosed in in the Notes to the Consolidated Financial Statements (Note No. 9 Allowances for losses on loans and advances).

In the following diagrams LBBW distinguishes between two types of impaired performance:

- A transaction is defined as »past due« when
  - there are arrears on a payment obligation (above a minimum limit) for more than five consecutive days.
- A transaction is classified as »non-performing« in the event of
  - a default in payment/overdraft of > 90 days
  - repayment is unlikely (due to doubts about creditworthiness)
  - an application for insolvency has been filed
  - a default rating has been given
  - an impairment has been recognized.

Non-performing and past due loans by region and industry.

The following tables show non-performing and past due loans and the allowances for losses on loans and advances, broken down by region and industry.

EUR million Regions	Utilization from non-performing loans	Past due loans (with no impairment requirement)	General value adjustments	Specific valuation allowances	Provisions
Germany	1 246	139		462	36
Western Europe	140	26		45	0
Eastern Europe	77	0		23	0
Asia/Pacific	20	7		1	0
North America	173	0		28	0
Latin America	71	8		8	0
Africa	1	6		0	0
Other	0	0		0	0
Total	**1 728**	**185**	**131**	**568**	**36**
Total previous year	**2 634**	**92**	**132**	**900**	**66**

Figure 14: Non-performing and past due loans by region (Article 442 (h) CRR).

EUR million Main industries	Utilization from non-performing loans	Past due loans (with no impairment requirement)	General value adjustments	Specific valuation allowances	Provisions	Net additions to (+)/reversals of specific valuation allowances/ provisions (-)	Write-offs (+)	Recoveries on loans previously written off (-)
Provision of financial and insurance services	**96**	**7**		**61**	**0**	**– 5**	**1**	**0**
Banks and central banks	3	7		1	0	– 1	0	0
of which savings banks and Landesbanks	0	6		0	0	0	0	0
Other financial institutions	84	0		5	0	– 4	0	0
Other financial and insurance services	9	0		55	0	– 1	1	0
Public administration, defense, social security	**2**	**0**		**2**	**0**	**0**	**0**	**0**
Private households	**104**	**11**		**40**	**0**	**– 6**	**8**	**0**
Real estate and housing	**338**	**23**		**85**	**0**	**– 10**	**3**	**6**
Other real estate	236	17		61	0	– 7	0	0
Housing companies	102	6		24	0	– 3	3	6
Energy supplies	**92**	**25**		**15**	**0**	**– 5**	**10**	**0**
Manufacturing	**502**	**34**		**178**	**18**	**– 36**	**8**	**1**
Mechanical engineering	103	0		21	17	– 9	0	0
Automotive production including components	35	0		15	0	– 16	3	1
Miscellaneous manufacturing	365	33		142	2	– 11	4	0
Other sectors	**593**	**85**		**186**	**18**	**– 26**	**51**	**13**
Total	**1 728**	**185**	**131**	**568**	**36**	**– 89**	**80**	**21**
Total previous year	**2 634**	**92**	**132**	**900**	**66**	**11**	**91**	**13**

Figure 15: Non-performing and past due loans by significant industry (Article 442 (g) CRR).

Changes in allowances for losses on loans and advances.

The following table shows changes in allowances for losses on loans and advances in the 2016 financial year. The following statement of allowances for losses on loans and advances includes all known value adjustments made up to the reporting date.

EUR million Allowances for losses on loans and advances	Opening balance on 1 Jan. 2016	Additions (+)	Reversals/ unwinding (-)	Utilization (-)	Exchange-rate related and other changes (+)	Closing balance on 31 Dec. 2016
Specific valuation allowances	900	164	220	294	19	568
Portfolio valuation allowances	132	65	63	0	– 4	131
Provisions	66	24	56	0	2	36
Total	**1 098**	**253**	**340**	**294**	**17**	**735**

Figure 16: Development of allowances for losses on loans and advances (Article 442 (i) CRR).

Total allowances for losses on loans and advances dropped by EUR 363 million over the previous year. This decline is predominantly due to utilization (EUR 294 million). Furthermore, reversals, including unwinding effects that were taken into account, exceeded additions by EUR 87 million.

6 Use of ratings of external credit assessment institutions (ECAIs). (Article 444 CRR)

External credit rating assessments from the following ratings agencies are applied to calculate regulatory capital requirements under the credit risk standard 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 position of an exposure in CRSA, it is used to determine the risk weight to be assigned to the position (Article 139 (1) CRR). Where no such rating exists, the risk is weighted using the credit assessment for a comparable exposure or using a general credit assessment for the issuer (Article 139 (2) CRR).

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

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

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

Total exposure values under the CRS approach.

The following two tables set out the exposure values by exposure class and risk weight on the basis of external ratings. There are no holdings for the 2%, 4%, 10% and 370% risk weights.

The exposure values are shown before and after credit risk mitigation effects from collateral. Collateral can cause a shift within the risk weight classes and a decline in the exposure values.

A large part of the exposure to banks reported with a risk weighting of 0% under the CRS approach comprises exposure to savings banks and Landesbanks. They come within the scope of Article 113 (7) CRR as they are members of the same institutional protection system as LBBW.

EUR million	Exposure values before credit risk mitigation/risk weights										
Exposure classes	0%	20%	35%	50%	70%	75%	100%	150%	250%	1250%	Other
Central governments	3	0	0	0	0	0	0	0	0	0	0
Regional governments and local authorities	4631	0	0	0	0	0	0	0	0	0	0
Other public-sector agencies	0	219	0	0	0	0	8	0	0	0	0
Multilateral development banks	0	0	0	0	0	0	0	0	0	0	0
International organizations	0	0	0	0	0	0	0	0	0	0	0
Banks	29128	4128	0	1	0	0	0	0	0	0	0
Corporates	0	13	0	2	0	0	9616	1	0	0	0
Retail business	0	0	0	0	0	5761	0	0	0	0	0
Items secured by real estate	0	0	5485	141	0	0	0	0	0	0	0
Past due items	0	0	0	0	0	0	82	92	0	0	0
Items exposed to particularly high risk	0	0	0	0	0	0	0	0	0	0	0
Covered bonds issued by banks	0	0	0	0	0	0	0	0	0	0	0
Risk exposure to banks and corporates with a short-term credit rating	0	0	0	0	0	0	0	0	0	0	0
Undertakings for collective investment (UCI)	0	0	0	0	0	0	0	0	0	0	0
Equity investments	0	0	0	0	0	0	87	0	361	0	0
Other items	176	0	0	0	0	0	84	0	0	0	0
Total	**33938**	**4360**	**5485**	**144**	**0**	**5761**	**9876**	**93**	**361**	**0**	**0**
Total previous year	**31962**	**3431**	**5559**	**169**	**0**	**6267**	**8224**	**136**	**466**	**0**	**0**

Figure 17: Total exposure values under the CRS approach before credit risk mitigation (Article 444 (e) CRR).

EUR million	Total exposure values after credit risk mitigation/risk weights										
Exposure classes	0%	20%	35%	50%	70%	75%	100%	150%	250%	1250%	Other
Central governments	246	0	0	0	0	0	6	0	0	0	0
Regional governments and local authorities	6759	0	0	0	0	0	0	0	0	0	0
Other public-sector agencies	0	217	0	0	0	0	1	0	0	0	0
Multilateral development banks	0	0	0	0	0	0	0	0	0	0	0
International organizations	0	0	0	0	0	0	0	0	0	0	0
Banks	28549	4211	0	1	0	0	0	0	0	0	0
Corporates	0	740	18	235	71	0	4714	0	0	0	0
Retail business	0	0	0	0	0	5097	0	0	0	0	0
Items secured by real estate	0	0	5485	141	0	0	0	0	0	0	0
Past due items	0	0	0	0	0	0	80	86	0	0	0
Items exposed to particularly high risk	0	0	0	0	0	0	0	0	0	0	0
Covered bonds issued by banks	0	0	0	0	0	0	0	0	0	0	0
Risk exposure to banks and corporates with a short-term credit rating	0	0	0	0	0	0	0	0	0	0	0
Undertakings for collective investment (UCI)	0	0	0	0	0	0	0	0	0	0	0
Equity investments	0	0	0	0	0	0	87	0	361	0	0
Other items	176	0	0	0	0	0	84	0	0	0	0
Total	**35731**	**5168**	**5503**	**376**	**71**	**5097**	**4971**	**86**	**361**	**0**	**0**
Total previous year	**34199**	**4115**	**5580**	**347**	**83**	**5512**	**4347**	**112**	**394**	**0**	**0**

Figure 18: Total exposure values under the CRS approach after credit risk mitigation (Article 444 (e) CRR).

Total exposure values under the IRB approach calculated using the simple risk-weight approach.

IRBA items with a fixed risk weight are reported in the following chart. These are exposure values for equity investments, for items secured with real estate liens and for specialized lending exposures.

Items in the equity investment exposure class which are subject to a fixed risk weight are reported at 190% in the case of private equity investments in sufficiently diversified portfolios, 290% in the case of exchange-traded equity investments and at 370% in the case of all other equity investments in accordance with Article 155 (2) CRR. An alternative risk weight of 50% is applied to exposures secured by a real estate lien in accordance with Article 230 (3) CRR. Specialized lending exposures in accordance with Article 153 (5) CRR are recognized at risk weights of between 0% and 115% or of 250%, depending on the residual term and degree of risk.

EUR million	Total exposure values after credit risk mitigation	
Risk weight	For specialized lending exposures	IRB approach for equity investments and exposures secured by real estate liens to which the simple risk weight approach is applied
0%	10	
50%	590	2 187
70%	54	
of which with a residual term of less than 2.5 years	5	
90%	98	
115%	23	
190%		898
250%	10	
290%		18
370%		4
Total	**784**	**3 106**
Total previous year	**1 034**	**3 769**

Figure 19: Exposures under the IRBA approach in accordance with the simple risk weight method.

7 Use of the IRB approach to credit risk. (Article 452 CRR).

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

- Banks
- Country and transfer risks
- Insurance companies
- Project finance
- Corporates
- International real estate finance
- Sparkassen-ImmobiliengeschäftsRating
- DSGV-Haftungsverbund
- Sparkassen-StandardRating
- Specific special rating classes
- IAA procedure for measuring securitization positions
- Leasing
- Leveraged finance
- Aircraft finance
- International administrative authorities
- Funds

The CRS approach is used for all other portfolios of LBBW (Bank) and all other companies included in the regulatory basis of consolidation of the LBBW Group with the exception of the equity investment portfolio. The IRB approach is applied to the investment portfolios of all subsidiaries.

In the future, all materially significant portfolios and subsidiaries will be measured using the IRB approach. These portfolios are being migrated to the IRB approach for both the LBBW Group and LBBW (Bank) in close consultation with the responsible competent authorities.

Description of the internal rating procedures.

