Regulatory Disclosure Report for the 2021 financial year

of Aareal Bank Group

Aareal

YOUR COMPETITIVE ADVANTAGE.

Regulatory Disclosure Report for the 2021 financial year

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Preface

In addition to the details contained in the Aareal Bank Group Annual Report, this Regulatory Disclosure Report explains the business policy standards and facts that are relevant for assessing our situation from a regulatory perspective. Besides providing a qualified description of the manner in which our risks are identified, evaluated, weighted and reviewed, the Regulatory Disclosure Report also contains detailed quantitative statements about the sizes of the individual areas.

The Regulatory Disclosure Report implements the requirements in accordance with part 8 of Regulation (EU) 575/2013 (Capital Requirements Regulation – "CRR"). The existing disclosure requirements are specified by the Commission Implementing Regulation (EU) 2021/637, published in March 2021.

Aareal Bank Group is classified as a significant institution within the scope of the Single Supervisory Mechanism (SSM) and is therefore subject to direct supervision by the European Central Bank (ECB).

Due to its total assets of more than € 30 billion, Aareal Bank Group is classified as a large institution in accordance with Article 4 No. 146 lit. d) of the CRR.

The Regulatory Disclosure Report is prepared in accordance with Bank-internal provisions and procedures stipulated in writing in order to fulfil disclosure requirements.

In line with the requirements of Article 431 (3) of the CRR, Aareal Bank Group has created formal procedures through disclosure guidelines, which ensure that the disclosure requirements are met. The disclosure guidelines of Aareal Bank Group contain rules on

- the scope and content of the disclosure requirements,
- the principles of disclosure, in particular on appropriateness, structure of the report, locations, reporting date and frequency,
- determining the materiality, confidential information and trade secrets,
- responsibilities and organisational units involved,
- the structure of the disclosure process,
- the data sources and relevant IT systems and
- the review of the disclosure procedure.

The specific structure and implementation of the disclosure requirements is described in detail in the supplementary documents.

Aareal Bank Group has implemented comprehensive control mechanisms as part of its disclosure process, which are used to review the disclosed data for completeness, accuracy, and appropriateness. These control activities associated with the disclosure process are an integral component of Aareal Bank Group's Internal Control System (ICS). Besides the ongoing control in the course of the creation process, the control activities include an annual, central review of the following aspects:

- appropriateness of the details,
- content-related design of the disclosures,
- frequency of the disclosures,
- new regulatory requirements and adjustments.

The Regulatory Disclosure Report and the disclosure guidelines are approved by the Management Board of Aareal Bank AG.

In addition, compliance with the disclosure requirements is regularly reviewed by Internal Audit of Aareal Bank Group.

Overall, the Regulatory Disclosure Report is subject to control mechanisms comparable to those used in the management report for financial reporting.

In accordance with the legal requirements, the Regulatory Disclosure Report does not require a qualified audit opinion and is therefore not audited.

The Regulatory Disclosure Report is published pursuant to Article 434 (1) of the CRR on the Aareal Bank AG website, under the menu item “Investor Relations”.

Aareal Bank AG publishes the Regulatory Disclosure Report on a quarterly basis. The scope of the information to be disclosed as at the respective reporting dates is based on the requirements set out in Article 433a of the CRR.

Summary

Aareal Bank AG, whose registered office is in Wiesbaden, Germany, is the parent institution of the Group (LEI code EZKODONU5TYHW4PP1R34).

Due to the use of the waiver option (section 2a (1) sentence 1 of the German Banking Act (Kreditwesengesetz – “KWG”) in conjunction with Article 7 (3) of the CRR), Aareal Bank complies with the requirements of parts 2, 3, 4, 6, 7 and 8 of the CRR at a Group level.

The details we have published in this Regulatory Disclosure Report are based on both the Credit Risk Standard Approach (CRSA) and the Advanced IRB Approach (Advanced Internal Ratings-Based Approach – AIRBA). We only mention the disclosure requirements explicitly relevant for us.

As at the reporting date, Aareal Bank holds no securitisation exposures in its portfolio, so that the disclosure requirements pursuant to Article 449 of the CRR shall not apply. In addition, the transitional provisions, pursuant to Article 473a of the CRR, to mitigate the impact of the introduction of IFRS 9 on regulatory capital requirements will not be applied. Accordingly, the obligation to provide additional disclosures (as specified in detail in EBA guidelines EBA/GL/2018/01) is waived.

Since the ECB does not classify Aareal Bank Group as a Global Systemically Important Institution (G-SII) on the basis of Delegated Regulation (EU) 1222/2014, the disclosure requirements pursuant to Article 437a of the CRR (“Disclosure of own funds and eligible liabilities”) do not apply.

Minor differences may occur regarding the figures stated, due to rounding.

The Regulatory Disclosure Report includes all the requirements of the CRR. References to our Annual Report are only made for additional information beyond the disclosure requirements.

Overview of Regulatory Key Metrics

The table EU KM1 provides an overview of the regulatory key metrics in accordance with Article 447 of the CRR. The overview also includes the additional regulatory capital as required by the Supervisory Review and Evaluation Process (SREP).

Due to the first-time disclosure of the Net Stable Funding Ratio (NSFR) and the SREP capital requirements as at 30 June 2021, their disclosure for prior periods is omitted.

EU KM1: Key metrics

		a	b	c	d	e
€ mn		31 Dec 2021	30 Sep 2021	30 Jun 2021	31 Mar 2021	31 Dec 2020
	Available own funds					
1	Common Equity Tier 1 (CET1) capital	2,322	2,225	2,298	2,248	2,286
2	Tier 1 (T1) capital	2,622	2,525	2,598	2,548	2,586
3	Own funds	3,016	2,945	3,048	3,027	3,396
	Risk-weighted exposure amounts[1]					
4	Risk-weighted exposure amounts (Risk-weighted assets, RWAs)	10,446	10,803	11,981	11,906	12,138
	Capital ratios (as a percentage of risk-weighted exposure amount)					
5	Common Equity Tier 1 ratio (CET1 ratio)	22.23	20.59	19.18	18.9	18.8
6	Tier 1 ratio (T1 ratio)	25.10	23.37	21.69	21.4	21.3
7	Total capital ratio (TC ratio)	28.87	27.26	25.44	25.4	28.0
	Additional own funds requirements to address risks other than the risk of excessive leverage (as a percentage of risk-weighted exposure amount)					
EU 7a	Additional own funds requirements to address risks other than the risk of excessive leverage	2.25	2.25	2.25	–	–
EU 7b	of which: to be made up of CET1 capital	1.27	1.27	1.27	–	–
EU 7c	of which: to be made up of Tier 1 capital	1.69	1.69	1.69	–	–
EU 7d	Total SREP own funds requirements	10.25	10.25	10.25	–	–
	Combined buffer and overall capital requirement (as a percentage of risk-weighted exposure amount)					
8	Capital conservation buffer	2.50	2.50	2.50	2.5	2.5
EU 8a	Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State	–	–	–	–	–
9	Institution-specific countercyclical capital buffer	0.01	0.01	0.01	0.0	0.0
EU 9a	Systemic risk buffer	–	–	–	–	–
10	Global Systemically Important Institution buffer	–	–	–	–	–
EU 10a	Other Systemically Important Institution buffer	–	–	–	–	–
11	Combined buffer requirement	2.51	2.51	2.51	–	–
EU 11a	Overall capital requirements	12.76	12.76	12.76	–	–
12	CET1 available after meeting the total SREP own funds requirements	16.46	14.83	13.42	–	–

[1] The RWAs disclosed in this report do not reflect the RWAs published in the Annual Report, which are based on an RWA estimate, using the revised AIRBA for commercial property lending, based on the European Commission's draft for the European implementation of Basel IV dated 27 October 2021.

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€ mn		a 31 Dec 2021	b 30 Sep 2021	c 30 Jun 2021	d 31 Mar 2021	e 31 Dec 2020
	Leverage Ratio[2]					
13	Total exposure measure	47,724	45,803	45,607	45,049	43,577
14	Leverage Ratio (%)	5.49	5.51	5.70	5.7	5.9
	Additional own funds requirements to address the risk of excessive leverage (as a percentage of total exposure measure)					
EU 14a	Additional own funds requirements to address the risk of excessive leverage	–	–	–	–	–
EU 14b	of which: to be made up of CET1 capital	–	–	–	–	–
EU 14c	Total SREP leverage ratio requirements	3.00	3.00	3.00	–	–
	Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)					
EU 14d	Leverage ratio buffer requirement	–	–	–	–	
EU 14e	Overall leverage ratio requirement	3.00	3.00	3.00	–	–
	Liquidity Coverage Ratio					
15	Total high-quality liquid assets (HQLA) (weighted value – average)	6,643	6,695	7,035	6,988	6,909
EU 16a	Cash outflows – total weighted value	3,080	3,020	3,045	–	–
EU 16b	Cash inflows – total weighted value	472	450	447	–	–
16	Total net cash outflows (adjusted value)	2,607	2,570	2,598	2,651	2,622
17	Liquidity coverage ratio (LCR) (%)	255.42	261.15	271.66	265.02	264.87
	Net Stable Funding Ratio					
18	Total available stable funding	33,011	34,997	34,414	–	–
19	Total required stable funding	27,064	29,807	29,667	–	–
20	NSFR ratio (%)	121.98	117.41	116.00	–	–

[2] Calculation of the Leverage Ratio has changed with the first-time application of the CRR II as at 30 June 2021. As a result, the figures disclosed as of this reporting date cannot be compared to the figures disclosed in columns d and e.

Development of key metrics

Capital ratios and RWA

Compared to the previous disclosure date of 30 September 2021, the capital ratios reported to the supervisory authorities (CET1, T1 and TC ratio) increased by 1.7 percentage points on average. This development was due to the € -357 million decline in RWAs and a simultaneous € 71 million increase in regulatory capital.

The decline in RWAs with a simultaneous increase in new business in the Structured Property Financing segment was mostly driven by quality improvements in the existing commercial property finance portfolio. Since the sum total of the aggregate net foreign exchange position was below the threshold of 2% of own funds, regulatory capital requirements for foreign exchange risk were not determined.

The increase in own funds was largely due to a € 97 million increase in CET1 capital. Amongst other things, this development was attributable to the omission of deductions of impairments recognised during

the course of the year (€ 68 million), the approved application for inclusion of profits and to changes in OCI (€ 31 million).

Leverage Ratio

Compared to 30 September 2021, the leverage ratio only marginally decreased to 5.49 %, which was due to the € 1.921 million increase in the total exposure measure and a simultaneous € 97 million increase in Tier 1 capital. The main driver for the development of the total exposure measure was the increase in deposits with central banks of € 1.559 billion.

Liquidity Coverage Ratio

High-quality liquid assets (HQLA) were at an above-average level in the first and second quarter of 2021. In the third quarter, they decreased by around € 1 billion on average, before rising again to the level of the first two quarters in the fourth quarter.

Net Stable Funding Ratio (NSFR)

Compared to 30 September 2021, the Net Stable Funding Ratio increased by 4.57 percentage points to 121.98 %, which was due to the lower decline in available stable funding (ASF) in relation to required stable funding (RSF). The reduction of ASF resulted from the transfer of a repo into a shorter residual maturity band (around € 2 billion). At the same time, RSF comprising liquid securities was also reduced (by around € 2.6 billion) by a shift to a shorter residual maturity band.