As a general rule, LBBW's internal rating procedures 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 area	Subgroup	Rating/assessment procedures	Methodology
Private and investment customers	Employed natural persons	Sparkassen KundenScoring (SKS)	Scorecard-based rating procedure
	Private customers with main cash flow from renting and leasing	Segment real estate compact rating in Sparkassen Immobilienrating	Simulation-based rating procedure
Corporate customers	Basic customers	Sparkassen StandardRating plus customer compact rating (CCR) (exposure between EUR 50,000 and EUR 250,000)	Scorecard-based rating procedure
	Business customers	Sparkassen StandardRating plus customer compact rating (CCR)	Scorecard-based rating procedure
	Corporate customers	Sparkassen StandardRating plus customer compact rating (CCR)	Scorecard-based rating procedure
	Leasing customers	Scoring of leasing customers Rating of leasing customers	Scorecard-based rating procedure
	Corporate customers/ key accounts	Rating for corporates	Scorecard-based rating procedure
	Non-profit organizations	Basic RCP (risk classification procedure)	Expert-based procedure
Project and specialized lending exposures	National commercial real estate	Sparkassen Immobilienrating	Simulation-based rating procedure
	International commercial real estate	Rating for international commercial real estate (ICRE)	Simulation-based rating procedure
		If necessary, RCP for specialized lending exposures	Slotting criteria
	Open-end real estate funds	Sparkassen Immobilienrating	Scorecard-based rating procedure
	Aircraft finance	Airlines: rating for corporates	Scorecard-based rating procedure
		SPC: rating for aircraft finance	Simulation-based rating procedure
		If necessary, RCP for specialized lending exposures	Scorecard-based rating procedure
	Other project finance	Rating for project finance	Simulation-based rating procedure
		If necessary, RCP for specialized lending exposures	Slotting criteria
	SPC real estate leasing	Rating for leasing refinancing	Simulation-based rating procedure
	Leveraged finance	Rating for leveraged finance	Scorecard-based rating procedure

Business area	Subgroup	Rating/assessment procedures	Methodology
Wholesale	Banks	Rating for banks	Scorecard-based rating procedure
		Rating for DSGV-Haftungsverbund	Simulation-based rating procedure
	Insurance companies	Rating for insurance companies	Scorecard-based rating procedure
	Leasing companies	Rating for leasing companies	Scorecard-based rating procedure
	Securitization items against own ABCP programs	Internal Assessment Approach (IAA) for securitizations for Weinberg ABCP program	Simulation-based rating procedure
	Synthetic CDO securitization tranches	SFA is applied in the absence of an internal rating	Supervisory Formula Approach (SFA)
	Other securitization transactions	Internal assessment if external rating is to hand: RCP for ABS	Expert-based procedure
	National (German) administrative authorities/public-sector loans	Rating inheritance	n/a
	International administrative authorities	Rating for international administrative authorities	Scorecard-based rating procedure
	Municipal corporations	Sparkassen StandardRating	Scorecard-based rating procedure
		Corporates rating	Scorecard-based rating procedure
		Basic RCP	Expert-based procedure
	Sovereigns & transfer risks	Rating for country and transfer risks	Scorecard-based rating procedure
	Government-supported enterprises (GSE)	Rating for government supported enterprises	Scorecard-based rating procedure
	Funds (individual funds)	Rating procedure for funds	Scorecard-based rating procedure
Corporate items	Strategic equity investments	Suitable rating in each case (bank equity investments rated with bank rating etc.) in the absence of any reason to dispense with a rating	Dependent on procedure
		Otherwise basic RCP	Expert-based procedure

Figure 20: LBBW's internal rating procedures (Article 452 (b) (i) CRR).

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 16 to 18 indicate default.

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

Figure 21: LBBW rating master scale (Article 452 (b) (i) CRR).

1) Ratings 15(B) and 15(C) are currently used only for the following rating methodologies: Sparkassen KundenScoring, Sparkassen KundenKompaktRating, leveraged finance rating, scoring and rating for leasing customers.

Further use of internal estimates.

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

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

Control mechanisms for the rating systems.

Responsibility within LBBW for the rating systems lies with Credit Risk Control. Credit Risk Control plays the role of the credit risk control unit stipulated by Article 190 CRR and is responsible in particular for the design, selection, introduction, ongoing monitoring and performance of rating systems.

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

The rating systems of LBBW are subject to a regular review process, the central element of which is conducted under the guidance of RSU or SR (this activity has been outsourced in line with Section 25a 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 validation, the central task of which is backtesting, benchmarking and checking the model design and data quality. The results are submitted to a working group comprising methodology experts from all member institutions, which is responsible for independently reviewing the validation and ensuring the consistency of the methods used for all processes in all modules. Validation involves confirming, adjusting or optimizing the rating procedure and its parameter estimates as necessary. Before introducing modified procedures, LBBW performs a test to ensure that they are representative. In turn, this ensures that the rating procedures are also accurate and valid for the LBBW portfolio and can therefore be applied without restriction. In addition, the correct use of rating systems is analyzed and evaluated extensively by a rating controlling process at LBBW, which also initiates and monitors any adjustments that may be required.

Process of allocating items or borrowers to rating classes or risk pools.

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. Allocation forms a key aspect of capital backing activities.

Central governments and central banks exposure class.

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

Banks exposure class.

The rating procedures for banks is applied to all borrowers which are allocated to the IRBA exposure class »Banks« under Article 147 (4) CRR and in the light of Articles 4 (1) Sentences 1, 2, 3 / 115 (2) and (4) / 116 (4) / 117 / 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, home savings 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 if 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 rated.

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

Corporates exposure class.

The rating systems for corporate clients classify obligors assigned to IRBA exposure class »corporates« in accordance with Article 147 (7) CRR. The corporates rating is applied to a substantial part of the portfolio. Large domestic customers with consolidated sales of more than EUR 100 million and all international corporate customers are assessed using the »corporates« rating. Domestic borrowers with sales of less than EUR 100 million are rated using the Sparkassen StandardRating methodology and may be included in the »corporates« exposure class under certain conditions. Also, banks assessed with the rating procedure for insurance companies are assigned to this class. 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.

All transactions to which the single funds rating method is applied are assigned to the corporates exposure class, as are the associated basic RCPs.

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.

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 rating procedure for aircraft finance is applied to finance for a special-purpose vehicle (SPV) and to direct loans to airlines in which there is a direct link to the financed asset (direct asset-linked loan, »virtual SPV«).

All finance coming within the scope of the rating procedure for aircraft finance is assigned to the specialized lending exposures exposure class.

Corporates/specialized lending exposures exposure class: SME check.

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

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

Equity investment exposure class.

Equity investments are handled by a special organizational unit. Depending on the type of equity investment, the same rating procedures can be used as for the exposure classes stated above. System allocations and product numbers ensure that they can be clearly identified and assigned to the aforementioned exposure classes or to the »equity investments« exposure class in accordance with Article 147 (6) CRR. In addition, some equity investments are measured using the standard approach in accordance with grandfathering rules (protection of pre-existing legal rights) (see »Own funds requirements«, page 21).

Retail business exposure class.

LBBW exposure positions which are classified as retail business are not yet measured using the IRB approach.

LBBW is targeting authorization to use self-estimated loss ratios (IRB Retail).

Exposure amounts by probability of default class under the IRB approach.

The following table sets out the exposure classes covered by the IRB approach: central governments, banks, corporates including the specialized lending exposures and SMEs sub-classes as well as equity investments. A further differentiation is made by risk class and geographic location (obligor's domicile). Countries in which LBBW had a branch or for which it held a banking license in 2016 are reported separately, while the sum of the exposure of the other countries is reported within »Other«. Compared with the previous year, exposures conducted in the Czech Republic will no longer be reported separately, as this subsidiary was sold during 2015. The following parameters are applied:

- Total risk exposures and the exposure values of non-drawn loan commitments
- The risk exposures weighted with average probabilities of default (PDs)
- The risk exposures weighted with average risk weights
- The total risk exposures weighted with the respective average risk weights

Higher liquidity led to an increase over the previous year in the IRBA in the exposure values reported in the »Central governments« exposure class.

EUR million Exposure class	Risk exposure values	of which outstanding credit commitments	Average PD in %	Average risk weight in %	Risk exposure value weighted by risk weight
PD classes 1 [(AAAA) - (A–)]/0.00 % to <= 0.10 %					
Central governments	54 875	597	0.00	2.00	1 095
Banks	24 684	310	0.06	9.93	2 452
Corporates	33 109	4 027	0.06	18.30	6 059
of which SMEs	1 868	109	0.05	13.48	252
of which specialized lending exposures	7 780	106	0.06	21.12	1 644
of which purchased receivables	0	0	0.00	0.00	0
Equity investments	87	0	0.09	69.69	61
Total	**112 754**	**4 934**			**9 667**
Total previous year	**97 452**	**5 312**			**9 569**
Broken down by geographic location					
Central governments	**54 875**	**597**	**0.00**	**2.00**	**1 095**
Germany	40 056	549	0.00	0.00	1
United Kingdom	110	0	0.00	0.53	1
USA	7 173	10	0.01	7.71	553
Singapore	210	0	0.00	0.00	0
Republic of Korea	416	0	0.02	12.68	53
Switzerland	786	1	0.00	0.00	0
Mexico	0	0	0.00	0.00	0
Other	6 124	36	0.02	7.97	488
Banks	**24 684**	**310**	**0.06**	**9.93**	**2 452**
Germany	3 139	134	0.07	10.28	323
United Kingdom	8 632	168	0.07	5.11	441
USA	2 619	0	0.06	15.39	403
Singapore	18	0	0.05	27.03	5
Republic of Korea	0	0	0.00	0.00	0
Switzerland	749	0	0.05	22.38	168
Mexico	0	0	0.00	0.00	0
Other	9 526	8	0.06	11.68	1 112
Corporates	**33 109**	**4 027**	**0.06**	**18.30**	**6 059**
Germany	23 846	3 257	0.06	17.21	4 103
United Kingdom	243	2	0.08	27.55	67
USA	3 342	74	0.07	21.01	702
Singapore	7	1	0.04	19.18	1
Republic of Korea	179	0	0.09	39.41	70
Switzerland	669	351	0.06	28.94	194
Mexico	50	0	0.05	20.84	11
Other	4 774	341	0.06	19.09	911
of which SMEs	**1 868**	**109**	**0.05**	**13.48**	**252**
Germany	1 867	109	0.05	13.48	252
United Kingdom	1	0	0.04	14.26	0
USA	0	0	0.00	0.00	0
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	0	0	0.00	0.00	0
Other	0	0	0.00	0.00	0
of which specialized lending exposures	**7 780**	**106**	**0.06**	**21.12**	**1 644**
Germany	4 234	32	0.05	17.86	756
United Kingdom	127	2	0.08	28.50	36
USA	2 329	20	0.07	24.86	579
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	20	12	0.09	22.99	5
Mexico	0	0	0.00	0.00	0
Other	1 070	40	0.07	25.01	268
Equity investments	**87**	**0**	**0.09**	**69.69**	**61**
Germany	87	0	0.09	69.66	61
Other	0	0	0.09	104.49	0
Total	**112 754**	**4 934**			**9 667**

EUR million Exposure class	Risk exposure values	of which outstanding credit commitments	Average PD in %	Average risk weight in %	Risk exposure value weighted by risk weight
PD classes 2–5/0.11 % to <= 0.47 %					
Central governments	18	0	0.20	18.85	3
Banks	6 232	205	0.20	23.05	1 436
Corporates	38 353	6 953	0.22	42.15	16 167
of which SMEs	1 903	163	0.28	39.27	747
of which specialized lending exposures	9 036	543	0.23	46.53	4 205
of which purchased receivables	0	0	0.00	0.00	0
Equity investments	28	0	0.23	105.87	30
Total	**44 631**	**7 158**			**17 637**
Total previous year	**40 665**	**6 811**			**15 604**
Broken down by geographic location					
Central governments	**18**	**0**	**0.20**	**18.85**	**3**
Germany	0	0	0.00	0.00	0
United Kingdom	0	0	0.00	0.00	0
USA	0	0	0.00	0.00	0
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	10	0	0.17	0.00	0
Other	8	0	0.23	43.17	3
Banks	**6 232**	**205**	**0.20**	**23.05**	**1 436**
Germany	2 738	86	0.17	19.04	521
United Kingdom	2 009	24	0.21	18.20	366
USA	21	4	0.12	34.93	7
Singapore	13	0	0.35	82.12	11
Republic of Korea	0	0	0.00	0.00	0
Switzerland	160	90	0.12	37.64	60
Mexico	2	0	0.22	65.55	1
Other	1 289	0	0.24	36.44	470
Corporates	**38 353**	**6 953**	**0.22**	**42.15**	**16 167**
Germany	28 439	5 851	0.22	41.01	11 663
United Kingdom	773	75	0.24	47.96	371
USA	3 150	318	0.23	47.83	1 506
Singapore	17	0	0.21	46.35	8
Republic of Korea	254	0	0.18	50.81	129
Switzerland	783	156	0.23	45.08	353
Mexico	6	0	0.21	45.43	3
Other	4 931	552	0.20	43.28	2 134
of which SMEs	**1 903**	**163**	**0.28**	**39.27**	**747**
Germany	1 828	161	0.27	38.67	707
United Kingdom	0	0	0.00	0.00	0
USA	0	0	0.00	0.00	0
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	56	2	0.39	56.64	32
Mexico	0	0	0.00	0.00	0
Other	19	0	0.33	45.98	9
of which specialized lending exposures	**9 036**	**543**	**0.23**	**46.53**	**4 205**
Germany	3 297	183	0.24	44.91	1 481
United Kingdom	478	75	0.31	58.21	278
USA	2 352	239	0.25	50.63	1 191
Singapore	2	0	0.39	65.67	1
Republic of Korea	0	0	0.00	0.00	0
Switzerland	40	0	0.32	59.40	24
Mexico	0	0	0.00	0.00	0
Other	2 866	46	0.19	42.90	1 229
Equity investments	**28**	**0**	**0.23**	**105.87**	**30**
Germany	28	0	0.23	105.87	30
Other	0	0	0.00	0.00	0
Total	**44 631**	**7 158**			**17 637**

EUR million Exposure class	Risk exposure values	of which outstanding credit commitments	Average PD in %	Average risk weight in %	Risk exposure value weighted by risk weight
PD classes 6–10/0.48 % to <= 3.62 %					
Central governments	180	0	1.02	93.50	168
Banks	896	0	1.24	64.29	576
Corporates	11 088	1 348	1.20	92.02	10 203
of which SMEs	1 542	115	1.19	77.04	1 188
of which specialized lending exposures	2 118	197	1.33	100.26	2 123
of which purchased receivables	0	0	0.00	0.00	0
Equity investments	2	0	0.59	191.27	3
Total	**12 165**	**1 348**			**10 950**
Total previous year	**13 747**	**1 326**			**12 191**
Broken down by geographic location					
Central governments	**180**	**0**	**1.02**	**93.50**	**168**
Germany	0	0	0.00	0.00	0
United Kingdom	0	0	0.00	0.00	0
USA	0	0	0.00	0.00	0
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	0	0	0.00	0.00	0
Other	180	0	1.02	93.50	168
Banks	**896**	**0**	**1.24**	**64.29**	**576**
Germany	35	0	2.22	29.55	10
United Kingdom	29	0	1.31	135.61	40
USA	153	0	1.32	8.15	12
Singapore	1	0	0.68	92.34	1
Republic of Korea	0	0	0.00	0.00	0
Switzerland	2	0	0.61	46.57	1
Mexico	0	0	0.00	0.00	0
Other	675	0	1.17	75.71	511
Corporates	**11 088**	**1 348**	**1.20**	**92.02**	**10 203**
Germany	7 591	960	1.18	90.95	6 905
United Kingdom	120	19	1.17	91.10	109
USA	738	151	1.05	82.08	606
Singapore	0	0	1.24	104.52	1
Republic of Korea	11	0	0.59	79.41	9
Switzerland	66	18	0.80	86.15	57
Mexico	9	0	2.74	130.82	12
Other	2 552	200	1.32	98.17	2 505
of which SMEs	**1 542**	**115**	**1.19**	**77.04**	**1 188**
Germany	1 521	112	1.19	76.86	1 169
United Kingdom	0	0	0.00	0.00	0
USA	8	1	0.88	84.17	7
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	1	0	1.62	71.57	0
Mexico	0	0	0.00	0.00	0
Other	12	3	1.66	94.65	12
of which specialized lending exposures	**2 118**	**197**	**1.33**	**100.26**	**2 123**
Germany	721	75	1.54	105.82	763
United Kingdom	81	0	1.09	94.44	77
USA	395	104	0.86	88.98	352
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	8	0	2.96	135.64	11
Other	912	17	1.37	100.97	921
Equity investments	**2**	**0**	**0.59**	**191.27**	**3**
Germany	1	0	0.59	160.51	2
Other	1	0	0.59	240.76	2
Total	**12 165**	**1 348**			**10 950**

EUR million Exposure class	Risk exposure values	of which outstanding credit commitments	Average PD in %	Average risk weight in %	Risk exposure value weighted by risk weight
PD classes 11–15/3.63% to <= 99.99%					
Central governments	16	0	19.67	251.43	41
Banks	7	0	4.60	79.90	6
Corporates	925	109	10.16	182.88	1 692
of which SMEs	154	8	8.85	140.95	217
of which specialized lending exposures	297	14	14.20	215.89	642
of which purchased receivables	0	0	0.00	0.00	0
Equity investments	0	0	6.67	448.76	0
Total	949	**109**			**1 739**
Total on 30 June 2016	**970**	**142**			**1 780**
Broken down by geographic location					
Central governments	16	**0**	**19.67**	**251.43**	**41**
Germany	0	0	0.00	0.00	0
United Kingdom	0	0	0.00	0.00	0
USA	0	0	0.00	0.00	0
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	0	0	0.00	0.00	0
Other	16	0	19.67	251.43	41
Banks	7	**0**	**4.60**	**79.90**	**6**
Germany	6	0	4.44	63.25	4
United Kingdom	0	0	0.00	0.00	0
USA	0	0	0.00	0.00	0
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	0	0	0.00	0.00	0
Other	1	0	5.59	179.79	2
Corporates	**925**	**109**	**10.16**	**182.88**	**1 692**
Germany	655	87	8.21	171.20	1 121
United Kingdom	0	0	4.44	152.82	0
USA	37	0	5.71	164.67	62
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	5	5	4.54	153.82	8
Other	228	17	16.63	220.16	501
of which SMEs	**154**	**8**	**8.85**	**140.95**	**217**
Germany	154	8	8.85	140.83	216
United Kingdom	0	0	0.00	0.00	0
USA	0	0	0.00	0.00	0
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	0	0	0.00	0.00	0
Other	1	0	8.86	173.81	1
of which specialized lending exposures	297	**14**	**14.20**	**215.89**	**642**
Germany	87	3	10.38	189.21	165
United Kingdom	0	0	0.00	0.00	0
USA	36	0	5.77	165.22	59
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	0	0	0.00	0.00	0
Other	174	11	17.85	239.69	417
Equity investments	0	**0**	**6.67**	**448.76**	**0**
Germany	0	0	6.67	448.76	0
Other	0	0	0.00	0.00	0
Total	949	**109**			**1 739**

EUR million Exposure class	Risk exposure values	of which outstanding credit commitments	Average PD in %	Average risk weight in %	Risk exposure value weighted by risk weight
PD classes 16–18/100 % (default)					
Central governments	2	0	100.00	0.00	0
Banks	1	0	100.00	0.00	0
Corporates	1 386	38	100.00	0.00	0
of which SMEs	130	1	100.00	0.00	0
of which specialized lending exposures	307	6	100.00	0.00	0
of which purchased receivables	0	0	0.00	0.00	0
Equity investments	0	0	100.00	0.00	0
Total	**1 389**	**38**			**0**
Total previous year	**2 251**	**73**			**0**
Broken down by geographic location					
Central governments	**2**	**0**	**100.00**	**0.00**	**0**
Germany	0	0	0.00	0.00	0
United Kingdom	0	0	0.00	0.00	0
USA	0	0	0.00	0.00	0
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	0	0	0.00	0.00	0
Other	2	0	100.00	0.00	0
Banks	**1**	**0**	**100.00**	**0.00**	**0**
Germany	0	0	0.00	0.00	0
United Kingdom	0	0	0.00	0.00	0
USA	0	0	0.00	0.00	0
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	0	0	0.00	0.00	0
Other	1	0	100.00	0.00	0
Corporates	**1 386**	**38**	**100.00**	**0.00**	**0**
Germany	1 032	36	100.00	0.00	0
United Kingdom	1	0	100.00	0.00	0
USA	172	1	100.00	0.00	0
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	1	0	100.00	0.00	0
Mexico	1	0	100.00	0.00	0
Other	179	0	100.00	0.00	0
of which SMEs	**130**	**1**	**100.00**	**0.00**	**0**
Germany	117	0	100.00	0.00	0
United Kingdom	0	0	0.00	0.00	0
USA	0	0	0.00	0.00	0
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	0	0	0.00	0.00	0
Other	13	0	100.00	0.00	0
of which specialized lending exposures	**307**	**6**	**100.00**	**0.00**	**0**
Germany	59	5	100.00	0.00	0
United Kingdom	0	0	0.00	0.00	0
USA	168	1	100.00	0.00	0
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	0	0	0.00	0.00	0
Mexico	0	0	0.00	0.00	0
Other	80	0	100.00	0.00	0
Equity investments	**0**	**0**	**100.00**	**0.00**	**0**
Germany	0	0	100.00	0.00	0
Other	0	0	0.00	0.00	0
Total	**1 389**	**38**			**0**

EUR million Exposure class	Risk exposure values	of which outstanding credit commitments	Average PD in %	Average risk weight in %	Risk exposure value weighted by risk weight
Total					
Central governments	55 090	597	0.02	2.37	1 308
Banks	31 820	515	0.13	14.05	4 470
Corporates	84 861	12 476	2.02	40.21	34 121
of which SMEs	5 597	396	3.01	42.96	2 405
of which specialized lending exposures	19 538	865	2.06	44.08	8 613
of which purchased receivables	0	0	0.00	0.00	0
Equity investments	117	0	0.13	80.34	94
Total	**171 889**	**13 588**			**39 993**
Total previous year	**155 086**	**13 664**			**39 143**
Broken down by geographic location					
Central governments	**55 090**	**597**	**0.02**	**2.38**	**1 308**
Germany	40 056	549	0.00	0.00	1
United Kingdom	110	0	0.00	0.53	1
USA	7 173	10	0.01	7.71	553
Singapore	210	0	0.00	0.00	0
Republic of Korea	416	0	0.02	12.68	53
Switzerland	786	1	0.00	0.00	0
Mexico	10	0	0.00	0.00	0
Other	6 330	36	0.13	11.07	701
Banks	**31 820**	**515**	**0.13**	**14.05**	**4 470**
Germany	5 919	220	0.13	14.50	858
United Kingdom	10 671	192	0.10	7.91	844
USA	2 792	4	0.13	15.22	425
Singapore	33	0	0.20	51.75	17
Republic of Korea	0	0	0.00	0.00	0
Switzerland	911	90	0.06	25.10	229
Mexico	2	0	0.00	0.00	1
Other	11 493	8	0.15	18.23	2 096
Corporates	**84 861**	**12 476**	**2.02**	**40.21**	**34 121**
Germany	61 563	10 192	2.03	38.65	23 792
United Kingdom	1 137	97	0.37	48.10	547
USA	7 438	544	2.57	38.66	2 876
Singapore	24	1	0.18	40.11	10
Republic of Korea	444	0	0.16	46.94	208
Switzerland	1 519	525	0.26	39.73	604
Mexico	73	5	2.77	46.08	33
Other	12 662	1 111	2.09	47.79	6 051
of which SMEs	**5 597**	**396**	**3.01**	**42.96**	**2 405**
Germany	5 487	391	2.83	42.72	2 344
United Kingdom	1	0	0.04	14.26	0
USA	8	1	0.88	84.17	7
Singapore	0	0	0.00	0.00	0
Republic of Korea	0	0	0.00	0.00	0
Switzerland	57	2	0.40	56.81	32
Mexico	0	0	0.00	0.00	0
Other	44	3	29.39	48.04	21
of which specialized lending exposures	**19 538**	**865**	**2.06**	**44.08**	**8 613**
Germany	8 399	298	1.06	37.68	3 165
United Kingdom	686	78	0.36	57.00	391
USA	5 280	364	3.42	41.30	2 181
Singapore	2	0	0.39	65.67	1
Republic of Korea	0	0	0.00	0.00	0
Switzerland	60	12	0.25	47.34	29
Mexico	8	0	2.96	135.64	11
Other	5 103	113	2.54	55.57	2 836
Equity investments	**117**	**0**	**0.13**	**80.34**	**94**
Germany	117	0	0.13	79.37	92
Other	1	0	0.54	226.42	2
Total	**171 889**	**13 588**			**39 993**

Figure 22: Exposure values used for ratings (excluding retail) under the IRB approach (Article 452 (e) and (j) (ii) CRR).

Actual losses from lending business.

The following table sets out actual losses from lending business reported in accordance with CRR using the IRB approach (including derivatives and banking book securities, but not including securitization positions that form a separate exposure class within CRR). Actual losses are defined as the total of direct write-downs and the total of additions and reversals of specific valuation allowances/provisions less recoveries on loans and advances already written off.

EUR million	Actual losses from lending business (including securities and derivatives)		
Exposure classes	In the period 1 Jan. 2016 to 31 Dec. 2016	In the period 1 Jan. 2015 to 31 Dec. 2015	Changes
Central governments	1	1	0
Banks	0	1	– 1
Corporates	57	46	11
of which corporates – SMEs	17	– 6	23
of which corporates – specialized lending exposures	2	20	– 18
Equity investments	17	74	– 57
Retail business	-	-	-
Total	**75**	**122**	**– 47**

Figure 23: Actual losses from lending business (Article 452 (g) CRR).