Aareal Bank Group Risk Management

The ability to correctly assess risks, and to manage them in a targeted manner, is a core skill in banking. Accordingly, being able to control risks in all their relevant variations is a key factor for a bank's sustainable, commercial success. This economic motivation for a highly-developed risk management system is continuously increased by extensive regulatory requirements for risk management.

Aareal Bank regularly reviews the appropriateness and effectiveness of its corporate governance systems (including risk governance systems). The regular review of the Risk Appetite Framework and the credit risk strategies carried out during the first quarter of 2021 did not indicate any material adjustments.

The Bank's risk management also incorporates sustainability risks, i. e. ESG risks from the environmental, social and governance areas. Aareal Bank considers sustainability risks to include overarching risks or risk drivers that are influenced directly or indirectly by environmental or social issues, or by monitoring processes. All material sustainability risks were able to be classified as a form of existing financial and non-financial risks. In line with this, they are managed implicitly as part of the risk types under which they are classified. ESG risks have been a component of the regular risk inventory process since 2021. Physical climate risk and transition risk in terms of investor behaviour that have an impact on credit, liquidity, property and reputational risk, were identified as the major short-term risk factors. This is complemented by the major mid- to long-term risk factors of the transition risk in relation to the regulatory environment and technology as well as governance factors such as fraud, sustainability management and data protection. In addition, there is client behaviour as an overarching factor.

With regard to the disclosure requirements pursuant to Article 435 (1) lit. e) and f) of the CRR, the Management Board confirms that Aareal Bank Group's risk management system is appropriate regarding

the risk strategies, which were derived from and are consistent with the business strategy, as well as with the risk profile identified as part of the risk inventory.

In addition to the general information on risk management, this section also addresses the risk management of risk types that are not subject to specific disclosure requirements pursuant to Part 8 of the CRR.

Risk management – scope of application and areas of responsibility

Aareal Bank AG, as the parent entity of the Group, has implemented extensive systems and procedures to monitor and manage the Group's risk exposure.

Uniform methods and procedures are deployed to monitor material risks generally associated with banking business across all entities of Aareal Bank Group. Specific risk monitoring methods have been developed and deployed to suit the relevant risk exposure at the subsidiaries. In addition, risk monitoring for these subsidiaries is carried out at Group level via the relevant control bodies of the respective entity, and equity investment risk controlling.

Overall responsibility for risk management and risk monitoring remains with the Management Board and – in its function of monitoring the Management Board – the Supervisory Board of Aareal Bank AG. The diagram below provides an overview of the responsibilities assigned to the respective organisational units.

Type of risk	Risk management	Risk monitoring
Overall responsibility: Management Board and Supervisory Board of Aareal Bank AG		
Loan loss risks		
Property Financing	Loan Markets & Syndication Credit Risk Credit Portfolio Management Credit Transaction Management Workout	Risk Controlling Second Line of Defence (NPL)
Treasury business	Treasury	Risk Controlling
Country risks	Treasury Credit Risk Credit Transaction Management	Risk Controlling
Interest rate risk in the banking book (IRRBB)	Treasury, Asset-Liability Committee	Risk Controlling Finance & Controlling
Market risks	Treasury, Asset-Liability Committee	Risk Controlling
Operational risks	Process owners	Non-Financial Risks
Investment risks	Group Strategy	Risk Controlling Finance & Controlling Controlling bodies
Property risks	Aareal Estate AG	Risk Controlling
Business and strategic risks	Group Strategy	Risk Controlling
Liquidity risks	Treasury	Risk Controlling
Process-independent monitoring: Internal Audit		

The Management Board formulates the business and risk strategies, as well as the so-called Risk Appetite Framework. For this purpose, "risk appetite" means the maximum risk exposure where the Bank's continued existence is not threatened, even in the event of risks materialising. For individual business units (the "First Line of Defence"), the Risk Appetite Framework defines guidelines for the independent and responsible handling of risks.

The risk monitoring function (the "Second Line of Defence") regularly measures utilisation of risk limits, and reports on the risk situation. In this context, the Management Board is supported by the Risk Executive Committee (RiskExCo). The RiskExCo develops proposals for resolutions in line with delegated tasks, and promotes risk communications and a risk culture within the Bank. The risk management system was supplemented by a recovery plan, in line with regulatory requirements, which comprises the definition of threshold values for key indicators – both from an economic and a normative perspective. These are designed to ensure that any sustained negative market developments having an impact upon our business model are identified at an early stage and corresponding action is taken in order to safeguard the sustained continuation of business operations. Risk Controlling is responsible for monitoring financial risks at portfolio level, whilst the Non-Financial Risk division exercises this function for non-financial risks. Both divisions report directly to the Group Chief Risk Officer (GCRO).

On top of this, Group Internal Audit (as the "Third Line of Defence") reviews the organisational structure and procedures, as well as risk processes – including the Risk Appetite Framework – and assesses their appropriateness. Moreover, internal processes provide for the involvement of the Compliance function whenever there are facts which are compliance-relevant.

In order to efficiently perform its control function, amongst other measures, the Supervisory Board has established a Risk Committee, whose responsibility includes the risk strategies as well as the management and monitoring of all material types of risk.

Strategies

The business policy set by the Management Board, and duly acknowledged by the Supervisory Board, provides the conceptual framework for Aareal Bank Group's risk management. The Risk Appetite Framework, which also outlines the key elements of the risk culture put in place, is defined consistently with the business strategy and building on the defined risk appetite. Taking the Risk Appetite Framework as a basis, and strictly considering the Bank's risk-bearing capacity, we have formulated detailed strategies for managing the material types of risk, in terms of capital as well as liquidity. Taken together, these represent the Group's risk strategy. These strategies are designed to ensure a professional and conscious management of risks. Accordingly, these strategies include general policies, to ensure a uniform understanding of risks across all parts of the Group. They also provide a cross-sectional, binding framework applicable to all divisions. The Bank has implemented adequate risk management and risk control processes to implement these strategies, and to safeguard the Bank's risk-bearing capacity.

The business strategy, the Risk Appetite Framework and the risk strategies are subject to review on an ongoing basis, and are updated if necessary. Besides the regular review (and, if appropriate, adjustment) of the business strategy (and consequently, of the Group risk strategy), the Bank's risk-bearing capacity and its material risk models are independently validated at least once a year. For this purpose, the appropriateness of risk measurement methods, processes, and risk limits is examined in particular. During the financial year under review, the strategies were adopted by the Management Board, duly noted, and approved by the Supervisory Board.

The Bank has defined escalation and decision-making processes to deal with limit breaches. Risk Controlling prepares timely and independent risk reports for the management. Aareal Bank Group maintains a decentralised Internal Control System (ICS), with control activities and results being outlined in the Written Set of Procedural Rules. These describe individual processes of divisions, subsidiaries, or other units. Internal controls may run upstream, downstream, or in parallel to workflows; this applies both to automatic control and monitoring functions as well as to the respective manual steps. Accordingly, the ICS comprises the entire universe of control activities; its objective is to ensure that qualitative and quantitative standards are adhered to (compliance with legal or regulatory requirements, with limits etc.).

The appropriateness and effectiveness of controls is reviewed on an event-driven basis; in any case, at least once a year. The results are discussed with the corresponding units within the Second and Third Lines of Defence (Risk Controlling, Compliance and Internal Audit), and reported to the Management Board and the Supervisory Board. In the event of any irregularities or violations, depending on the severity of the event, the Management Board (as well as the Supervisory Board, if appropriate) must be notified without delay, so that adequate measures or audit activities can be initiated at an early stage.

Risk-bearing capacity and risk limits

The Bank's ability to carry and sustain risk (as determined within the framework of the Internal Capital Adequacy Assessment Process (ICAAP)) is a core determining factor governing the structure of its risk management system. To ensure its uninterrupted risk-bearing capacity, Aareal Bank Group has adopted a dual management approach comprising two complementary perspectives: the normative and the economic perspective.

The normative perspective aims to ensure Aareal Bank Group's ability to fulfil all of its regulatory requirements over a multi-year period. This perspective thus accounts for all material risks which may impact upon relevant regulatory indicators over the multi-year planning period.

The normative ICAAP perspective is embedded into Aareal Bank Group's planning process, which – in particular – also includes capital planning. Group planning covers three planning years, it comprises both baseline and adverse scenarios. Results of Group planning are shown as a projected consolidated income statement for Aareal Bank Group. Planning also encompasses the balance sheet structure, as well as key regulatory indicators, plus additional internal management indicators.

Besides the planning process itself, intra-year computation adjustments to Aareal Bank Group's planning process also include the ongoing monitoring of management indicators as well as checking whether limits in the normative perspective were being complied with. Management indicators in the normative perspective (which are being monitored, and for which limits have been set) comprise various regulatory ratios.

We are using the ICAAP economic perspective, whose purpose is to safeguard Aareal Bank Group's economic substance and thus, in particular, to protect creditors against economic losses. The procedures and methods are part of the Supervisory Review and Evaluation Process (SREP) and are applied in order to identify and quantify potential economic losses, and to determine the required capital backing.

The purpose of internal capital is to serve as a risk-bearing component under the economic perspective. Within Aareal Bank Group, the current regulatory Tier I capital serves as the basis for determining economic aggregate risk cover. Accordingly, available internal capital comprises Common Equity Tier I (CET1)

capital, supplemented by Additional Tier I (AT1) capital. Tier 2 capital, as well as projected results to be incurred during the risk analysis horizon, are not taken into account.

Moreover, the value-oriented approach adopted under the economic perspective requires suitable adjustments to be made to regulatory Tier 1 capital, in order to bring aggregate risk cover into line with the economic assessment. Specifically, this may entail adjustments regarding conservative valuation, hidden encumbrances, or a management buffer.

Aareal Bank Group consistently applies a period of 250 trading days as a risk analysis horizon, as well as for the holding period as part of risk models under the economic perspective. To the extent that risks are measured on the basis of quantitative risk models, a uniform observation period of at least 250 trading days (or at least one year) is applied to the risk parameters used. The appropriateness of model assumptions is verified within the scope of independent validation of the corresponding risk models and parameters.

Looking at correlation effects between material types of risk within the framework of the economic ICAAP perspective, Aareal Bank Group has prudently opted for aggregation of risk levels; accordingly, no risk-mitigating correlation effects are being taken into account. Where we measure risks on the basis of quantitative risk models for the purposes of calculating risk-bearing capacity, these are based on a confidence level of 99.9 %.

Limits for specific risk types are determined in such a manner that aggregate limits do not exceed economic aggregate risk cover, less a risk buffer designed to cover risks not explicitly covered by limits, and to also absorb other fluctuations of internal capital over time. Individual limits are set on the basis of existing risk exposures and historical levels of potential risks, and to an extent that is in line with the Bank's business and risk strategy. Specific limits have been set in a way that each limit is sufficient for utilisation in line with planned business development, as well as for common market fluctuations.

A detailed monthly report provides information regarding the utilisation of individual limits for the material types of risk, as well as on the overall limit utilisation. These are being monitored as part of daily reporting. No limit breaches were detected during the period under review.

Since risk cover potential is an inadequate measure to assess the risk-bearing capacity in terms of monitoring the Bank's ability to meet its payment obligations (liquidity risk in the narrower sense), we have defined special tools within the framework of the Internal Liquidity Adequacy Assessment Process (ILAAP) for managing and monitoring this type of risk. These tools are described in detail in the section "Liquidity risks" (page 86 et seqq.).

Stress testing

Within the scope of ICAAP and ILAAP, scenario analyses are carried out in all perspectives, as a core element of our risk management system. This involves conducting stress tests for all material risks, using both historical parameters as well as hypothetical stress testing scenarios. To also be able to assess cross-relationships between the various types of risk, we have defined multi-factor stress scenarios, so-called "global" stress tests. For instance, the impact of the crisis affecting financial markets and the economy, which broke out in 2007, on individual types of risk and aggregate risk is analysed within the scope of a historical scenario. In the hypothetical scenario, current potential developments are derived from factors such as political developments, and are combined with significant macro-economic deterioration. The stress testing methodology implemented also takes into account the impact of any risk concentrations.

Stress scenarios are analysed both from an economic and a normative perspective, with the respective cross-relationships being taken into consideration – meaning that any economic risks which may materialise (from a normative view) over the analysis period being incorporated in the normative perspective, unless they are sufficiently covered already. The Bank is currently working on integrating climate risks in stress testing. The integration process is scheduled to be completed in 2022.

The Management Board and the Supervisory Board are informed of the results of the stress analyses on a quarterly basis.

Lending business

Division of functions and voting

Aareal Bank Group's structural organisation and business processes consider regulatory requirements regarding the organisational structure and procedures in the credit business.

Processes in the credit business are designed to consistently respect the clear functional division of Sales units ("Markt") and Credit Management ("Marktfolge"), up to and including senior management level. In addition, the Risk Controlling division, which is not involved in making lending decisions, is responsible for monitoring all material risks whilst ensuring an adequate and targeted risk reporting system at portfolio level.

Lending decisions regarding credit business classified as relevant for the Bank's risk exposure require two approving votes submitted by a Sales unit and a Credit Management unit. The Bank's Schedule of Powers defines the relevant lending authorities within Sales units and Credit Management. Where authorised persons are unable to come to a unanimous lending decision, the loan involved cannot be approved, or must be presented to the next-highest decision-making level for a decision.

The RiskExCo, which has delegated authority to the Heads of Risk Controlling, Credit Transaction Management and Credit Portfolio Management (organisational units which are independent of the Sales units), is responsible for the approval of counterparty, issuer, or country limits.

We have consistently implemented and documented the clear separation of Sales and Credit Management processes across all relevant divisions.

Process requirements

The credit process comprises the credit approval and further processing phases, each governed by a control process. Credit exposures subject to increased risks involve supplementary processes for intensified handling, the handling of problem loans, and – if necessary – for recognising loss allowance. The corresponding processing principles are laid down in the Bank's standardised rules and regulations. Important factors determining the counterparty credit risk of a credit exposure are identified and assessed on a regular basis, taking into account sector and (where appropriate) country risks. Critical issues regarding an exposure are highlighted, and analysed assuming different scenarios where appropriate.

Suitable risk classification procedures are applied to evaluate risks for lending decisions, as well as for regular or event-driven assessment of existing exposures. This classification scheme is reviewed at least once a year; depending on the risk situations, the review cycle may be shortened significantly. Furthermore, the risk assessment results influence pricing.

The organisational guidelines contain provisions governing escalation procedures and further handling in the event of limit breaches, or of a deterioration in individual risk parameters. Measures involved may include the provision of extra collateral, or an impairment test.

Early risk detection procedures

The early identification of credit risk exposure, using individual or combined (early warning) criteria is a core element of our risk management approach.

In particular, the procedures applied for the early detection of risks serve the purpose of identifying borrowers or exposures where higher risks start emerging, at an early stage. For this purpose, we generally monitor individual exposures and the parties involved (such as borrowers or guarantors) regularly throughout the entire credit term, assessing quantitative and qualitative factors, using instruments such as periodic monitoring and internal ratings. The intensity of the ongoing assessments is based on the risk level and size of the exposure. The Group's risk management processes ensure that counterparty credit risk is assessed at least once a year.

A CRE Credit Risk Committee (CRC) has been established in order to enhance the Bank's procedures for the early detection of risks. The CRC promotes the risk culture by identifying and addressing risk-relevant issues concerning individual credit exposures; the committee is also involved in each credit exposure with mandatory rating that is subject to higher risk exposure. Specifically, the CRC decides upon the exercise of discretion regarding classification of exposures as "normal", "intensified" or "problem loan" handling, as well as approval of action plans. The transfer of know-how is enhanced through the cross-divisional representation on the CRC. Contractual measures related to Covid-19 – such as the waiver of certain agreements, deferrals of repayments, or the provision of liquidity facilities – are being reported to the Management Board on a regular basis, and closely monitored.

Extensive IT resources are deployed to identify risk positions, and to monitor and assess risks. Overall, the existing set of tools and methods enables the Bank to adopt risk management measures, where required, at an early stage.

Actively managing client relationships is crucially important in this context: approaching clients in time to jointly develop a solution to any problems which may arise. Where necessary, we muster the support of experts from the independent restructuring and recovery functions.

Risk classification procedures

Aareal Bank employs risk classification procedures tailored to the requirements of the respective asset class for the initial, regular, or event-driven assessment of counterparty credit risk. Responsibility for development, quality assurance, and monitoring implementation of risk classification procedures, and for annual validation, lies with two separate divisions outside the Sales units which are independent from each other.

The ratings determined using internal risk classification procedures are an integral element of the Bank's approval, monitoring, and management processes.

Property financing business

The Bank employs a two-level risk classification procedure for large-sized commercial property finance exposures, specifically designed to match the requirements of this type of business. This procedure is described in more detail in the section "Qualitative information on the use of the IRB approach" (here: "Internal rating systems").

Financial institutions

Aareal Bank Group employs an internal rating procedure for financial institutions, which incorporates qualitative and quantitative factors as well as our client's group affiliation, to classify the risk exposure to banks, financial services providers, securities firms, public-sector development banks, and insurance companies. Financial institutions are assigned to a specific rating grade by way of assessing relevant financial indicators and taking into account expert knowledge.

Sovereign states and local authorities

In addition, Aareal Bank Group employs internal rating methods for sovereign borrowers and regional governments, local and other public-sector entities. In this context, rating grades are assigned using clearly defined risk factors, such as fiscal flexibility or the level of debt. The expert knowledge of our rating analysts is also taken into account for the rating.

In general, the risk classification procedures employed by the Bank are dynamic methods which are permanently adapted to changing risk structures and market conditions.

Trading activities

Functional separation

We have implemented a consistent functional separation between Sales units and Credit Management for the conclusion, settlement and monitoring of trading transactions, covering the entire process chain.

On the Sales side, the processing chain comprises the Treasury division, whilst Credit Management tasks are carried out by the independent Credit Transaction Management and Risk Controlling divisions. Beyond this, Finance & Controlling and Audit are responsible for tasks not directly related to processes.

We have laid down organisational guidelines providing for binding definitions of roles and responsibilities along the process chain; with clearly defined change processes.

The detailed assignment of responsibilities is outlined below.

Treasury is responsible for risk management and trading activities as defined by the Minimum Requirements for Risk Management ("MaRisk"). Treasury is also responsible for asset/liability management, and for managing the Bank's market and liquidity risk exposures. In addition, we have established an Asset-Liability Committee (ALCO), to develop strategies for the Bank's asset/liability management and proposals for their implementation. The ALCO, which comprises the Management Board member responsible for Treasury, the Head of Treasury, and other members appointed by the Management Board, meets on a weekly basis.

Credit Transaction Management is responsible for controlling trading activities, confirming trades to counterparties, and for trade settlement. The division is also responsible for verifying that trades entered into are in line with prevailing market conditions, as well as for the legal assessment of non-standard agreements, and of new standard/master agreements.

To assess counterparty credit risk in the trading business, a rating is prepared for all counterparties and issuers on a regular or event-driven basis. The rating is a key indicator used to determine the limit for the relevant counterparty or issuer.

The tasks of the Risk Controlling division comprise identifying, quantifying and monitoring market price, liquidity and counterparty credit risk exposure from trading activities, and the timely and independent risk reporting to senior management.

Process requirements

Processes are geared towards ensuring end-to-end risk management, from conclusion of the trade right through to monitoring portfolio risk. The monitoring and reporting function comprises deploying adequate risk measurement systems, deriving limit systems, and ensuring the transparency of Aareal Bank Group's overall risk exposure from trading activities, in terms of scope and structure.

Change processes (as defined in section AT 8 of the MaRisk) are consistently managed via Group-wide framework directives, with the RiskExCo involved in all cases. Moreover, processes and systems are designed in a way that allows to incorporate new products into the risk monitoring system swiftly and adequately, in order to ensure the flexibility of the Sales units in their business activities.

A standardised process exists for the intensified handling of counterparties and issuers, and for dealing with problems. This process comprises identifying early warning indicators, applying them for the purposes of risk analysis, as well as determining further action to be taken. In the event of counterparty or issuer default, the RiskExCo will be involved in devising an action plan, in cooperation with the Bank's divisions involved.

Escalation and decision-making processes have been set out to deal with limit breaches.

Investment risks

Definition

Aareal Bank defines investment risk as the threat of unexpected losses incurred due to an impairment of the investment's carrying amount, or a default of loans extended to investees. The concept of investment risk also encompasses additional risks arising from contingencies vis-à-vis the relevant Group entities.

Risk measurement and monitoring

All relevant Group entities are subject to regular audits, including a review and assessment of their risk situation within the framework of risk measurement and monitoring. Due to the special character of some exposures (e.g. marketing risks), special methods and procedures are employed to deal with investment risk. The Bank uses an internal valuation method to quantify investment risk, and to include it in the calculations of the Bank's ability to carry and sustain risk, and for the purpose of limitation. The limit defined for investment risk was always complied with during the financial year under review.

The existing procedures used to measure and monitor risk exposure are supplemented by subjecting the equity portfolio to regular stress testing.

Strategy Development, as well as Finance & Controlling and Risk Controlling, are responsible for measuring and monitoring investment risk exposure.

Risk Controlling is responsible for submitting a quarterly equity investment risk report to the Bank's Management Board.

Property risks

Definition

We define property risk as the threat of unexpected losses arising from changes in the value of property held by the Bank, or by fully-consolidated subsidiaries.

Due to the special character of property risk (e.g. marketing risks), special methods and procedures are employed to deal with this type of risk. All relevant property holdings are subject to regular audits, including a review and assessment of their risk situation.

Risk measurement and monitoring

In order to measure and monitor risks, property yields are analysed for different regions, and over the time horizons available: on this basis, potential yield increases over a one-year horizon are determined applying a 99.9 % confidence interval. A property's risk contribution results from the difference between the current market value and the property value adjusted for the yield increase.

Country risks

Our comprehensive approach to risk management also includes measuring and monitoring country risk exposure. When defining country risk, in addition to the risk of sovereign default or default of state entities, Aareal Bank also considers the risk that a counterparty could become unable to meet its payment obligations as a result of government action, despite being willing and able to pay, due to restrictions being imposed on making payments to creditors (transfer risk). Country risk exposure is managed using a cross-divisional process. The respective country limits are determined on the basis of a country risk assessment by the Bank's senior management. The Risk Controlling division is responsible for the continuous monitoring of country limits and limit utilisation, and for periodical reporting.

Business and strategic risks

Definition

Business and strategic risk is defined as the risk of unexpected losses, usually brought about by a decline in profits due to income falling short of expectations, whereby the shortfall cannot be compensated for by cost reductions. Strategic risk may emerge from changes in the competitive or regulatory environment, or due to unsuitable strategic positioning in the macro-economic environment.