Actual losses in 2016 continued to decline in comparison with the previous year. The decline in the »equity investments« exposure class is attributable mainly to the absence of the previous year's non-recurring effect.

Expected and actual losses from traditional lending business.

The following table compares expected and actual losses for transactions reported under the IRB approach in accordance with CRR. The information relates only to traditional lending business (excluding banking book securities, securitizations or derivatives) for the respective exposure classes under the IRB approach.

Actual losses are defined as the total of direct write-downs and the total of additions and reversals of specific valuation allowances/provisions less recoveries on loans and advances already written off. Expected loss (EL) is calculated in accordance with the IRB approach and only includes lending business with a probability of default (PD) of less than 100% as at 1 January 2015.

EUR million	Losses from traditional lending business (excluding securities in the banking book and derivatives)					
	Period 1 Jan. 2016 to 31 Dec. 2016		Period 1 Jan. 2015 to 31 Dec. 2015		Period 1 Jan. 2014 to 31 Dec. 2014	
Exposure classes	Expected loss (EL)	Actual loss	Expected loss (EL)	Actual loss	Expected loss (EL)	Actual loss
Central governments	4	0	1	1	1	0
Banks	3	2	11	0	14	1
Corporates	1 34	41	172	61	227	152
of which corporates – SMEs	16	10	21	8	24	29
of which corporates – specialized lending exposures	37	7	65	1	74	25
Equity investments	8	17	7	74	15	23
Retail business			0	0	0	0
Total	150	**60**	191	**136**	**257**	**177**

Figure 24: Expected and actual losses from traditional lending business (Article 452 (i) CRR).

As in the previous years, actual loss in the corporates exposure class was substantially lower than expected loss. The decline in actual losses in the »equity investments« exposure class is attributable mainly to the absence of the previous year's non-recurring effect.

8 Use of credit risk mitigation techniques. (Article 453 CRR)

Processes for managing and acknowledging credit risk mitigation techniques.

Credit risk mitigation is managed in accordance with the stipulations on admissible types of collateral and value bases set out in the Bank's rule books. LBBW has implemented the regulatory requirements for collateral management in order to include collateral in the own funds backing calculations.

Risk mitigation.

Registered liens, guarantees, financial collateral and credit derivatives are acknowledged risk mitigators.

Main types of collateral.

Traditional lending business.

- Real estate secured by liens
- Guarantees/warranties from domestic and foreign local authorities and banks, as well as guarantees mainly from government export credit insurers. These usually consist of guarantors with investment grade credit ratings.

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 30 December 2016, no credit derivatives were used in the banking book as part of the credit risk mitigation techniques. The following types of collateral are primarily used:

- Financial collateral (securities, deposits)
- Eligible guarantees
- Netting agreements for derivatives plus collateral agreements (in accordance with Chapter 9)

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).

Measuring and managing the collateral used.

The procedures for measuring and managing the collateral eligible under CRR are set out in the Bank 's rules.

The internal processes and systems in place ensure that collateral is only used for weighting if it meets all CRR requirements. Collateral is initially measured upon receipt. Values are calculated and carrying amounts are regularly reviewed by the back office divisions. Regardless of this, collateral is checked for impairment immediately if information that has an impact on its value becomes known. If a significant positive correlation between the value of an item of collateral and the borrower providing the collateral is established, the collateral in question is not included.

Notes on main types of collateral:

- Real estate secured by liens

Real estate collateral is measured on the basis of opinions by acknowledged experts and, in the case of small loans, in accordance with Section 24 BelWertV (Regulation on the Determination of Mortgage Lending Values) by the front and back offices with the help of a computer-assisted program.

LBBW uses statistical methods (market fluctuation method) of the central associations of the German banking industry for real estate used as »residential«, »office«, »retail«, »storage« und »city hotel« in order to identify real estate requiring particular review or a revaluation.

- Warranties/guarantees

The measurement of a guarantor in a traditional lending transaction or of a collateral provider in the case of a credit derivative is, as a rule, carried out by means of a credit assessment and rating determination.

Loan collateral is recorded and continuously reviewed in the collateral management system using all relevant inputs.

In the case of domestic standard collateral, 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. Legal efficacy is ensured at all times; at the same time, the underlying legal conditions are subject to ongoing observation.

Management of concentration risks in the credit and collateral portfolio.

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

In traditional lending business, options exist for evaluating real estate, e.g. according to region or type of use. Appropriate limits are set for guarantors on the basis of rating characteristics and economic strength. Guarantees accepted are included in the limit on the respective guarantees.

Concentrations of collateral in capital markets business are limited by a restrictive collateral policy. Individual and portfolio risks (e.g. those in relation to repo and securities lending transactions) are regularly monitored by means of a trading-internal steering committee. Concentrations of collateral in the case of OTC derivatives are prevented by only accepting cash collateral or first class sovereign bonds. In addition, continuous measurement of collateral contributes to risk limitation.

The collateral portfolio for OTC derivatives is documented on a monthly basis in management reporting and includes statistical information as well as details of the largest providers and takers of collateral within LBBW.

Total amount of secured exposure values (not including securitization).

The following table shows the exposure amounts by CRSA exposure class secured by financial collateral, endowment policies or guarantees (including warranties).

EUR million Exposure class	Financial collateral	Endowment policies	Guarantees
Central governments	0	0	0
Regional governments	0	0	0
Other public-sector agencies	0	0	11
Multilateral development banks	0	0	0
International organizations	0	0	0
Banks	2 160	0	0
Covered bonds issued by banks	0	0	0
Corporates	1 950	5	2 972
Retail business	42	101	524
Items secured by real estate	0	0	0
Investment units	0	0	0
Equity investments	0	0	0
Other items	0	0	0
Past due items	0	3	4
Risk exposure to banks and corporates with a short-term credit rating	0	0	0
Items exposed to particularly high risk	0	0	0
Total	**4 153**	**109**	**3 511**
Total previous year	**4 483**	**125**	**3 624**

Figure 25: Total amount of the secured exposure values under the CRS approach (not including securitization) (Article 453 (f) CRR).

The following table shows the exposure values under the IRB approach secured by financial collateral other or physical collateral, endowment policies or guarantees (including warranties).

EUR million Exposure class	Financial collateral	Other/ physical collateral	Endowment policies	Guarantees
Central governments	4672	1	0	9
Banks	29085	51	0	252
Corporates	13850	10829	144	4782
of which SMEs	58	2214	31	389
of which specialized lending exposures	27	4195	4	660
Retail business	0	0	0	0
Equity investments	0	0	0	0
Other assets not relating to credit	0	0	0	0
Total	**47607**	**10881**	**144**	**5043**
Total previous year	43002	9845	195	4743

Figure 26: Total amount of the secured exposure values under the IRB approach (not including securitization) (Article 453 (f) CRR).

9 Exposure to counterparty credit risk. (Article 439 CRR)

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 Chapter 4 section »Economic management«.

Risk mitigation measures.

At LBBW, risk mitigation measures in connection with derivative counterparty risk items are applied by means of master netting agreements and the conclusion of contractual netting and collateralization agreements.

The procedure for entering into and managing master agreements for OTC derivative netting and collateralization agreements is stipulated in the Bank's internal rules and the working instructions of the responsible back office. OTC derivatives are netted if corresponding master netting agreements have been entered into.

Furthermore, derivative transactions (with the exception of credit derivatives) are entered into with savings bank customers via an intermediary procedure, which are guaranteed by the intermediary savings bank.

Impact of a possible LBBW rating downgrade on the collateral amount to be provided.

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.

Allowances for losses on loans and advances.

Credit risks of derivative transactions are included in a Credit Value Adjustment (CVA). This involves adjusting the fair value of a derivative. This reflects the risk that a derivative's positive fair value is reduced due to a deterioration of the counterparty's credit rating. This provision is applied in addition to the general rating assessment of the counterparty and covers the counterparty default risk.

Correlation between market price risks and credit risks.

Market price risks and credit or counterparty risks are pooled using economic capital under the Group-wide economic capital limit.

The economic capital of the various types of risk is aggregated taking correlations into account. The assumed correlation between market price risks and credit risks is based on a time-series analysis. This views any changes in value based on LBBW's current portfolio.

Derivative counterparty risk items and netting positions.

The following table shows the derivative counterparty risk items in the form of the positive market values (corresponding to potential replacement costs before add-ons in accordance with Article 274 CRR) before and after charging derivative netting positions and collateral, broken down by type of contract.

EUR million Type of contract	Positive replacement costs before netting and collateral	Netting possibilities	Eligible collateral	Positive replacement costs after netting and collateral
Interest rate-related contracts	37 591			
Currency-related contracts	4 949			
Share/index-related contracts	530			
Credit derivatives	134			
Commodity-linked contracts	52			
Other contracts	9			
Total	**43 265**	**31 433**	**4 550**	**7 282**
Total previous year	**40 824**	**30 346**	**2 509**	**7 969**

Figure 27: Positive replacement costs before and after netting and collateral (Article 439 (e) CRR).

The positive replacement costs for interest-rate-related contracts rose slightly over the previous year. This is mainly due to falling interest rates across all maturities. This effect was dampened by portfolio compression (derivatives with positive and negative market values were mutually closed out with a neutral risk effect), restructuring of derivatives (for example recouponing) and the reduction in the volume of derivatives due to expiry or shorter maturities.

The following table shows the counterparty risks of the derivative counterparty risk items to be included in the form of the exposure amount after credit risk mitigation for the respective method used. LBBW only uses the mark-to-market method.

EUR million	Accrual method	Mark-to-market method	Standard method	Internal model
Counterparty credit risk positions	0	16 227	0	0
Total previous year	**0**	**17 125**	**0**	**0**

Figure 28: Counterparty credit risk (Article 439 (f) CRR).

As at 31 December 2016 LBBW held no eligible credit derivatives under regulatory requirements used for hedging credit risks in the banking book in accordance with Article 439 (g) CRR.

The following table sets out the nominal amounts of the credit derivatives bought and sold for the Bank's own credit portfolio by type of credit derivative. Credit derivatives from brokering activities were not used by LBBW in 2016.

EUR million	Nominal values from use of own credit portfolio	
Type of contract	Bought	Sold
Credit default swaps	6 015	9 732
Total return swaps	1 163	0
Credit linked note	3 656	684
Other	0	0
Total	**10 834**	**10 416**
Total previous year	**13 632**	**13 140**

Figure 29: Nominal value of credit derivatives by type of use (Article 439 (h) CRR).

With the credit default swaps, portfolio compression leads to a risk-neutral reduction of EUR 1 762 million of the notional value of the purchased positions and of EUR 1 493 million of the sold positions over the previous year.

Maturities led to a EUR 1 035 million reduction in the holdings of sold total return swaps over the previous year. The sold positions were reduced by EUR 1 250 million to zero due to the reversal of the corresponding transactions.

In contrast to the annual report, transactions are classified here according to the CRR definition of market risk positions.

10 Exposure to securitization positions. (Article 449 CRR)

Securitization positions in the banking book.

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

Investor positions.

In connection with efforts to restructure the Bank, credit substitute business, a material part of which entailed securitization positions, has very largely been run off. No new investment was made in securitization transactions in the 2016 reporting year.

In earlier years, LBBW primarily continued to invest in collateralized loan obligations (CLOs) and other asset-backed securities (ABS).

Investor position risk is regularly monitored on the basis of the trustee reports.

External ratings are generally available for investor positions, which lead to the application of the ratings-based approach (IRBA). 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.

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 2016. 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.

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 banking book. LBBW also acts as collateral trustee for these SPVs.

In its capacity as a service provider, LBBW is exclusively responsible for structuring, managing and coordinating the customer transactions. It also manages the bank accounts which the SPVs hold at LBBW. Furthermore, LBBW acts as a dealer for the euro commercial paper of the Weinberg program.

The liquidity risks accepted in connection with pledges for liquidity facilities are recorded on a quarterly basis by LBBW's Liquidity 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 every quarter for trading receivables and at least once annually 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 one exception, all securitization positions for which LBBW reports risk-weighted securitization values as a sponsor are rated using the Internal Assessment Approach (IAA). The IAA could not be applied to one transaction, as a condition for application was not met. This securitization position is therefore subject to a risk weighting of 1250%. The IAA was also applied to one other transaction comprising almost exclusively risk positions measured under the standard approach in accordance with Article 109 (1) Sentence 2 CRR, although the risk weighting tables under Article 251 CRR (standard approach) were applied. All other transactions use the risk weighting tables under Article 261 CRR (IRB approach).