Risk measurement and monitoring

In this context, we distinguish between investment risk and allocation risk, whereby allocation risk is already covered by various planning scenarios, and is thus incorporated in aggregate risk cover.

Investment risk is measured across segments: it is quantified assuming that additional upfront investment is required to establish an investment opportunity which was previously unavailable. Such upfront investment is assumed to represent potential risk.

Information about Corporate Governance Regulations

The disclosures required pursuant to Article 435 (2) of the CRR are outlined below.

Management and supervisory functions of the Management Board and the Supervisory Board

The number of management and supervisory functions held by members of the Management Board and Supervisory Board presented in the following overviews is based on the list of offices held disclosed in the Group Annual Report.[1)]

	Number of management or supervisory functions actually exercised	Number of management or supervisory functions taking into account the privileged status pursuant to section 25c (2) of the KWG
Management Board		
Jochen Klösges	4	2
Marc Hess	4	1
Christiane Kunisch-Wolff	1	1
Christof Winkelmann	4	1

	Number of management or supervisory functions actually exercised	Number of management or supervisory functions taking into account the privileged status pursuant to section 25d (3) of the KWG
Supervisory Board		
Prof. Dr Hermann Wagner	5	4
Jana Brendel	5	2
Thomas Hawel	2	1
Petra Heinemann-Specht	1	1
Jan Lehmann	2	1
Klaus Novatius	1	1
Richard Peters	3	2
Sylvia Seignette	1	1
Elisabeth Stheeman	4	4

1) "Aareal Bank Group 2021 Annual Report": chapter "Other Notes", Note (91) in the Notes to the consolidated financial statements, page 201 et seqq.

Guidelines regarding the Selection of Members of the Management Board and the Supervisory Board

The Supervisory Board of Aareal Bank AG is satisfied that the Management Board and the Supervisory Board are adequately staffed, if all members are in a position to perform their duties (professional qualification), commit the time necessary to perform these and possess the integrity to be guided by the ethical principles of Aareal Bank when performing their duties (with respect to personal reliability, including conflicts of interest and independence aspects). The composition of the Supervisory Board and the Management Board, respectively, shall facilitate, in its entirety, cooperation and the widest possible diversity of opinions and knowledge (the concept of diversity).

The Supervisory Board has defined concrete requirements and processes to incorporate these criteria when evaluating Management Board and Supervisory Board members, as well as when selecting candidates for appointment to the Management Board, or shareholder representatives to the Supervisory Board. When establishing these processes, it took into account the requirements of the German Public Limited Companies Act (Aktiengesetz – "AktG") and the German Banking Act (Kreditwesengesetz – "KWG"), as well as the recommendations of the German Corporate Governance Code. In addition, the regulatory guidelines of the European Central Bank and the European Banking Authority on adequacy and internal governance are also incorporated, as are corporate governance guidelines of consultants on share voting rights and major shareholders that are relevant to Aareal Bank. Besides the Supervisory Board, the European Central Bank also reviews the suitability of the respective candidates before they take up their duties, using the so-called "fit & proper" approach.

Personal reliability

The principles of personal reliability apply equally for all members of the Management Board and the Supervisory Board. All members of the Management Board and the Supervisory Board should demonstrate honesty, integrity and independence of mind. They should live by the ethical principles of Aareal Bank, as set out in the Code of Conduct, and commit sufficient time to perform their duties. The Supervisory Board calculates the time commitment of every member of the Management Board and the Supervisory Board, and reviews on an annual basis whether they also dedicate sufficient time to exercising the mandate. In this connection, the Supervisory Board takes care to ensure compliance with the requirements for the maximum number of additional offices, pursuant to sections 25c (2) and 25d (3) of the KWG.

Conflicts of interest and independence of Supervisory Board members

Special rules apply to the Supervisory Board, over and above the Group-wide Conflict of Interest Policy. Acting in the interests of the Company means making judgements unbiased by extraneous influences. The Supervisory Board therefore attaches particular importance to the handling and disclosure of actual, potential, temporary or permanent conflicts of interest that could, for example, call into question the independence of the Supervisory Board.

In the Management Board's and Supervisory Board's Conflicts of Interest Policy, which has been specifically designed for these two corporate bodies, the Supervisory Board has laid down procedures on how to handle conflicts of interest affecting members of the Management Board or the Supervisory Board. In accordance with this Policy, individual Management Board and Supervisory Board members must establish transparency in the event of any potential conflicts of interest. The members of the Supervisory Board and the Management Board have declared in writing that no conflicts of interest pursuant to recommendation E. 1 of the German Corporate Governance Code arose during the financial year under review. Any

individual whose circumstances may give rise to a material conflict of interest that cannot be mitigated will be ineligible as a candidate.

The Supervisory Board also determines when the independence of one of its members is not ensured and carries out an annual review of whether the independence of individual members is no longer ensured, or may be compromised. In the event of the following circumstances, the Supervisory Board generally assumes that independence is not ensured:

- At the commencement of the fourth term of office as a member of the Supervisory Board of Aareal Bank AG ("general limitation to a member's maximum term of office"). The term of office begins with the election by the Annual General Meeting, excluding any judicial appointments.

- The period between membership in Aareal Bank AG's Management Board and membership in the Supervisory Board is less than five years.

- The period between being a senior manager at the first management level below the Management Board and membership in the Supervisory Board of Aareal Bank AG is less than three years.

- The period between working as or on behalf of a material consultant, external auditor, or other service provider or client of Aareal Bank and membership in the Supervisory Board of Aareal Bank AG is less than three years.

- A Supervisory Board member is simultaneously associated with a major competitor, as a staff member, member of the Management or Supervisory Board, but may also be the case if said member acts as a consultant to a major competitor.

Furthermore, all Supervisory Board members are subject to the statutory limitations laid out in section 100 (2) nos. 2 to 4 of the AktG. Unlike the criteria listed above, the statutory limitations are mandatory, which means that they prevent the nomination of a potential candidate, or require the resignation of the affected board member.

Effective 31 December 2021, the Supervisory Board believes, taking the above criteria into account, that all shareholder representatives (Prof. Dr Hermann Wagner, Jana Brendel, Richard Peters, Sylvia Seignette and Elisabeth Stheeman) are independent.

Professional qualification

Every member of an executive body must possess the knowledge, ability and experience to properly perform their duties. This means that they must at least be able to understand and assess the Company's material business activities and the associated material risks, the control and monitoring system established in this regard, as well as the corresponding accounting and financial reporting systems. This also requires being familiar with the underlying material legal requirements. Each member of the Supervisory Board must be in a position to perform the duties incumbent on the Supervisory Board in its entirety.

When chairing a committee, Supervisory Board members should possess extensive expertise in the topics covered by that committee. The Chairman of the Audit Committee, for example, must be an expert on accounting/financial reporting issues and internal control and risk management systems, while the Chairman of the Risk Committee must be an expert in assessing the efficacy of risk management systems in credit institutions.

Overall, with regard to its collective composition, the Supervisory Board further decided that the following additional expertise be adequately represented:

- Experience in sectors and financial markets which are material to Aareal Bank Group,
- Digitalisation and transformation,
- Strategic planning,
- Design and assessment of risk management systems, internal control systems and corporate governance frameworks,
- Accounting and audit matters.

The curricula vitae of the members of the Management Board (www.aareal-bank.com/en/about-us/company-profile/the-management-board/) and the members of the Supervisory Board (www.aareal-bank.com/en/about-us/company-profile/supervisory-board/) can be found on the Bank's website.

Concept of diversity

In principle, the Management Board and the Supervisory Board pursue the objective in their bodies of ensuring maximum variety with regard to gender, age, internationality and professional diversity. Where there are several equally suitable candidates, further selection takes these aspects into account, to avoid "herd mentality" and to draw together the broadest possible spectrum of different perceptions to make the best possible decision for Aareal Bank. The Management Board ensures that these aspects of diversity are also taken into consideration at the management levels it controls, to facilitate succession oriented around this concept of diversity. The Supervisory Board has set individual objectives for the aforementioned diversity aspects, for both itself and the Management Board, the implementation of which it presents annually. It understands these objectives as being minimum objectives; there is no reason why they cannot be exceeded.

Gender diversity

In accordance with the German Act on Equal Participation of Men and Women in Executive Positions in the Private and Public Sector, the Supervisory Board sets specific targets – including concrete implementation deadlines – for the share of female members on the Supervisory Board and the Management Board. Likewise, the Management Board defines such targets for the first two management levels below the Management Board. On the Supervisory Board, by 30 June 2022 at least 25 % of positions are to be held by women. The status quo is 44.4 % (2020: 41.7 %). On the Management Board, by 30 June 2022 at least 20 % of positions are to be held by women. The status quo is 25 % (2020: 33.3 %). Therefore, the minimum objectives set by the Supervisory Board have been achieved.

Age diversity

The Supervisory Board has set out targets for the age structure of the Management Board and the Supervisory Board, in order to safeguard the continuous development of both executive bodies. At the time of (re)election to the Supervisory Board, candidates should be less than 70 years old. Furthermore, the Supervisory Board should not consist exclusively of members who are older than 60 years. Members of the Management Board should not exceed the upper age limit of 65 years while serving on the Management Board. These objectives are currently met.

International profile

In addition, given Aareal Bank's international business activities, the Supervisory Board has set itself and the Management Board the goal of having the broadest possible international experience, which can

be proven by foreign nationality or considerable professional experience gained in another country. For the Management Board, the figure is currently at 25 % (2020: 33.3 %), for the Supervisory Board it is at 22.2 % (2020: 33.3 %).

Diversity of professional skills

The Supervisory Board pursues the objective of maximum professional diversity when selecting the members of the Management Board and the Supervisory Board. However, the demanding professional requirements for members of the management board and the supervisory board of so-called "significant credit institutions" limit the opportunities for achieving this objective: for instance, regulatory rules require in principle that the members of the Management Board have extensive experience in the lending business and in risk management. In accordance with section 100 (5) of the AktG, the Management Board members in their entirety shall be familiar with the sector in which the Company operates. The Supervisory Board's aim of ensuring that not all members have gained most of their professional experience at a credit institution is currently met.

Risk Committee

The Supervisory Board has established five committees, including the Risk Committee, in order to perform its supervisory duties in an efficient manner: The Risk Committee deals with all material types of risk Aareal Bank is exposed to in its business activities. Along with the Supervisory Board in its entirety, it is also the recipient of the risk reports. The material risk types comprise financial and non-financial types of risk alike, including IT-related risks. The Committee is also responsible for reviewing the contents of the risk strategies in accordance with the MaRisk, for checking conformity with the business strategy, and preparing the corresponding resolutions of the Supervisory Board. It furthermore advises the Management Board on how to design an appropriate and effective risk management system, making sure that the Bank's risk-bearing capacity is adequate. To achieve this, the Committee monitors the Management Board, especially as regards determining risk appetite and the corresponding limits.

The Risk Committee held six meetings during the year under review. It regularly discussed reports on the Bank's risk situation, which were submitted and explained by the Management Board. The risk reporting structure and frequency, which had been adjusted in view of the Covid-19 pandemic, was retained. Having discussed the contents with the Management Board, these were duly noted and approved by the members of the Committee. Besides credit and country risks, the Committee concerned itself with market risks, liquidity risks, and operational risks, as well as reputational and IT risks. The Committee was also engaged with the analysis of Aareal Bank's risk-bearing capacity and its capital ratios. Also, detailed reports were provided regarding the Bank's liquidity status and management as well as its funding. Risks from existing investments, as well as all additional material risks were also presented.

The Risk Committee concerned itself with Aareal Bank's strategies and the derived sub-risk strategies, as well as with the risk management system. The Management Board also submitted detailed reports to the Risk Committee, covering all markets in which the Bank is active in the property finance business, as well as supplementary reports regarding the Bank's investments in securities portfolios. The Committee members discussed these reports and market views in detail. Within the scope of risk reporting, significant exposures were discussed in detail, and measures for the reduction of high-risk exposures presented and consulted within the Committee. The Risk Committee received reports on recovery planning and other risk management measures. The Management Board also informed the Risk Committee about all completed, ongoing and scheduled audits by the supervisory authorities at each Risk Committee meeting. In addition to regular reporting on the risk situation at each meeting, the following meetings had additional

focal points on certain topics: The impact of current Covid-19 pandemic-related developments on the individual types of risk was examined at all meetings.

- The Risk Committee meeting held in **March 2021** dealt with the results of the risk management system review performed by the external auditors, the supervisory authorities' focus during the 2021 financial year and other regulatory publications and amendments.
- In **April 2021**, the Risk Committee focused on those exposures in Aareal Bank Group's credit portfolio that entail a particularly high risk as well as the requirements of this year's supervisory stress tests along with issues relating to the recovery planning required by supervisory and regulatory specifications. In addition, various supervisory and regulatory issues were also addressed.
- In **June 2021**, the Risk Committee dealt with the regular reporting as well as the yearly reports of the individual risk management functions.
- At the **September 2021** meeting, the Management Board informed the Risk Committee about current recovery planning. The event-driven review of business and risk strategies as well as various issues centring on IT risks were other focal points.
- The **October 2021** meeting focused primarily on the specific risks of the property classes financed by Aareal Bank.
- At its meeting in **December 2021**, the Risk Committee discussed the results of the Bank's annual risk inventory. The Committee monitored the terms in the client business, based on the business model and risk structure of the Bank. The meeting in December also served to comprehensively review Aareal Bank's risks and the measures that are in place to manage these risks.

The Committee also concerned itself at all meetings with the banking and regulatory environment, focusing on current topics such as individual risk types during individual meetings. Furthermore, the Risk Committee dealt with the audits performed by the supervisory authorities, the findings these audits yielded, and the authorities' recommendations on risk-related topics in all meetings.

Flow of information towards the Management Board and the Supervisory Board

Reporting to the Management Board and the Supervisory Board is described in the section "Risk management" of this Regulatory Disclosure Report as well as in the relevant sections addressing the risk types that are relevant for disclosure.

The Chairman of the Supervisory Board regularly discusses questions regarding the risk situation and risk management with the Chairman of the Management Board. The Chairman of the Risk Committee goes into detail – especially with the Chief Risk Officer – on topics such as the risk situation, risk management, and risk strategies. The Chairman of the Audit Committee also regularly exchanges views with the Chief Risk Officer, but with the Chief Financial Officer and the external auditors, too.

Scope of Application of the Regulatory Framework

Aareal Bank AG, whose registered office is in Wiesbaden, Germany, is the parent institution of Aareal Bank Group, and prepares this Regulatory Disclosure Report in accordance with Article 10a (1) of the KWG.

The strategic business segments of Aareal Bank Group are commercial property financing and services, software products and digital solutions for the property sector and related industries. The strategic business segments are broken down into the three segments Structured Property Financing, Banking & Digital Solutions and Aareon.

In the Structured Property Financing segment, Aareal Bank facilitates property investments for its domestic and international clients, and is active in Europe, North America and Asia/Pacific. We finance commercial property, especially office buildings, hotels, retail, logistics and residential properties. Our focus is on financing existing buildings. By combining local market expertise with sector-specific know-how from the corporate headquarters, Aareal Bank can offer financing concepts that meet the special requirements of our domestic and international clients, as well as concluding structured portfolio and cross-border financings.

In the Banking & Digital Solutions segment, we offer our clients from the institutional housing industry, commercial property companies, as well as the energy and utilities industries, amongst other things services for the management of properties for residential use and the integrated processing of payment flows, thus contributing to a more efficient and sustainable structuring of our fundamental business processes. In conjunction with payment transactions processed via Aareal Bank's systems, deposits are generated that contribute significantly to Aareal Bank Group's refinancing base.

In the Aareon segment, the Aareon sub-group offers the European property industry and its partners user-oriented ERP software and digital solutions that simplify and automate processes, and support sustainable and energy-efficient operations.

Please refer to the Annual Report for further information concerning our business model.[1]

Comparison of the scopes of consolidation

The entities within the Group are consolidated for accounting and regulatory monitoring purposes. Applicable accounting and regulatory rules differ in some areas in relation to their specifications and objectives.

Hence, the scope of consolidation created on the basis of the legal requirements differs, in terms of the number of consolidated entities, as well as regarding the method of consolidation.

The following table EU LI3 lists all subsidiaries, joint arrangements and associates of Aareal Bank Group for each of the three segments which are consolidated on the basis of regulatory aspects and included in consolidated financial reporting as at the reporting date. Furthermore, the table includes only companies included in consolidated financial reporting with equity amounting to at least € 1 million.

With regard to the description of the respective company to be disclosed in column f, we follow the definitions listed in Article 4 of the CRR and section 1 of the KWG, whereby companies which are consolidated on the basis of regulatory aspects are classified depending on their principal activity, including

[1] "Aareal Bank Group 2021 Annual Report": chapter "Fundamental Information about the Group" in the Group Management Report, page 32 et seqq.

as credit institutions, providers of ancillary services or financial institutions. Shareholdings classified as other companies comprise only those included in consolidated financial reporting and for which classification pursuant to CRR does not apply.

Within the scope of Regulation (EU) 2019/876 amending CRR I (i.e. CRR II) which entered into force at the end of June 2019, pure industrial holding companies such as Aareon AG are excluded from the classification as financial institutions and thus from inclusion in the regulatory scope of consolidation. Further investments which are outside the regulatory scope of consolidation are allocated to the "at equity" measurement category, and are reported in the "Investments accounted for using the equity method" line item. These investments are not consolidated, nor are they deducted from regulatory capital; instead, they are taken into account when determining RWAs.

EU LI3: Outline of the differences in the scopes of consolidation

a	b	c	d	e	f	g	h
Name of the entity	Method of accounting consolidation	Method of regulatory consolidation					Description of the entity
		Full consolidation	Proportional consolidation	Equity method	Neither consolidated nor deducted	Deducted	
Structured Property Financing segment							
Aareal Bank Asia Ltd., Singapore	Full consolidation	X					Credit institution
Aareal Beteiligungen AG, Frankfurt/Main	Full consolidation	X					Financial institution
Aareal Capital Corporation, Wilmington	Full consolidation	X					Financial institution
Aareal Estate AG, Wiesbaden	Full consolidation	X					Ancillary services undertaking
Aareal Gesellschaft für Beteiligungen und Grundbesitz Erste mbH & Co. KG, Wiesbaden	Full consolidation				X		Miscellaneous
Aareal Holding Realty LP, Wilmington	Full consolidation	X					Financial institution
Aareal Immobilien Beteiligungen GmbH, Wiesbaden	Full consolidation	X					Financial institution
BauContact Immobilien GmbH, Wiesbaden	Full consolidation				X		Miscellaneous
BVG – Grundstücks- und Verwertungsgesellschaft mbH, Frankfurt/Main	Full consolidation	X					Financial institution
Cave Nuove S.p.A., Rome	Full consolidation	X					Ancillary services undertaking
DBB Inka, Dusseldorf	Full consolidation				[1]		Miscellaneous
Deutsche Structured Finance GmbH, Wiesbaden	Full consolidation				X		Miscellaneous
DHB Verwaltungs AG, Wiesbaden	Full consolidation				X		Miscellaneous
GEV Besitzgesellschaft mbH, Wiesbaden	Full consolidation				X		Miscellaneous
Houses2021 Management Beteiligungs GmbH, Frankfurt/Main	Full consolidation				X		Miscellaneous
Houses2021 Management Beteiligungs GmbH & Co. KG, Frankfurt/Main	At equity				X		Miscellaneous
IV Beteiligungsgesellschaft für Immobilieninvestitionen mbH, Wiesbaden	Full consolidation				X		Miscellaneous
Izalco Spain S.L., Madrid	Full consolidation	X					Ancillary services undertaking
La Sessola Holding GmbH, Wiesbaden	Full consolidation	X					Financial institution

[1] The special funds reported under the advanced IRB approach are treated using the simple risk weight method pursuant to Article 155 (2) of the CRR.

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a	b	c	d	e	f	g	h
Name of the entity	**Method of accounting consolidation**	**Method of regulatory consolidation**					**Description of the entity**
		Full consolidation	**Proportional consolidation**	**Equity method**	**Neither consolidated nor deducted**	**Deducted**	
La Sessola S.r.l., Rome	Full consolidation	X					Ancillary services undertaking
La Sessola Service S.r.l., Rome	Full consolidation	X					Ancillary services undertaking
Manager Realty LLC, Wilmington	Full consolidation	X					Ancillary services undertaking
Mercadea S.r.l., Rome	Full consolidation				X		Miscellaneous
Mirante S.r.l., Rome	Full consolidation	X					Ancillary services undertaking
Northpark Realty LP, Wilmington	Full consolidation	X					Ancillary services undertaking
objego GmbH, Essen	At equity				X		Miscellaneous
Participation Achte Beteiligungs GmbH, Wiesbaden	Full consolidation	X					Financial institution
Pisana S.p.A., Rome	Full consolidation	X					Ancillary services undertaking
PropTech1 Fund I GmbH & Co. KG, Berlin	No consolidation				[1]		Miscellaneous
Terrain Beteiligungen GmbH, Wiesbaden	Full consolidation	X					Financial institution
Terrain-Aktiengesellschaft Herzogpark, Wiesbaden	Full consolidation	X					Ancillary services undertaking
Tintoretto Rome S.r.l., Rome	Full consolidation	X					Ancillary services undertaking
Westdeutsche Immobilien Servicing AG, Mainz	Full consolidation	X					Financial institution
WP Galleria Realty LP, Wilmington	Full consolidation	X					Ancillary services undertaking
Banking & Digital Solutions segment							
Aareal First Financial Solutions AG, Mainz	Full consolidation	X					Ancillary services undertaking
Aareon segment							
Aareon AG, Mainz	Full consolidation				X		Miscellaneous
Aareon Deutschland GmbH, Mainz	Full consolidation				[2]		Miscellaneous
Aareon France S.A.S., Meudon-la-Forêt	Full consolidation				[2]		Miscellaneous
Aareon Nederland B.V., Emmen	Full consolidation				[2]		Miscellaneous
Aareon Norge AS, Oslo	Full consolidation				[2]		Miscellaneous
Aareon Planungs- und Bestandsentwicklungs GmbH, Mainz	Full consolidation				[2]		Miscellaneous
Aareon RELion GmbH, Augsburg	Full consolidation				[2]		Miscellaneous
Aareon Sverige AB, Mölndal	Full consolidation				[2]		Miscellaneous
Aareon UK Ltd., Coventry	Full consolidation				[2]		Miscellaneous
Arthur Online Ltd., London	Full consolidation				[2]		Miscellaneous
BauSecura Versicherungsmakler GmbH, Hamburg	Full consolidation				[2]		Miscellaneous
BrickVest B.V., Amsterdam	Full consolidation				[2]		Miscellaneous
CalCon Deutschland GmbH, Munich	Full consolidation				[2]		Miscellaneous
GAP Gesellschaft für Anwenderprogramme und Organisationsberatung mbH, Bremen	Full consolidation				[2]		Miscellaneous
Tactile Limited, London	Full consolidation				[2]		Miscellaneous
Twinq Facilitair B.V., Oosterhout	Full consolidation				[2]		Miscellaneous
Twinq Holding B.V., Oosterhout	Full consolidation				[2]		Miscellaneous

[1] The special funds reported under the advanced IRB approach are treated using the simple risk weight method pursuant to Article 155 (2) of the CRR.
[2] Indirect consideration via the carrying amount of the parent company Aareon AG classified as pure industrial holding company

Undercapitalised entities

Currently, there are no Aareal Bank Group subsidiaries failing to meet capital adequacy requirements whose participation is deducted from the liable equity capital of the parent institution.