Owing to a change in Irish company law, the legal form of the former Weinberg Capital Ltd., Dublin was amended and the company was converted into a Designated Activity Company (DAC). The company has therefore operated under the name »Weinberg Capital DAC, Dublin« since October 2016.

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 2016. The commercial papers are rated by Moody's Investors Service and Fitch Ratings Ltd.

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 did not hold any originator positions during the 2016 reporting year.

Resecuritizations.

The resecuritization position includes two loans extended by LBBW to special-purpose vehicle Sealink amounting to the equivalent of EUR 4.2 billion (EUR 3.0 billion and EUR 1.2 billion) as at 31 December 2016. In addition, interest-rate derivatives (EUR 1 million) exist between LBBW and Sealink.

Presentation of the procedures for determining exposure values.

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

With the exception of underlying retail tranches, investor positions are recognized as IRB securitization positions while the underlying retail tranches (such as credit cards) and the positions from the refinancing of own conduits that hold investor positions are recognized as CRSA securitization positions.

The Bank normally uses the ratings based approach in the investor portfolio for IRB 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 supervisory formula approach in accordance with the IRB approach.

The liquidity lines and swaps (sponsor positions) provided as part of the ABCP program are weighted using the Internal Assessment Approach (IAA). To this end, LBBW developed and rolled out corresponding models for measuring trading and interest-bearing receivables in 2008. The IAA method 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 based on the assumption that there are no open residual value risks and that the portfolios are granular. 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:

Asset credit risk	Dilution risk	Transactions costs	Commingling risk
Liquidity facility	Liquidity facility	Liquidity facility	Liquidity facility
	Funding cost reserve	Dilution reserve	Dilution reserve / Funding cost reserve
Sec. Loss Piece (surety or credit agreement)	Dilution reserve	Funding cost reserve	
First loss piece seller	Seller	Seller	Seller/Servicer

Figure 30: Principal types of risk on 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 Risk Committee and/or the Board of Managing Directors verifies the validation results.

If LBBW purchases commercial papers (CP) under its own ABCP program, this is classified as an overlapping position under Article 246 (2) CRR. This means that the risk exposures are backed by the risk weightings of the securitization liquidity facilities provided by LBBW under Article 246 (3) CRR.

Securitization positions in the trading book.

LBBW did not trade in any trading-book securitization positions in 2016. It only has transactions from previous years in which it acted as an intermediary between the brokers and dealers for CDS, on the one hand, and LBBW customers, on the other. In these existing transactions LBBW now only acts as portfolio manager of the positions. The portfolio is being run off. The securitization positions held in the portfolio are marked to the market and fully hedged. This means that no additional hedging transactions are executed to mitigate risk.

Furthermore, LBBW does not have any retained or assumed resecuritization positions from this.

Accounting policies 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. Moreover, it was the collateral taker in 2016 in connection with a securitization portfolio and the funding for Sealink (risk shield).

As at 31 December 2016 LBBW did not hold any assets connected with securitization transactions without the transfer of receivables or earmarked for securitization.

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 basis for consolidation under IFRS may deviate from the regulatory group 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 2016:

- 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 balance sheet.

In LBBW's separate financial statements under HGB, the debt capital with which the special-purpose vehicles are provided is classified as a loan.

LBBW as investor.

The securitization products acquired by the LBBW Group as an investor (mainly CLOs and other ABS) are allocated to the banking book for regulatory purposes.

In accordance with IFRS, the products were assigned to the »held for trading«, »fair value option«, »available for sale« or »loans and receivables« categories at the time of their acquisition and duly measured on the basis of their documented purpose in accordance with the criteria defined in IAS 39.9. For more information on IFRS accounting see also the consolidated financial statements of LBBW, Note 6 on financial instruments.

Financial instruments which are categorized as »held for trading« or »fair value option« are measured at their fair value. Net measurement and realized gains and losses are reported within net gains and losses from financial instruments measured at fair value. Current income is reported within net interest result.

Financial instruments classified as available for sale are measured at fair value. Net measurement gains and losses are reported within equity (revaluation reserve). In the event of an impairment or disposal, the net gains and losses are recycled to profit and loss and reported within net gains and losses from financial assets. Current net gains and losses are reported within net interest result.

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. Reference should be made to Note 54 of the Annual Report for further information on the measurement of the fair value of financial instruments.

Financial instruments which are classified as loans and receivables are measured at amortized cost. Any impairment recognized through profit and loss is reported within net income from financial assets. Current income is reported within net interest result.

Under HGB, the securitization products were assigned to the trading portfolio, the liquidity reserve and the holdings of securities valued as non-current assets.

Securities held for trading are measured at their fair value less a risk discount in accordance with Section 340e (3) of the German Commercial Code (VaR - value at risk) and the special item for general banking risks in accordance with Section 340g and Section 340e (4) of the German Commercial Code. Net measurement and realization gains and losses are reported within net income from the trading book. Current net gains and losses are reported within net interest result.

Liquidity reserve securities are measured in line with the strict principle of lower of cost or market and write-downs are reversed as required. Gains and losses on remeasurement and realization are netted and shown under depreciation and write-downs on receivables and certain securities and additions to provisions for credit risks. Current income is reported within net interest result.

Securities treated as non-current assets are measured in line with the moderated principle of lower of cost or market and write-downs are reversed as required. Gains and losses on remeasurement and realization are netted and shown under income from reversals of impairments of equity investments, shares in affiliates and securities treated as non-current assets. Current income is reported within net interest result.

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 and receivables (IFRS) or as receivables (HGB) upon utilization and measured at amortized cost.

Upon utilization, swaps are recognized as derivatives and classified as held for trading under IFRS and allocated to the trading book under HGB and measured at fair value through profit and loss.

LBBW as protection buyer (risk shield).

A fixed liability surety bond for EUR 4.3 billion agreed as at 31 December 2016 with a guarantee entity of the State of Baden-Württemberg as part of a guarantee structure secured a loan amounting to EUR 3.0 billion extended by LBBW (Bank) to Sealink Funding DAC (Sealink), a non-consolidated special-purpose vehicle to which LBBW transferred certain risk-bearing structured ABS in connection with the acquisition of the former Landesbank Sachsen. The guarantee satisfies the requirements of a financial guarantee within the meaning of IAS 39.9 and is therefore not recognized as a derivative. The hedging effect of the guarantee is netted directly against the valuation of the loan (net method) under both IFRS and HGB.

Presentation of securitization positions in accordance with CRR.

The CRR provisions apply to the information provided in the following tables, which may differ from the presentation for securitization positions shown in other reports.

The following table shows the receivables effectively securitized by LBBW as an originator and its sponsor activities. LBBW did not transact any securitization positions without the transfer of receivables.

EUR million	Originator positions			Sponsor activities		
	Banking book					
Type of securitized receivable	Traditional	Synthetic	Total	Banking book	Trading book	Total
Receivables	0	0	0	2 682	0	2 682
from residential construction loans	0	0	0	0	0	0
from total or partial commercial real estate loans	0	0	0	0	0	0
from corporates (including SMEs)	0	0	0	1 402	0	1 402
from own and purchased lease receivables	0	0	0	1 244	0	1 244
from automotive financing (excl. leasing)	0	0	0	36	0	36
from other retail business	0	0	0	0	0	0
from CDOs and ABS	0	0	0	0	0	0
Derivatives	0	0	0	4	0	4
Credit enhancements	0	0	0	0	0	0
Resecuritizations	0	0	0	0	0	0
Total	**0**	**0**	**0**	**2 686**	**0**	**2 686**
Total previous year	**0**	**0**	**0**	**2 090**	**0**	**2 090**

Figure 31: Total outstanding securitized receivables and securitization transactions in which LBBW took part as an originator or sponsor (Article 449 (n) (i) CRR).

The following table sets out the Bank's securitization positions as a sponsor and investor. Under the underlying CRR approach, securitization positions acquired are categorized according to whether they are held in the trading or the banking book and on the basis of the type of securitized assets.

EUR million	Banking book		
Securitization positions	Exposure values under the CRS approach	Exposure values under the IRB approach	Trading book
Receivables	15	310	0
from residential construction loans	0	0	0
from total or partial commercial real estate loans	0	29	0
from corporates (including SMEs)	0	0	0
from own and purchased lease receivables	0	282	0
from automotive financing (excl. leasing)	15	0	0
from other retail business	0	0	0
from CDOs and ABS	0	0	0
Resecuritizations	0	0	0
of which guarantee portfolio	0	0	0
Credit enhancements	0	0	0
Drawn liquidity facilities	0	18	0
Other balance sheet items	0	0	0
Total balance sheet items	**15**	**328**	**0**
Liquidity facilities	36	2 629	0
Derivatives	2	3	0
of which resecuritizations	1	0	0
Positions specifically for synthetic transactions	0	0	0
Other off-balance-sheet items	0	0	0
Total off-balance-sheet items	**38**	**2 631**	**0**
Total	**53**	**2 960**	**0**
Total previous year	**48**	**2 486**	**0**

Figure 32: Total securitization positions retained or purchased (Article 449 (n) (ii) CRR).

The reduction in balance sheet items over the previous year results primarily from the following items:

- »Receivables from own and purchased lease receivables«. The reduction is as a result of the full repayment of a securitization position and of repayments on another securitization position.
- »Drawn liquidity facilities«. The reduction results from the liquidity facility of only one Weinberg ABCP transactions being drawn as at 31 December 2016.

The increase in the off-balance-sheet items is due to four new Weinberg ABCP transactions with interest-bearing receivables and trading receivables.

As at 31 December 2016, no assets were awaiting securitization in accordance with Article 449 (n) (iii) CRR.

LBBW did not engage in any securitization activities as an originator in 2016. Accordingly, no gains or losses were realized or reported in accordance with Article 449 n (iv) CRR.

The following figure shows the securitization positions to be included with a risk weight of 1250%.

EUR million	Securitization positions with a risk weight of 1250 %	
Securitization positions	Banking book	Trading book
Receivables	0	0
from residential construction loans	0	0
from total or partial commercial real estate loans	0	0
from corporates (including SMEs)	0	0
from own and purchased lease receivables	0	0
from automotive financing (excl. leasing)	0	0
from other retail business	0	0
from CDOs and ABS	0	0
Resecuritizations	0	0
Credit enhancements	0	0
Other balance sheet items	0	0
Total balance sheet items	**0**	**0**
Liquidity facilities	39	0
Derivatives	0	0
Positions specifically for synthetic transactions	0	0
Other off-balance-sheet items	0	0
Total off-balance-sheet items	**39**	**0**
Total	**39**	**0**
Total previous year	**0**	**0**

Figure 33: Total securitization positions risk weighted at 1250 % (Article 449 (n) (v) CRR).

In the following table the exposure values and capital backing for securitizations are broken down by the approach used, the risk weighting bands, by banking book or trading book, securitization or resecuritization.