Utilisation of the “waiver” regulation

Aareal Bank has opted for the waiver according to section 2a (1) sentence 1 of the KWG in conjunction with Article 7 (3) of the CRR. This so-called parent waiver allows parent companies to fulfil the requirements of parts 2 to 5 and 8 of the CRR on a consolidated basis only.

Due to its equity interest in the subsidiaries, Aareal Bank AG is able to transfer the subordinated companies’ excess capital to Aareal Bank AG if necessary. This can be achieved, for example, through distributions to Aareal Bank AG or by way of capital reductions at subsidiaries. The Bank can also factually request its subsidiaries to repay their liabilities due to its position vis-à-vis the subordinated subsidiaries.

Accordingly, there are no burdens (neither legal, nor materially factual) as per Article 7 (3) lit. a) of the CRR to the immediate transfer of capital or repayment of liabilities by the subsidiaries to Aareal Bank AG.

As the parent institution of the Group, Aareal Bank AG operates a central risk management system for the banking group of which it forms a part. This means that the prerequisite stated in Article 7 (3) lit. b) of the CRR regarding the combined supervision of risk assessment, risk measurement and risk control procedures are fulfilled.

Aareal Bank AG carries out event-driven reviews to ensure it continues to fulfil the prerequisites of Article 7 (3) of the CRR and documents them in writing.

Differences between accounting and regulatory scopes of consolidation and mapping of financial statements categories with regulatory risk categories

For each of the line items in the annual financial statements, the following table shows the differences between the scope of accounting consolidation and the regulatory scope of consolidation within Aareal Bank Group. Furthermore, for the line items shown, the table outlines the allocation to relevant risk categories for regulatory capital requirements.

The carrying values shown in table EU LI1 are calculated using financial reporting principles in accordance with the IFRSs. Allocation to risk categories is in line with the regulatory scope of consolidation; this also encompasses those line items which are generally exempt from regulatory capital requirements (such as liabilities), or which are deducted when determining regulatory capital requirements.

Differences between the carrying values shown are exclusively due to the different scopes of consolidation and the resulting consolidation postings. In this context, there are overlaps between the corporate entities included in the respective scope of consolidation. For further details, please refer to the comparison of scopes of consolidation in table EU LI3.

Please note that the sum of the amounts shown in the above-mentioned columns c to g is not identical to the amounts disclosed in column b; this is due to the fact that several line items are subject to capital requirements for credit or counterparty credit risk, as well as to capital requirements for market risk.

EU LI1: Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories to regulatory risk categories

		a	b	c	d	e	f	g
				Carrying values of items				
€ mn		Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to own funds requirements or deduction from regulatory capital
Assets								
1	**Financial assets (ac)**	**42,345**	**42,389**	**42,389**	**–**	**–**	**16,179**	**–**
1a	Cash funds (ac)	6,942	6,942	6,942	–	–	0	–
1b	Loan receivables (ac)	29,434	29,569	29,569	–	–	15,707	–
1c	Money market and capital market receivables (ac)	5,884	5,828	5,828	–	–	468	–
1d	Receivables from other transactions (ac)	85	51	51	–	–	3	–
2	Loss allowance (ac)	-492	-493	-493	–	–	-292	–
3	**Financial assets (fvoci)**	**3,753**	**3,735**	**3,735**	**–**	**–**	**–**	**–**
3a	Money market and capital market receivables (fvoci)	3,749	3,734	3,734	–	–	–	–
3b	Equity instruments (fvoci)	4	2	2	–	–	–	–
4	**Financial assets (fvpl)**	**1,734**	**1,832**	**700**	**1,132**	**–**	**295**	**–**
4a	Loan receivables (fvpl)	598	597	597	–	–	227	–
4b	Money market and capital market receivables (fvpl)	4	103	103	–	–	–	–
4c	Positive market value of designated hedging derivatives (fvpl)	900	900	–	900	–	44	–
4d	Positive market value of other derivatives (fvpl)	232	231	–	231	–	24	–
5	Investments accounted for using the equity method	19	199	199	–	–	8	–
6	Intangible assets	394	25	–	–	–	–	25
7	Property and equipment	278	205	205	–	–	7	–
8	Income tax assets	66	59	59	–	–	24	–
9	Deferred tax assets	168	166	153	–	–	–	13
10	Other assets	463	435	435	–	–	205	–
11	**Total assets**	**48,728**	**48,553**	**47,383**	**1,132**	**–**	**16,426**	**38**

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€ mn	a	b	c	d	e	f	g
			Carrying values of items				
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to own funds requirements or deduction from regulatory capital
Equity and liabilities							
12 Financial liabilities (ac)	**43,017**	**43,087**	**–**	**–**	**–**	**2,235**	**40,852**
12a Money market and capital market liabilities (ac)	30,597	30,651	–	–	–	2,217	28,434
12b Deposits from the housing industry (ac)	11,717	11,767	–	–	–	–	11,767
12c Liabilities from other transactions (ac)	94	60	–	–	–	19	41
12d Subordinated liabilities (ac)	609	609	–	–	–	–	609
13 Financial liabilities (fvpl)	**1,882**	**1,882**	**–**	**1,882**	**–**	**101**	**–**
13a Negative market value of designated hedging derivatives (fvpl)	971	971	–	971	–	69	–
13b Negative market value of other derivatives (fvpl)	911	911	–	911	–	31	–
14 Provisions	558	499	–	–	–	17	482
15 Income tax liabilities	17	14	–	–	–	1	12
16 Deferred tax liabilities	56	37	–	–	–	24	12
17 Other liabilities	137	38	–	–	–	1	37
18 Equity	**3,061**	**2,995**	**–**	**–**	**–**	**–**	**2,995**
18a Subscribed capital	180	180	–	–	–	–	180
18b Capital reserves	721	721	–	–	–	–	721
18c Retained earnings	1,937	1,921	–	–	–	–	1,921
18d AT1 bond	300	300	–	–	–	–	300
18e Other reserves	-143	-127	–	–	–	–	-127
18f Non-controlling interests	66	0	–	–	–	–	0
19 Total liabilities	**48,728**	**48,553**	**–**	**1,882**	**–**	**2,380**	**44,391**

Main sources of differences between regulatory risk exposure amounts and carrying values in financial statements

Whilst the focus of table EU LI1 is on the reconciliation of carrying amounts in the financial statements under IFRSs to the regulatory scope of consolidation, and on the allocation to regulatory risk categories, table EU LI2 reconciles carrying amounts with the regulatory risk exposure (Exposure at Default – “EaD”), in line with the scope of prudential consolidation.

In this context, table EU LI2 identifies the main sources of differences between the carrying amounts/values shown, and exposures at default used for regulatory purposes.

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

€ mn		a	b	c	d	e
			Items subject to			
		Total	Credit risk framework	Securitisation framework	CCR framework	Market risk framework
1	**Assets carrying value under the scope of prudential consolidation (as per table EU LI1)**	**48,553**	**47,383**	**–**	**1,132**	**16,426**
2	Liabilities carrying value under the scope of prudential consolidation (as per table EU LI1)	48,553	–	–	1,882	2,380
3	Total net amount under the scope of prudential consolidation	–	–	–	–	–
4	Off-balance sheet amounts	1,219	1,219	–	–	–
5	Differences in valuations	–	–	–	–	–
6	Differences due to different netting rules, other than those already included in row 2	–	–	–	–	–
7	Differences due to consideration of provisions	484	484	–	–	–
8	Differences due to the use of credit risk mitigation techniques	–	–	–	–	–
9	Differences due to credit conversion factors	-126	-126	–	–	–
10	Differences due to securitisation with risk transfer	–	–	–	–	–
11	Other differences	-1,121	-368	–	-715	-16,386
12	**Exposure amounts considered for regulatory purposes**	**49,009**	**48,592**	**–**	**417**	**40**

As at the reporting date, none of the financial assets and financial liabilities meet the offsetting requirements for accounting purposes, therefore, no disclosure is made in line 3 of table EU LI2.

Line 4 shows off-balance sheet exposures not carried on the statement of financial position, which must be supplemented for regulatory purposes. Off-balance sheet exposures are shown before application of credit conversion factors (CCFs) and credit risk mitigation techniques.

There are no values reported in line 5 as the additional value adjustments of the assets and liabilities measured at fair value in accordance with Article 34 of the CRR in conjunction with Article 105 of the CRR (Prudent Valuation)[1] are included in own funds and do not affect EaD determination.

Line 7 reflects credit risk adjustments used for the regulatory comparison of Expected Loss (EL) to credit risk adjustments of exposures under the AIRBA as they have already been deducted from the carrying amounts shown in line 1. EaD for IRBA exposures is determined prior to deduction of credit risk adjustments; hence, credit risk adjustments already deducted from the carrying value must be supplemented.

Line 8 only shows credit risk mitigants in relation to the exposure value disclosed in line 12 for risk exposures reported under the CRSA. There were no such effects as at the disclosure date. The collateral available under the AIRBA is fully taken into account in the determination of the LGD of the respective property financing.

[1] Since the determination of the additional value adjustments is not based on the core approach set out in Chapter III of Delegated Regulation (EU) 2016/101, but on the simplified approach, table EU PV1 (Prudent valuation adjustments) is not disclosed.

Line 9 comprises the effect on the EaD of the off-balance sheet risk exposures reported in line 4, which results from the consideration of the CCF.

Line 11 shows the balance-sheet items deducted from regulatory capital, as reported in column g of table EU LI1, since these are not included in the risk categories shown above (columns b and c of table EU LI2). These items must be deducted in order to reconcile the totals column (a) with the amounts of relevant risk categories (columns b and c). This line also includes, on the one hand, the difference attributable to the determination of the net foreign exchange position, for the purpose of own funds requirements for market risk, and, on the other hand, valuation differences between the carrying amounts under IFRSs and EaD for on-balance sheet exposures. This is largely attributable to adjustments due to the methodology for determining EaD for credit risk exposures under the AIRBA, as well as to adjustments of the total exposure value as a result of the new SA-CCR calculation logic for derivative transactions introduced in June 2021. The differences are due to the regulatory alpha factor, the determination of replacement costs, and the calculation of the potential future exposure value.

Regulatory Capital

Aareal Bank Group has to comply with the capital adequacy requirements set out in the Capital Requirements Regulation (CRR), the Capital Requirements Directive (CRD IV), the German Banking Act (Kreditwesengesetz – "KWG") and the German Solvency Regulation (Solvabilitätsverordnung – "SolvV").