EUR million	Banking book						Trading book					
	Securitizations		Resecuritizations		Total		Securitizations		Resecuritizations		Total	
Risk weight bands	Exposure value	Capital require ment	Exposure value	Capital require ment	Exposure value	Capital require ment	Exposure value	Capital require ment	Exposure value	Capital require ment	Exposure value	Capital require ment
Standard approach												
20%	15	0	0	0	15	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
100%	0	0	0	0	0	0	0	0	0	0	0	0
225%	0	0	0	0	0	0	0	0	0	0	0	0
350%	0	0	0	0	0	0	0	0	0	0	0	0
650%	0	0	0	0	0	0	0	0	0	0	0	0
1250%	0	0	0	0	0	0	0	0	0	0	0	0
Total	**15**	**0**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Look-through approach												
≤ 10%	0	0	0	0	0	0	0	0	0	0	0	0
> 10% ≤ 20%	0	0	0	0	0	0	0	0	0	0	0	0
> 20% ≤ 50%	1	0	0	0	1	0	0	0	0	0	0	0
> 50% ≤ 100%	0	0	0	0	0	0	0	0	0	0	0	0
> 100% ≤ 250%	0	0	0	0	0	0	0	0	0	0	0	0
> 250% ≤ 650%	0	0	0	0	0	0	0	0	0	0	0	0
> 650% ≤ 1250%	0	0	0	0	0	0	0	0	0	0	0	0
Total	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Ratings based approach												
≤ 10%	251	1	0	0	251	1	0	0	0	0	0	0
> 10% ≤ 20%	31	0	0	0	31	0	0	0	0	0	0	0
> 20% ≤ 50%	0	0	0	0	0	0	0	0	0	0	0	0
> 50% ≤ 100%	0	0	0	0	0	0	0	0	0	0	0	0
> 100% ≤ 250%	0	0	0	0	0	0	0	0	0	0	0	0
> 250% ≤ 650%	0	0	0	0	0	0	0	0	0	0	0	0
> 650% ≤ 1250%	39	39	0	0	39	39	0	0	0	0	0	0
Total	**321**	**41**	**0**	**0**	**321**	**41**	**0**	**0**	**0**	**0**	**0**	**0**
Supervisory formula approach												
≤ 10%	0	0	0	0	0	0	0	0	0	0	0	0
> 10% ≤ 20%	0	0	0	0	0	0	0	0	0	0	0	0
> 20% ≤ 50%	0	0	0	0	0	0	0	0	0	0	0	0
> 50% ≤ 100%	0	0	0	0	0	0	0	0	0	0	0	0
> 100% ≤ 250%	29	3	0	0	29	3	0	0	0	0	0	0
> 250% ≤ 650%	0	0	0	0	0	0	0	0	0	0	0	0
> 650% ≤ 1250%	0	0	0	0	0	0	0	0	0	0	0	0
Total	**29**	**3**	**0**	**0**	**29**	**3**	**0**	**0**	**0**	**0**	**0**	**0**
Internal Assessment Approach												
≤ 10%	587	5	0	0	587	5	0	0	0	0	0	0
> 10% ≤ 20%	1 328	18	0	0	1 328	18	0	0	0	0	0	0
> 20% ≤ 50%	732	23	0	0	732	23	0	0	0	0	0	0
> 50% ≤ 100%	0	0	0	0	0	0	0	0	0	0	0	0
> 100% ≤ 250%	0	0	0	0	0	0	0	0	0	0	0	0
> 250% ≤ 650%	0	0	0	0	0	0	0	0	0	0	0	0
> 650% ≤ 1250%	0	0	0	0	0	0	0	0	0	0	0	0
Capital deduction	0	0	0	0	0	0	0	0	0	0	0	0
Total	**2 647**	**46**	**0**	**0**	**2 647**	**46**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**3 012**	**89**	**0**	**0**	**3 012**	**89**	**0**	**0**	**0**	**0**	**0**	**0**
Total previous year	**2 532**	**56**	**1**	**0**	**2 534**	**56**	**0**	**0**	**0**	**0**	**0**	**0**

Figure 34: Total retained or purchased securitization positions and capital requirements, broken down by approach used and by risk weight band (Article 449 (o) (i) CRR).

The final table on securitization positions shows the resecuritization positions before and after collateral. All guarantors for LBBW's resecuritization positions have top ratings without exception.

EUR million Type of collateral	Banking book	Trading book
Resecuritization positions before collateralization	4 277	0
Collateralization using guarantees	4 276	0
of which guarantors with AAA to A ratings	4 276	0
of which guarantors with ratings below A	0	0
Collateralization using other positions	0	0
Resecuritization positions after collateralization	1	0

Figure 35: Total retained or purchased resecuritization positions before and after inclusion in hedging (Article 449 (o) (ii) CRR).

The decline in resecuritization positions before collateralization (previous year EUR 5 347 million) results chiefly from current repayments in the portfolio. Currency fluctuations may have an additional impact on the EUR equivalent value of the portfolio.

LBBW did not have any non-performing or past due loans or losses coming within Article 449 (p) CRR. Furthermore, there are no trading book risk positions that were securitized in accordance with Article 449 (q) CRR.

LBBW did not provide any implicit support (Article 248 CRR) in the 2016 reporting period.

11 Exposure from equities not included in the trading book. (Article 447 CRR)

In line with risk and return considerations, LBBW's strategic equity investments help the Bank implement its operating policy, thus strengthening LBBW's market position in terms of target customers and key products. By outsourcing market, staff and operating functions to subsidiaries and associated companies, this ensures ideal utilization of market potential.

The same profitability requirements generally apply to LBBW's own strategic investment business as for its front offices.

In addition to the equity investments that are consolidated for regulatory purposes or deducted from liable equity capital (see Chapter 3 »Scope«, Figure 1), LBBW also has further equity investments in its banking book with own funds backing in accordance with the IRB approach or, if grandfathering applies, the CRS approach.

For regulatory purposes, LBBW distinguishes when using the IRB approach between investment positions that are part of a portfolio managed in terms of probability of default (PD/LGD method) and those handled using the simple risk weight approach. Investment positions that were already held before 1 January 2008 are measured in line with the CRS approach under grandfathering arrangements (protection of pre-existing legal rights) (see »Own funds requirements«, page 21).

On the date of acquisition, equity investments which are not consolidated are measured at historical cost (including transaction costs) and subsequently remeasured at fair value in line with IFRS. For listed companies, the respective market price as at the balance sheet date is used for valuation. The fair value of non-listed companies is calculated on the basis of available multi-year forecasts using the income capitalization approach or the discounted cash flow method (DCF method) in line with the principles of Institut der Wirtschaftsprüfer (IDW). If the capitalized income method or the DCF method is not appropriate, valuations are performed on the basis of net asset value (NAV) or transaction value or in relation to the equity share. If the carrying amount of an equity investment pursuant to HGB is less than EUR 250,000, the existing valuation is retained.

Carrying amounts of investment positions in the banking book.

The following table breaks down the non-consolidated investment positions by type and tradability and shows the balance sheet value recorded in the consolidated financial statements and the fair value. For listed companies the fair value is always equivalent to the market price. If a fair value has not been calculated for internal or external purposes, then the carrying amount is used.

EUR million Groups of investment instruments	Carrying amount under IFRS	Fair value	Stock-market value
Equity investments in banks	**600**	**607**	**395**
of which exchange-traded	395	395	395
of which not exchange-traded	205	212	0
Equity investments in financial institutions	**225**	**225**	**0**
of which exchange-traded	0	0	0
of which not exchange-traded	225	225	0
Equity investments in other companies	**259**	**262**	**22**
of which exchange-traded	22	22	22
of which not exchange-traded	237	240	0
Affiliated companies – banks	**7**	**7**	**0**
of which exchange-traded	0	0	0
of which not exchange-traded	7	7	0
Affiliated companies – financial institutions	**21**	**24**	**0**
of which exchange-traded	0	0	0
of which not exchange-traded	21	24	0
Affiliated companies – other companies	**688**	**651**	**0**
of which exchange-traded	0	0	0
of which not exchange-traded	688	651	0
Investment funds	**207**	**207**	**0**
of which exchange-traded	0	0	0
of which not exchange-traded	207	207	0
Total	**2 007**	**1 983**	**417**
Total previous year	**2 147**	**2 157**	**476**

Figure 36: Carrying amounts of investment positions in the banking book (Article 447 (b) and (c) CRR).

The following table sets out realized and unrealized gains and losses from equity investments outside the supervisory consolidation base in line with IFRS accounting for the reporting period.

Unrealized gains from investment instruments could be included as Common Equity Tier 1 capital at 60% in 2016, according to the transition provisions pursuant to Article 468 CRR.

EUR million	31 Dec. 2016	31 Dec. 2015
Realized gains (+) and losses (–) from sale/liquidation	**88**	**114**
Unrealized gains (+) and losses (–) from investment instruments	**14**	**165**
of which amounts recognized in capital under CRR:	**9**	**66**
in Tier 1 capital	9	66
in Tier 2 capital	0	0

Figure 37: Realized and unrealized gains/losses from investment positions (Article 447 (d) and (e) CRR).

12 Use of Internal Market Risk Models. (Article 455 CRR).

LBBW defines market price risks as potential losses resulting from adverse changes in market prices or factors influencing prices. This includes share prices, interest rates, exchange rates, credit spreads and commodity prices as well as volatility or correlations as market parameters.

LBBW's market price 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).

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

The integrated performance and risk management is supplemented by stressed value-at-risk calculations. This is based on an observation period which covers a significant financial stress period. This observation period is determined once every quarter for the CRR portfolio relevant for prudential disclosures containing all the trading book positions of LBBW (Bank) excluding investment funds. In addition, the relevant observation period for stressed value-at-risk is calculated on a weekly basis. This is also calculated for the LBBW Group. This second calculation simulates the increase in risk under stress during the relevant period for the Group. This figure is also incorporated in the scenarios applying across all risk categories and is thus relevant for risk-bearing capacity.

Internal model in accordance with CRR.

LBBW calculates value-at-risk (VaR) from market price risks at a confidence level of 99% and a holding period of ten days. A 95% confidence level and a one-day holding period are applied for internal management purposes. This calculation is based on a procedure involving a Monte Carlo simulation. In most cases, the simulation enables LBBW not only to simply approximate market-induced value fluctuations but to measure them fully, even for complex transactions. Historical time series for the preceding 250 days are weighted equally in covariance estimates. The abovementioned stressed value-at-risk is also included in the calculation of regulatory capital cover. LBBW's market price risk model is also uniformly used for all sub-portfolios and for the Group's subsidiaries that are integrated in Group-wide standardized management based on the value-at-risk risk indicator.

Trading portfolios and the strategic interest rate position of the banking book can be affected by potentially detrimental developments in market interest rates. In addition to parallel shifts and turns in the interest curve, basic risks arising from movements in the relevant fixed-income markets relative to each other are also included in risk calculations. Basic risks depend very heavily on the correlation of the underlying interest curves.

Credit spread risks from securities are measured on the basis of the general and specific issuer risk. For this purpose, trading book and banking book transactions that are sensitive to creditworthiness are mapped onto rating- and sector-dependent interest curves. This is carried out for all transactions executed through the trading systems (in particular fixed-income securities). In addition, the specific issuer risk for securities is calculated by reference to the spread (and spread volatility) of individual counterparties.

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 and the residual maturities for the specific risk.

Credit spread risks account for a substantial share of LBBW's market price risk. Equity risks, along with currency and commodity risks, are less significant for LBBW than interest rate and spread risks. Commodity risks also include risks from precious metals and notes and coins portfolios, which LBBW holds to only a limited degree.

LBBW's internal risk model has been approved by the competent authority for general interest rate and equity risks including option price risks in the form of volatility risks. The aforementioned CRR portfolio forms the basis for calculating own funds backing requirements.

Backtesting and validation.

The VaR calculated in the risk model constitutes a statistical forecast of the portfolio losses from market price risks expected over the individual time periods. In order to verify the suitability of the model, it is necessary to test the quality of forecasts. Backtesting assumes particular importance in the validation program. It performs a comparison against the actual portfolio changes and focuses not only on the VaR forecast but also includes the entire distribution forecasts. In line with regulatory requirements the procedure is based on portfolio changes excluding new and intraday transactions, net interest income and fees and commissions (clean profit/loss (P/L)) and on portfolio changes excluding fees and commissions (dirty P/L) derived directly from the economic P/L.

The CRR portfolio, which comprises trading transactions whose own funds backing for general equity and interest rate risks takes place via the internal risk model, does not show any outliers for the clean P/L. On the basis of the dirty P/L two outliers were recorded for the CRR portfolio in 2016. The outliers were each caused by changes to a credit valuation adjustment that is calculated on a monthly basis. This means that they do not indicate any deficiencies in the forecasting quality of the internal model. No additional equity is required for model outliers for regulatory purposes as an impact on the weighting factor of the internal model only materializes if five or more outliers occur.

In addition to backtesting, LBBW's risk model is subject to an extensive validation program in which potential model risks in the stochastics of the market factors (including distribution model, risk factor selection and mapping), in the implemented measurement models and in the relevant market data (especially market data calibrated within the Bank) are identified and their materiality assessed using customized validation analyses. The validation analyses are performed by the Risk Model Validation organizational unit within Group Risk Control, which is independent of model development. The analyses are guided by the materiality of the model risks and performed at regular intervals (at least twice yearly) and on an ad hoc basis in the event of material structural changes occurring in the model design, on the market or in the portfolio composition. Should the backtesting or validation analyses indicate material model risks, they are made transparent to all parties integrated in the market risk management process (model developers, model users (operational market risk controlling)) and recipients of the model results (Risk Committee, trading) so as to enable the efficient initiation of the necessary model optimization measures. Model changes are carried out according to the model change policy and communicated to the regulatory authorities.