Following these regulations, institutions and companies operating in the financial sector must calculate their existing regulatory capital on a regular basis, and present these detailed results thereon to the supervisory authorities on specific dates.

Strict regulatory criteria are applied to the availability and sustainability of the qualifying capital when calculating regulatory capital. These provisions are not consistent with the recognition rules for the financial statements.

The regulatory capital as well as equity disclosed in Aareal Bank Group's Annual Report are based on the items reported in the statement of financial position according to IFRSs. However, there are differences between items disclosed for regulatory and accounting purposes which are due to different scopes of consolidation on the one hand, as well as adjustments to the Group's regulatory capital on the other hand.

The disclosures in this report are based on the binding provisions for the implementation of disclosure requirements set out in Article 4 of Commission Implementing Regulation 2021/637/EU, in the interests of comparability and increased transparency pursuant to Article 437 of the CRR.

Main features of capital instruments

The main features of capital instruments of Common Equity Tier 1, Additional Tier 1 and Tier 2 capital are described by using the table EU CCA, which is published on our website as an annex to this Disclosure Report.

In addition, Aareal Bank is required, pursuant to Article 437 lit. (c) of the CRR, to disclose the full terms and conditions of all Common Equity Tier 1, Additional Tier 1 and Tier 2 instruments. These terms and conditions of issue presented in the table EU CCA are fully published on our website in the section "Investors › Financial Information › Terms and Conditions of Issue pursuant to Article 437 lit. (c) of the CRR".

Composition of regulatory own funds

Within the scope of the ECB's Supervisory Review and Evaluation Process, Aareal Bank has to meet total SREP own funds requirements of 10.25 % on a consolidated level in 2021. This comprises an additional own funds requirement (Pillar 2 Requirement, P2R) of 2.25 %, which has to be maintained in the form of at least 56.25 % in Common Equity Tier 1 capital and 75 % of Tier 1 capital. Taking into account the capital conservation buffer of 2.50 % and the countercyclical capital buffer of 0.01 %, both of which have to be maintained in the form of Common Equity Tier 1 capital, the Overall Capital Requirement (OCR) of Aareal Bank as at 31 December 2021 amounts to 12.76 %.

The average total capital ratio (TC ratio) over the current reporting date and the four last quarters amounts to 26.99 %. The comparison to the total SREP own funds requirements demonstrates that Aareal Bank Group is well capitalised to cover its risks.

The following table EU CC1 serves to fulfil the disclosure requirements set out in Article 437 lit. (a) and (d) of the CRR. The components of Common Equity Tier 1, Additional Tier 1 and Tier 2 capital are described in the section following this table.

In order to reconcile the regulatory own funds with the balance sheet figures disclosed in column b of table EU CC2, column b references the relevant balance sheet line item.

EU CC1: Composition of regulatory own funds

€ mn		a Amounts	b Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
Common Equity Tier 1 (CET1) capital: instruments and reserves			
1	Capital instruments and the related share premium accounts	901	A, B
	of which: shares	180	A
2	Retained earnings	1,785	C
3	Accumulated other comprehensive income (and other reserves)	-127	D
EU-3a	Funds for general banking risks	–	
4	Amount of qualifying items referred to in Article 484 (3) CRR and the related share premium accounts subject to phase-out from CET1	–	
5	Minority interests (amount allowed in consolidated CET1)	–	
EU-5a	Independently reviewed interim profits net of any foreseeable charge or dividend	18	E
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	**2,577**	

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€ mn		a Amounts	b Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
Common Equity Tier 1 (CET1) capital: regulatory adjustments			
7	Additional value adjustments (negative amount)	-2	F
8	Intangible assets (net of related tax liability) (negative amount)	-25	G
9	–	–	
10	Deferred tax assets that rely on future profitability, excluding those arising from temporary differences (net of related tax liability where the conditions of Article 38 (3) CRR are met) (negative amount)	-13	H
11	Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value	–	
12	Negative amounts resulting from the calculation of expected loss amounts	-5	
13	Increase in equity resulting from securitised assets (negative amount)	–	
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	–	
15	Defined-benefit pension fund assets (negative amount)	–	
16	Direct, indirect and synthetic holdings by an institution of own CET1 instruments (negative amount)	–	
17	Direct, indirect and synthetic holdings of Common Equity Tier 1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	–	
18	Direct, indirect and synthetic holdings by the institution of Common Equity Tier 1 instruments of financial sector entities in which the institution does not have a significant investment (amount above 10% threshold and net of eligible short positions) (negative amount)	–	
19	Direct, indirect and synthetic holdings by the institution of Common Equity Tier 1 instruments of financial sector entities in which the institution has a significant investment (amount above 10% threshold and net of eligible short positions) (negative amount)	–	
20	–	–	
EU-20a	Exposure amount of the following items which qualify for a risk weight of 1.250%, where the institution opts for the deduction alternative	–	
EU-20b	of which: qualifying holdings outside the financial sector (negative amount)	–	
EU-20c	of which: securitisation positions (negative amount)	–	
20d	of which: free deliveries (negative amount)	–	
21	Deferred tax assets arising from temporary differences (amount exceeding the 10% threshold, net of related tax liability where the conditions in Article 38 (3) of the CRR are met) (negative amount)	–	
22	Amount exceeding the 17.65% threshold (negative amount)	–	
23	of which: direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities	–	
24	–	–	
25	of which: deferred tax assets arising from temporary differences	–	
EU-25a	Losses for the current financial year (negative amount)	–	
EU-25b	Foreseeable tax charges relating to CET1 items except where the institution suitably adjusts the amount of CET1 items insofar as such tax charges reduce the amount up to which those items may be used to cover risks or losses (negative amount)	–	

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€ mn		a Amounts	b Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
26	–	–	
27	Qualifying Additional Tier 1 deductions that exceed the AT1 items of the institution (negative amount)	–	
27a	Other regulatory adjustments	-210	
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1) capital**	**-255**	
29	**Common Equity Tier 1 (CET1) capital**	**2,322**	
Additional Tier 1 (AT1) capital: instruments			
30	Capital instruments and the related share premium accounts	300	I
31	of which: classified as equity under applicable accounting standards	300	I
32	of which: classified as liabilities under applicable accounting standards	–	
33	Amount of qualifying items referred to in Article 484 (4) of the CRR and the related share premium accounts subject to phase-out from Additional Tier 1 (AT1) capital	–	
EU-33a	Amount of qualifying items referred to in Article 494a (1) of the CRR subject to phase-out from Additional Tier 1 (AT1) capital	–	
EU-33b	Amount of qualifying items referred to in Article 494b (1) of the CRR subject to phase-out from Additional Tier 1 (AT1) capital	–	
34	Qualifying Tier 1 instruments included in consolidated Additional Tier 1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties	–	
35	of which: instruments issued by subsidiaries subject to phase-out	–	
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**	**300**	
Additional Tier 1 (AT1) capital: regulatory adjustments			
37	Direct, indirect and synthetic holdings by an institution of own Additional Tier 1 instruments (negative amount)	–	
38	Direct, indirect and synthetic holdings of the Additional Tier 1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	–	
39	Direct, indirect and synthetic holdings by the institution of Additional Tier 1 instruments of financial sector entities in which the institution does not have a significant investment (amount above 10% threshold and net of eligible short positions) (negative amount)	–	
40	Direct, indirect and synthetic holdings by the institution of Additional Tier 1 instruments of financial sector entities in which the institution has a significant investment (net of eligible short positions) (negative amount)	–	
41	–	–	
42	Qualifying Tier 2 deductions that exceed the Tier 2 items of the institution (negative amount)	–	
42a	Other regulatory adjustments to Additional Tier 1 (AT1) capital	–	
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**	**–**	
44	**Additional Tier 1 (AT1) capital**	**300**	
45	**Tier 1 capital (T1 = CET1 + AT1)**	**2,622**	

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€ mn		a Amounts	b Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
Tier 2 (T2) capital: instruments			
46	Capital instruments and the related share premium accounts	346	J
47	Amount of qualifying items referred to in Article 484 (5) of the CRR and the related share premium accounts subject to phase-out from Tier 2 as described in Article 486 (4) of the CRR	–	
EU-47a	Amount of qualifying items referred to in Article 494a (2) of the CRR subject to phase-out from Tier 2	–	
EU-47b	Amount of qualifying items referred to in Article 494b (2) of the CRR subject to phase-out from Tier 2	–	
48	Qualifying own funds instruments included in consolidated Tier 2 capital (including minority interests and Additional Tier 1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties	–	
49	of which: instruments issued by subsidiaries subject to phase-out	–	
50	Credit risk adjustments	48	
51	**Tier 2 (T2) capital before regulatory adjustments**	**394**	
Tier 2 (T2) capital: regulatory adjustments			
52	Direct, indirect and synthetic holdings by an institution of own Tier 2 instruments and subordinated loans (negative amount)	–	
53	Direct, indirect and synthetic holdings of the Tier 2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	–	
54	Direct, indirect and synthetic holdings of the Tier 2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	–	
54a	–	–	
55	Direct, indirect and synthetic holdings by the institution of the Tier 2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	–	
56	–	–	
EU-56a	Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)	–	
EU-56b	Other regulatory adjustments to Tier 2 capital	–	
57	**Total regulatory adjustments to Tier 2 (T2) capital**	**–**	
58	**Tier 2 (T2) capital**	**394**	
59	**Own funds (TC = T1 + T2)**	**3,016**	
60	**Total risk-weighted assets**	**10,446**	
Capital ratios and requirements including buffers			
61	CET1 ratio	22.23 %	
62	Tier 1 ratio	25.10 %	
63	Total capital ratio	28.87 %	

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€ mn		a Amounts	b Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
64	Institution CET1 overall capital requirements	8.27 %	
65	of which: capital conservation buffer requirement	2.50 %	
66	of which: countercyclical capital buffer requirement	0.01 %	
67	of which: systemic risk buffer requirement	–	
EU-67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer requirement	–	
EU-67b	of which: additional own funds requirements to address the risks other than the risk of excessive leverage	1.27 %	
68	Common Equity Tier 1 capital (as a percentage of risk exposure amount) available after meeting the minimum capital requirements	16.46 %	
Amounts below thresholds for deductions (before risk weighting)			
72	Direct and indirect holdings of own funds and eligible liabilities of financial sector entities where the institution does not have a significant investment in those entities (amount below 10 % threshold and net of eligible short positions)	–	
73	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 17.65 % thresholds and net of eligible short positions)	–	
74	–	–	
75	Deferred tax assets arising from temporary differences (amount below 17,65 % threshold, net of related tax liability where the conditions in Article 38 (3) of the CRR are met)	153	
Applicable caps on the inclusion of provisions in Tier 2			
76	Credit risk adjustments included in Tier 2 in respect of exposures subject to standardised approach (prior to the application of the cap)	–	
77	Cap on inclusion of credit risk adjustments in Tier 2 under standardised approach	15	
78	Credit risk adjustments included in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	195	
79	Cap on inclusion of credit risk adjustments in Tier 2 under internal ratings-based approach	48	
Capital instruments subject to phase-out arrangements (only applicable between 1 January 2014 and 1 January 2022)			
80	Current cap on CET1 instruments subject to phase-out arrangements	–	
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	–	
82	Current cap on Additional Tier 1 capital instruments subject to phase-out arrangements	–	
83	Amount excluded from Additional Tier 1 capital due to cap (excess over cap after redemptions and maturities)	–	
84	Current cap on Tier 2 instruments subject to phase-out arrangements	–	
85	Amount excluded from Tier 2 capital due to cap (excess over cap after redemptions and maturities	–	

Common Equity Tier 1 capital

Aareal Bank Group's Common Equity Tier 1 (CET1) capital (€ 2,322 million) is generally limited to the items and capital instruments listed under Article 26 of the CCR, whereby the latter must meet the requirements of Article 28 of the CRR. The CET1 is composed as follows:

- subscribed capital and capital reserves,
- eligible retained earnings,
- accumulated other comprehensive income and
- regulatory adjustments.