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 are 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 as historical input. These scenarios are applied to the portfolio on a weekly basis together with the defined market data changes and any changes in the present values reported as stress test results.

At the moment, scenario no. 14 (extreme increase in credit spreads) in the Bundesbank's annual stress test survey and the scenario of the financial market crisis have the greatest relevance for LBBW's trading book.

The shifted market factors for the most significant stress scenarios for LBBW's CRR portfolio as at 31 December 2016 are shown in the following table.

Bundesbank scenario no. 14	
Extreme increase in credit spreads (in BP)	AAA + 30/AA + 50/A + 100/BBB + 200/BB + 500/B + 1000/CCC + 1500
Increase in credit spreads banks EUR A	
Increase in bond yield curve EUR A (in BP)	A + 150

Figure 38: Stress test scenarios (Article 455 (a) (iii) CRR).

Allocation of positions to the trading book.

Under Article 4 (1) (85) and (86) CRR, the decisive criterion for allocating financial instruments and commodities to the trading book is 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. The partial or full closure of a market risk position by means of a counter-transaction (for the purpose of generating a short-term different in present value) is equivalent to a resale. Short term is defined as a period of up to one year.

The internal criteria of Landesbank Baden-Württemberg (including foreign branches) are the central document for the allocation of the aforementioned positions for the purpose of delineating the trading book in accordance with Articles 102 et seq. CRR). These criteria describe the general allocation criterion as well as specific details with respect to the business portfolio of LBBW (Bank), the rules for shifts between the banking book and the trading book as well as the technical methods for determining the positions.

Correct allocation is regularly checked by means of a review of the actual holding period of the financial instruments and commodities as well as through procedures for tracking the book allocations of positions in regulatory reporting and in risk control in which VaR is calculated on the basis of the internal risk model.

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 by Risk Control. Risk Control also applies consistent standards and processes for performing an independent price verification (IPV) process, in which trading prices are monitored on an independent basis.

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

Adjustments in accordance with Article 105 CRR (prudent valuation).

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

Further disclosures on the use of non-observable parameters can be found in the »Notes on financial instruments« in the annual report.

Own funds requirements for market risk positions.

The following table shows the own funds requirements for market price risks broken down by type of risk. This shows that the internal risk model for regulatory purposes is only applied to the general interest rate and equity risk including option price risks. In contrast to the following illustrations, the »internal model« column shows the average for the past 60 days multiplied by the stipulated factor of 3.4 (Article 364 (1) CRR) rather than the year-end figure.

EUR million	Own funds requirement	
	Standard method	Internal model
Interest rate risk	145	308
of which general and special price risk for net interest position	145	308
of which general price risk for net interest position	0	308
of which special price risk for net interest position	145	0
of which special price risk for securitization positions in trading book	0	0
of which special price risk in correlation trading portfolio	0	0
Equity position risk	4	113
of which general equity position risk	0	113
of which special equity position risk	4	0
Risk exposure in UCI	21	0
of which UCI that invest exclusively in traded bonds	14	0
of which UCI that invest exclusively in equity instruments or mixed instruments	6	0
Currency risk	70	0
Risks from commodities positions	13	0
Total	**253**	**421**
Total previous year	**204**	**372**

Figure 39: Own funds requirements for market risk positions (Article 455 (e) CRR).

The following chart shows a comparison between the potential risk amounts calculated daily at the close of business with a holding period of one working day and the changes in value of the CRR portfolio calculated at the close of business. In December 2016, there was a temporary exaggerated risk value in equity risk on options with a very short term to maturity.

Clean backtesting CRR portfolio for the period 5 Jan. – 30 Dec. 2016 in EUR million.

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

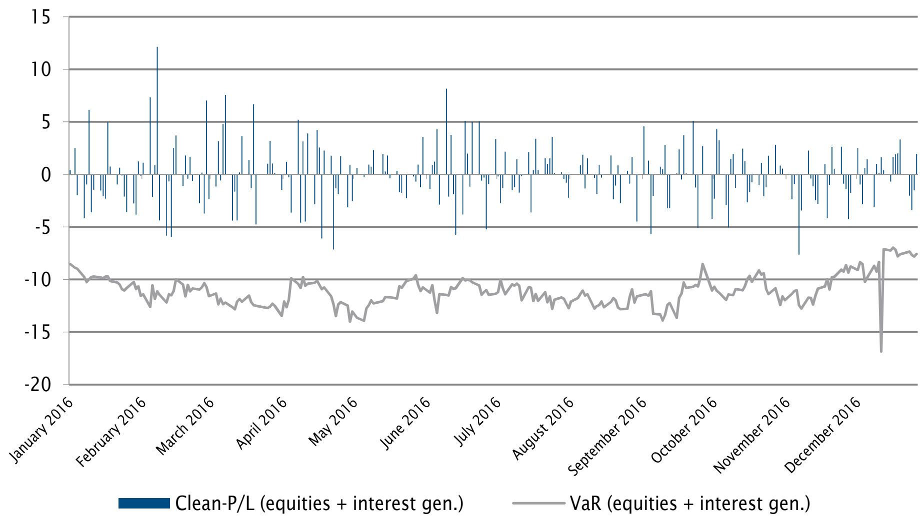

Figure 40: Value at risk of the CRR portfolio under the Internal Model Method and hypothetical buy-and-hold losses (Article 455 (g) CRR).

Dirty backtesting CRR portfolio for the period 5 Jan. – 30 Dec. 2016 in EUR million.

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

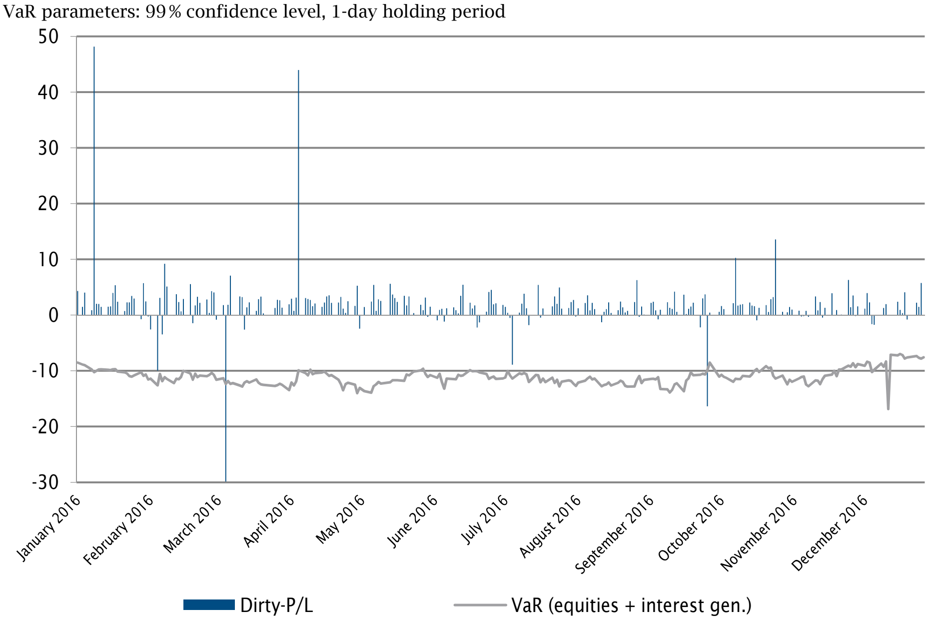

Figure 41: Value at risk of the CRR portfolio under the Internal Model Method and actual portfolio changes excluding commissions and fees (Article 455 (g) CRR).

The following table sets out the normal and the stress VaR for the trading book (99% / ten days) by risk type at the Bank level plus the specific interest rate and equity position risk as well as the currency and commodity risk.

EUR million	Normal VaR in the reporting period				Stress VaR in the reporting period			
Trading book portfolio according to internal model	Normal VaR at the end of the reporting period	Highest value	Lowest value	Average value for reporting period	Stress VaR at the end of the reporting period	Highest value	Lowest value	Average value for reporting period
Interest rate risks	10	32	9	16	73	112	73	91
Equity risks	6	22	3	6	9	17	5	10
Currency and commodity risks	3	5	1	3	7	16	1	5
Total trading book	**17**	**35**	**15**	**23**	**70**	**111**	**70**	**90**
Total trading book previous year	**23**	**32**	**17**	**24**	**80**	**130**	**69**	**97**

Figure 42: Overview of VaR for the trading book portfolios (Article 455 (d) (i) and (ii) CRR).

There has been a reduction in VaR for the trading book compared with the previous year.

13 Exposure to interest rate risk on positions not included in the trading book. (Article 448 CRR)

As a matter of principle, all new customer exposures are funded on a matching maturities basis with minimum delay. The Group Board of Managing Directors accepts further strategic positions in the light of current market conditions on the basis of this business policy. 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 banking book are included in measurements in accordance with LBBW's own procedures for measuring interest rate risks. All those related to individual transactions and/or portfolios are measured daily, with margin or retail-oriented business entered in calculations in the form of aggregated items when the portfolio is updated monthly.

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 banking 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 95% and holding period of one trading day). The VaR identified on this basis expresses the potential loss which with 95% probability will not be exceeded within a trading day. The calculated risks of the banking book are taken into account in risk-bearing capacity on the basis of the relevant parametrization.

In addition to daily reporting, further stress and worst-case scenarios are calculated on a weekly basis and made available for further analysis. 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.

Interest rate risks in the banking book.

Under regulatory requirements, the effect of an interest-rate shock on the economic value must be disclosed in the banking book. This involves a parallel shift in the yield curve by + 200 basis points (rising interest) upwards and by – 200 basis points (falling interest) downwards. The interest rate of 0% constitutes a floor. Due to the continued fall in the EUR interest rate level and the existing floor, the imbalance between a positive and a negative interest shock persists. The decline over the previous year was due to an increase in equity and liabilities sensitive to interest rates.

The following table shows the changes in net present value, broken down into the main currencies.

EUR million	Changes in present value due to interest rate shock	
Currency	Positive interest rate shock + 200 basis points	Negative interest rate shock – 200 basis points
CHF	– 31	– 1
EUR	– 561	– 12
GBP	– 35	9
JPY	0	0
USD	– 163	119
Other	1	– 1
Total [1]	**– 764**	**– 215**
Total previous year	**– 1 124**	**– 60**

Figure 43: Interest rate risks in the banking book (Article 448 (b) CRR).

1) Calculated in accordance with BaFin Circular 11/2011.

14 Operational risk. (Article 446 CRR)

In accordance with regulatory requirements, operational risks are defined 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.

The LBBW Group has a comprehensive system for managing and controlling operational risks. On the basis of a dual overall approach, firstly an independent, centralized organizational unit within the Group Risk Control division is tasked with further developing and implementing the methods and tools used by OpRisk Controlling. Secondly, in the LBBW Group, the execution of the processes implemented for the management of operational risks is mainly the responsibility of the individual divisions and subsidiaries.

The central parameters for handling operational risks are enshrined in the risk strategy and policy for operational risks as well as in the work rules.

One of the main goals of the management and control activities is to identify operational risks at an early stage and to reduce or avoid the resulting losses by implementing the appropriate measures. Where possible, risk should be minimized. The management of measures, the internal control system and an open risk culture play an important role in the coordination of operational risks.

Internal and external loss event data, the annual risk inventory (self-assessment and scenario analysis) and risk indicators are used to identify the risk situation and to report regularly to the decision-makers. Furthermore, there is a constant exchange of data and experience between various persons in charge of interfaces.

The overall exposure to operational risks is aggregated within the risk-bearing capacity concept on the basis of operational value-at-risk (OpVaR) in the LBBW Group's limit system.

The standard approach under CRR is applied to determine own fund requirements for regulatory purposes. The own funds required came to EUR 377 million (previous year: EUR 383 million) as at 31 December 2016.

Further information on operational risks can be found in the Chapter »Operational risks« in the report on risks and opportunities of the LBBW Group.

15 Asset encumbrance. (Article 443 CRR)

Asset encumbrance as defined in Guideline 2014/03[1] issued by the European Banking Authority (EBA) deals with on and off-balance-sheet assets. Under the EBA definition, an asset is encumbered if it is used as collateral or is the subject of any form of agreement on the provision of collateral, the securing or grant of loan collateral for a transaction from which it cannot be withdrawn without prior approval.[2] The value of encumbered assets is therefore fundamentally influenced by a bank's business model.

A large part of the encumbered assets result from LBBW's function as the clearing bank for the savings banks. This particularly causes an increase in encumbered assets allocated to the derivatives, transit loans and also repo transactions category. LBBW has encumbered (on-balance-sheet) assets of EUR 100.6 billion (previous year: EUR 99.6 billion) and unencumbered assets of EUR 152.1 billion (previous year: EUR 176.8 billion).[3] The encumbered on-balance-sheet assets primarily relate to the following positions:

- Covered bonds: LBBW issues covered bond in accordance with German covered bond legislation. Accordingly, 29% (previous year: 20%) of the encumbered assets are for covered bonds. The figures include the statutory, the rating-related and (for the first time this year) the voluntary surplus cover. This is also a key reason for the increase in the share of covered bonds of total encumbered assets and therefore impacts on LBBW's asset encumbrance ratio.
- Repos: LBBW uses bilateral and triparty repo markets such as Eurex GC Pooling and Fixed Income Clearing Corporation (FICC) for funding purposes. A total of 3% (previous year: 9%) of the encumbered on-balance-sheet assets are used for repos. The relief results from the fist-time application of netting with central counterparties. LBBW transacts repos under national and international repo contracts (global master repurchase agreements and global master securities lending agreements).
- Derivatives: 29% (previous year: 27%) of the encumbered assets are related to OTC derivatives. Positive market values under derivatives particularly result in an encumbrance as they are reported within gross asset encumbrance (without netting of the corresponding liability position). LBBW transacts derivatives under national and international agreements (German global contract and International Swaps and Derivatives Association) and with corresponding credit support annexes.
- Transit loans: LBBW passes on loans provided by development banks to the savings banks. These transit loans are classed as encumbered assets. Encumbered transit loans account for 24% (previous year: 24%) of the encumbered assets.

1) »Guideline on disclosure of encumbered and unencumbered assets.«
2) See Commission Implementing Regulation (EU) 2015/79 of 18 December 2014, Chapter 1.7 for a definition.
3) This disclosure of encumbered assets is based on the median figures of the four reporting qualifying dates.

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

EUR million	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of unencumbered assets	Fair value of unencumbered assets
Assets of the reporting bank	**100 563**		**152 053**	
Own funds instruments	1	1	865	1 054
Bonds	12 780	13 031	25 112	25 382
Other assets	22 052		15 568[1)]	

Figure 44: Assets.

1) This item primarily comprises exchange-traded derivatives as well as controlling equity investments, property, plant and equipment and cash and cash equivalents (previous year: EUR 16.8 billion).

LBBW has received collateral worth a total of EUR 41.2 billion (previous year: EUR 51.5 billion); of this, EUR 20.7 billion (previous year: EUR 25.7 billion) has been reused. The reused collateral is particularly related to repo and securities lending business.

EUR million	Fair value of encumbered collateral received or own bonds issued	Fair value of collateral received or own bonds issued suitable for encumbrance
Collateral received by the reporting bank	**20 660**	**20 504**
Own funds instruments	299	950
Bonds	20 422	19 995
Other collateral received	0	0
Own bonds issue excluding own covered bonds or asset-backed securities	**0**	**1 542**

Figure 45: Collateral received.

EUR million	Matching liabilities, contingent liabilities or lent securities	Assets, collateral received and other own bonds issued except covered bonds and encumbered asset-backed securities
Carrying amount of selected financial liabilities	**91 898**	**106 160**

Figure 46: Sources of encumbrance.

16 Leverage ratio. (Article 451 CRR)

Disclosure of the leverage ratio as at 31 December 2016 is based on the stipulations of the Commission Delegated Regulation (EU) No. 2015/62 of 10 October 2014 amending the CRR with regard to the leverage ratio. The capital measure is based on Tier 1 capital taking into account the transitional provisions (phase-in) (Article 499 (1) (b) CRR).

1 Description of procedures to monitor the risk of excessive indebtedness	Description under LRQua 1
2 Description of factors which had an impact on the disclosed leverage ratio during the period under review	Description under LRQua 2

Figure 47: Disclosure of qualitative elements.

LRQua 1: Description of procedures to monitor the risk of excessive indebtedness.

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.

LRQua 2: Description of factors which had an impact on the disclosed leverage ratio during the period under review.

The leverage ratio on the basis of the CRR transitional provisions (phase-in) came to 5.0% at 31 December 2016 (as at 31 December 2015: 5.3%). The decline in the debt ratio was caused by an increase in the leverage ratio exposure (phase-in) from EUR 242 357 million as at 31 December 2015 to EUR 255 925 million as at 31 December 2016 (+ EUR 13 568 million).

The increase in the leverage ratio exposure over the previous year is attributable particularly to the expansion of other on-balance-sheet transactions with central governments and central banks.

EUR million		Figures to be used
1	Total assets according to the published accounts	243 620
2	Adjustment for corporates that are consolidated for accounting purposes but do not form part of the regulatory basis of consolidation.	– 2 089
3	(Adjustment for fiduciary assets recognized in the balance sheet according to the applicable accounting provisions but which under Article 429 (13) of Regulation (EU) No. 575/2013 are excluded from the leverage ratio total exposure measure)	-
4	Adjustment for derivative financial instruments	– 6 268
5	Adjustment for securities financing transactions (SFTs)	4 690
6	Adjustment for off-balance-sheet items (i.e. conversion of off-balance-sheet exposures into credit equivalent amounts)	16 719
EU-6a	(Adjustments for intra-group risk exposures which are excluded from the leverage ratio total exposure measure in accordance with Article 429 (7) of Regulation (EU) No. 575/2013)	-
EU-6b	(Adjustments for risk exposures which are excluded from the leverage ratio total exposure measure in accordance with Article 429 (14) of Regulation (EU) No. 575/2013)	-
7	Other adjustments	– 747
8	**Leverage ratio total exposure measure**	**255 925**

Figure 48: Comparison between balance sheet and overall exposure value measurement.

EUR million		Risk exposure values of the CRR leverage ratio
On-balance-sheet risk exposures (excluding derivatives and SFTs)		
1	On-balance-sheet items (excluding derivatives, SFTs and fiduciary assets but including collateral)	199 763
2	(Asset amounts deducted in the calculation of Tier 1 capital)	– 895
3	Total of on-balance-sheet risk exposures (excluding derivatives, SFTs and fiduciary assets) (total of rows 1 and 2)	198 868
4	Replacement value of all derivatives transactions (i.e. excluding eligible additional contributions received in cash)	9 444
5	Premiums for the potential future replacement value with regard to all derivatives transactions (mark-to-market measurement method)	8 496
EU-5a	Risk exposure valued in accordance with the Original Exposure Method	-
6	Addition of amount of collateral furnished in connection with derivatives that is deducted from total assets according to the applicable accounting standard	
7	(Deductions from receivables for additional contributions in cash for derivatives transactions)	– 6 519
8	(Excluded CCP portion of customer-cleared trading positions)	– 752
9	Adjusted effective nominal value of written credit derivatives	9 732
10	(Netting of adjusted effective nominal values and deduction of premiums for written credit derivatives)	– 5 952
11	Total risk exposures from derivatives (total of rows 4 to 10)	14 448
Risk exposures from securities financing transactions (SFTs)		
12	Gross assets from SFTs (without recognition of netting) after adjustment for transactions booked as sales	23 199
13	(Netted amounts of cash liabilities and receivables from gross assets from SFTs)	– 1 999
14	Counterparty default risk exposures for SFT assets	4 690
EU-14a	Divergent treatment of SFTs; counterparty default risk exposure in accordance with Article 429b (4) and Article 22 of Regulation (EU). No. 575/2013	-
15	Risk exposures from transactions realized as an agent	-
EU-15a	(Excluded CCP portion of customer-cleared SFT risk exposures)	-
16	Total of risk exposures from securities financing transactions (total of rows 12 to 15)	25 890
Other off-balance-sheet risk exposures		
17	Off-balance-sheet risk exposures at their gross nominal value	47 695
18	(Adjustments for the conversion into credit equivalent amounts)	– 30 976
19	Other off-balance-sheet risk exposures (total of rows 17 and 18)	16 719
(On-balance-sheet and off-balance-sheet) risk exposures which may be excluded pursuant to Article 429 (14) of Regulation (EU) No. 575/2013		
EU-19a	(On-balance-sheet and off-balance-sheet) intra-group risk exposures (individual basis) which are excluded pursuant to Article 429 (7) of Regulation (EU) No. 575/2013	-
EU-19b	((On-balance-sheet and off-balance-sheet) risk exposures which may be excluded pursuant to Article 429 (14) of Regulation (EU) No. 575/2013)	-
Equity and leverage ratio total exposure measure		
20	Tier 1 capital	12 822
21	Leverage ratio total exposure measure (total of rows 3, 11, 16, 19, EU-19a and EU-19b)	255 925
Leverage ratio		
22	Leverage ratio	5.0%
Application of transitional provisions and value of derecognized fiduciary items		
EU-23	Transitional provision chosen for the definition of the capital measure	Phase-in
EU-24	Amount of fiduciary assets removed from the balance sheet in accordance with Article 429 (11) of Regulation (EU) No. 575/2013	-

Figure 49: Uniform disclosure schema for the leverage ratio.

EUR million		Risk exposure values of the CRR leverage ratio
EU-1	**Total of on-balance-sheet risk exposures (excluding derivatives, SFTs and excluded risk exposures), of which:**	**193 038**
EU-2	**Risk exposures in the trading book**	**18 835**
EU-3	**Risk exposures in the trading book, of which:**	**174 203**
EU-4	Covered bonds	1 365
EU-5	Risk exposures treated as risk exposures towards sovereigns	47 182
EU-6	Risk exposures to regional authorities, multilateral development banks, international organizations and public-sector bodies which are not treated as risk exposures towards sovereigns	415
EU-7	Banks	33 510
EU-8	Collateralized by real estate liens	18 069
EU-9	Risk exposures from retail business	5 388
EU-10	Corporates	57 882
EU-11	Defaulted exposures	1 100
EU-12	Other risk exposures (e.g. equity investments, securitizations and other assets that are not loan commitments)	9 291

Figure 50: Breakdown of balance-sheet risk exposures (excluding derivatives, securities financing transactions (SFTs) and excluded risk exposures).

Abbreviations.

ABCP	Asset backed commercial paper
ABS	Asset backed security
AT1	Additional Tier 1 Capital
BaFin	Bundesanstalt für Finanzdienstleistungsaufsicht
BCBS	Basel Committee on Banking Supervision
BelWertV	Beleihungswertermittlungsverordnung
CCF	Credit conversion factor
CCP	Central counterparty
CDO	Collateralized debt obligation
CDS	Credit default swap
CET1	Common Equity Tier 1
CLN	Credit linked note
CLO	Credit loan obligation
CMBS	Commercial mortgage backed security
COREP	Common solvency ratio reporting
CP	Commercial paper
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
CSA	Credit support annex
DCF	Discounted cash flow
DRV	Deutscher Rahmenvertrag (German global agreement)
DSGV	Deutscher Sparkassen- und Giroverband (German Savings Banks Finance Group)
EAD	Exposure at default
EBA	European Banking Authority
ECAI	External Credit Assessment Institution
EL	Expected loss
EAA	European Economic Area
FICC	Fixed Income Clearing Corporation
FINREP	Financial Reporting
GMRA	Global master repurchase agreement
GMSLA	Global master securities lending agreement
HGB	Handelsgesetzbuch (German Commercial Code)
IAA	Internal Assessment Approach
ICRE	Rating for international commercial real estate
IDW	Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany)
IFRS	International Financial Reporting Standards
IMM	Internal Model Method
IPV1	Independent price verification
IRBA	Internal Ratings Based Approach
ISDA	International Swaps and Derivatives Association
KKR	KundenKompaktRating
SME	Small and medium-sized enterprises
CRSA	Credit Risk Standard Approach
LGD	Loss given Default
UCI	Undertakings for collective investment
OTC	Over the counter
PD	Probability of Default
RCP	Risk classification procedure
RMBS	Residential mortgage backed security
SAG	Sanierungs- und Abwicklungsgesetz (German Recovery and Resolution Act)
SIC	Standing Interpretations Committee
SKS	Sparkassen KundenScoring
SPC	Special purpose company
SPV	Special purpose vehicle
T2	Tier 2 capital
VaR	Value-at-risk
CCP	Central counterparty

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