Aareal Bank AG's subscribed capital amounted to € 180 million as at 31 December 2021. It is divided into 59,857,221 fully-paid no-par value shares ("unit shares") with a notional value of € 3 per share. The shares are bearer shares. Each share carries one vote. There are no pre-emptive rights or constraints with respect to dividend payouts.

The capital reserves amount to € 721 million and contain premiums received upon the issuance of shares. Costs incurred within the framework of a capital increase reduce capital reserves.

Retained earnings (excluding consolidated net retained profit) comprise € 5 million in statutory reserves (pursuant to section 150 of the AktG) and € 1,846 million in other retained earnings. Dividends of € 1.10 per share, equivalent to € 66 million, that were not distributed in 2021, are deducted from this.

Accumulated other comprehensive income (€ -127 million) contains other reserves recognised in equity, in which the following effects are recognised directly:

- reserve from remeasurements of defined benefit plans (€ -123 million),
- reserve from the measurement of equity instruments fvoci (€ -4 million),
- reserve from the measurement of debt instruments fvoci (€ 16 million),
- other recyclable and non-recyclable reserves from companies accounted for using the equity method (€ 5 million),
- reserve from changes in the value of foreign currency basis spreads (€ -23 million), and
- currency translation reserve (€ 2 million).

The regulatory adjustments reducing the CET1 amount to € 255 million. Specifically, the following deductions were made:

- **Additional value adjustments to assets and liabilities at fair value in accordance with Article 34 of the CRR in conjunction with Article 105 of the CRR (€ -2 million)**
  In accordance with Article 34 of the CRR in conjunction with the requirements for prudent valuation under Article 105 of the CRR, those additional value adjustments that are required to adjust the fair value to the prudent valuation are to be deducted from CET1.

  As the line items at fair value amount to less than € 15 billion, the simplified approach pursuant to Article 4 of Commission Delegated Regulation (EU) No. 2016/101 does apply to Aareal Bank Group.

- **Intangible assets as defined in Article 37 of the CRR (€ -25 million)**
  The amount largely comprises purchased and self-developed software classified as intangible assets (€ 20 million). The regulatory technical standard EBA/RTS/2020/07 on the regulatory treatment of software assets is not applied within Aareal Bank Group.

- **Deferred tax assets that rely on future profitability (€ -13 million)**
  The only deferred tax assets considered are those that do not result from temporary differences (net of related tax liability).

- **Negative amounts resulting from the calculation of expected loss amounts (€ -5 million)**
  In accordance with Article 36 (1) lit. d) of the CRR, negative amounts resulting or remaining from the offsetting of an expected loss (EL) and credit risk adjustments (the so-called value adjustment deficit) as required by Article 159 of the CRR are to be deducted from CET1.

  This item includes the EL from investments. Pursuant to Article 159 of the CRR, there are no netting options for this EL within the scope of the comparison of value adjustments, meaning that the amount is directly deducted from CET1.

- **Other regulatory adjustments (€ -210 million)**

  Deductions pursuant to Article 3 of the CRR (€ -175 million)
  This includes an additional voluntary and preventive capital deduction for regulatory uncertainties in connection with ECB reviews in the amount of € 90 million. This deduction item also accounts for the expectations defined by regulatory and legislative authorities regarding provisioning for non-performing exposures ("prudential provisioning").

  Other deductions from CET1 (€ -35 million)
  Aareal Bank holds irrevocable payment obligations to deposit guarantee schemes and resolution funds, for which assets were encumbered or cash collateral provided. The fact that the encumbered assets or the cash collateral provided cannot be used to cover potential current losses is taken into account by deducting them from CET1.

Additional Tier 1 capital

Additional Tier 1 (AT1) capital comprises a € 300 million Additional Tier 1 (AT1) bond (ISIN DE000A1TNDK2). Regulatory adjustments pursuant to Article 56 et seqq. of the CRR were not made.

On 13 November 2014, the Management Board had issued notes in an aggregate nominal amount of € 300 million with a denomination of € 200,000 and an initial interest rate of 7.625% p.a. (valid until 30 April 2020), based on the authorisation granted by the Annual General Meeting on 21 May 2014. The rate of interest for any interest period commencing after 30 April 2020 is equal to the reference rate (one-year EUR swap rate) determined on the relevant interest determination date plus a margin of 7.18% p.a.

The notes constitute unsecured and subordinated obligations of the issuer.

Further information on the conditions of the AT1 bond can be found in the annex to the Disclosure Report 2021 "EU CCA: Main Features of Capital Instruments 2021" published on our website.

Tier 2 capital

Aareal Bank's Tier 2 capital of € 394 million largely consists of subordinated promissory notes (€ 177 million) and subordinated bearer debt securities (€ 169 million), which are allocated to the measurement category "amortised costs". In the event of liquidation or insolvency, claims on interest and principal from these liabilities are subordinated to the claims of the other creditors, which are not subordinated themselves.

In accordance with Article 64 (2) of the CRR, the IFRS carrying amount (instead of the nominal amount) on the first day of the final five-year period is used in the calculation of the eligible amount for the amortisation of Tier 2 instruments in the last five years of their contractual maturity. The IFRS carrying amount is also used for Tier 2 instruments with a residual maturity of more than five years, to ensure consistency in the measurement basis for all Tier 2 instruments.

The valuation adjustment excess (€ 48 million) determined in accordance with Article 62 lit. d) of the CRR within the scope of the comparison of value adjustments pursuant to Article 159 of the CRR is another component of Tier 2 capital.

Reconciliation of regulatory own funds to balance sheet in the audited financial statements

To fulfil the disclosure requirements in accordance with Article 437 lit. a) of the CRR, the equity items of table EU CC1 are clearly allocated to the line items contained in the following table via column c. The granularity of the line items disclosed corresponds to the statement of financial position in our Annual Report.

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

	a	b	c
	Balance sheet as at 31 December 2021		
€ mn	as in published financial statements	under regulatory scope of consolidation	Reference
Assets			
Financial assets (ac)	**42,345**	**42,389**	
Cash funds (ac)	6,942	6,942	
Loan receivables (ac)	29,434	29,569	
Money market and capital market receivables (ac)	5,884	5,828	
Receivables from other transactions (ac)	85	51	
Loss allowance (ac)	-492	-493	
Financial assets (fvoci)	**3,753**	**3,735**	
Money market and capital market receivables (fvoci)	3,749	3,734	F
Equity instruments (fvoci)	4	2	F

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€ mn	a	b	c
	Balance sheet as at 31 December 2021		
	as in published financial statements	under regulatory scope of consolidation	Reference
Financial assets (fvpl)	**1,734**	**1,832**	
Loan receivables (fvpl)	598	597	F
Money market and capital market receivables (fvpl)	4	103	F
Positive market value of designated hedging derivatives (fvpl)	900	900	
Positive market value of other derivatives (fvpl)	232	231	
Investments accounted for using the equity method	19	199	
Intangible assets	394	25	G
Property and equipment	278	205	
Income tax assets	66	59	
Deferred tax assets	168	166	H
Other assets	463	435	
Total assets	**48,728**	**48,553**	
Equity and liabilities			
Financial liabilities (ac)	**43,017**	**43,087**	
Money market and capital market liabilities (ac)	30,597	30,651	
Deposits from the housing industry (ac)	11,717	11,767	
Liabilities from other transactions (ac)	94	60	
Subordinated liabilities (ac)	609	609	J
Financial liabilities (fvpl)	**1,882**	**1,882**	
Negative market value of designated hedging derivatives (fvpl)	971	971	F
Negative market value of other derivatives (fvpl)	911	911	F
Provisions	558	499	
Income tax liabilities	17	14	
Deferred tax liabilities	56	37	
Other liabilities	137	38	
Equity	**3,061**	**2,995**	
Subscribed capital	180	180	A
Capital reserves	721	721	B
Retained earnings	1,937	1,921	C, E
AT1 bond	300	300	I
Other reserves	-143	-127	D
Non-controlling interests	66	0	
Total liabilities	**48,728**	**48,553**	

Risk-weighted assets and regulatory capital requirements

In accordance with Article 438 lit. a) of the CRR, a credit institution has to disclose "... a summary of the ... approach to assessing the adequacy of its internal capital to support current and future activities". The related information can be found in the chapter "Risk-bearing capacity and risk limits" (page 10 et seqq.) in this Disclosure Report.

The regulatory capital requirements for a transaction's counterparty credit risk under the CRSA are essentially based on the following:

1. the regulatory classification (balance sheet, off-balance sheet, or derivatives business);
2. the amount of the loan at the time of default (Exposure at Default – "EaD");

and, under the AIRBA, additionally depends on

3. the Probability of Default (PD); as well as
4. the Loss Given Default (LGD).

The credit conversion factors for off-balance sheet transactions are predefined by the supervisory authorities for capital requirements under the CRSA. The borrowers are subdivided into exposure classes; the exposure amounts are risk-weighted, based on their external ratings.

As at 31 December 2021, no risks associated with outstanding delivery as part of counterparty risks had to be taken into account when determining counterparty usage limits.

Based on the AIRBA or CRSA calculation approach, the following RWAs and capital requirements were determined as at the reporting date for the types of risk that are relevant for regulatory purposes.

EU OV1: Overview of risk-weighted assets (RWAs)[1)]

		a	b	c
		RWAs		Regulatory capital requirements
€ mn		31 Dec 2021	30 Sep 2021	31 Dec 2021
1	**Credit risk (excluding CCR)**	**8,934**	**9,273**	**715**
2	of which: Credit Risk Standard Approach (CCR)	1,030	974	82
3	of which: Foundation IRB Approach (FIRB)	–	–	–
4	of which: slotting approach	–	–	–
EU 4a	of which: Equity exposures under the simple risk-weighted approach	757	754	61
5	of which: Advanced IRB Approach (AIRBA)	7,147	7,545	572
6	**CCR**	**381**	**372**	**31**
7	of which: standardised approach	207	210	17
8	of which: internal model method (IMM)	–	–	–
EU 8a	of which: exposures to a CCP	5	6	0
EU 8b	of which: credit valuation adjustment – CVA	169	156	14
9	of which: other CCR	0	–	0
15	**Settlement risk**	**–**	**–**	**–**
16	**Securitisation exposures in the banking book (after the cap)**	**–**	**–**	**–**
17	of which: SEC-IRBA approach	–	–	–
18	of which: SEC-ERBA (including IAA)	–	–	–
19	of which: SEC-SA approach	–	–	–
EU 19a	of which: 1.250 % / deduction	–	–	–

[1)] The RWAs disclosed in this report do not reflect the RWAs published in the Annual Report, which are based on an RWA estimate, using the revised AIRBA for commercial property lending, based on the European Commission's draft for the European implementation of Basel IV dated 27 October 2021.

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€ mn		a	b	c
			RWAs	Regulatory capital requirements
		31 Dec 2021	30 Sep 2021	31 Dec 2021
20	**Market risk (position, foreign exchange and commodities risks)**	**–**	**27**	**–**
21	of which: standardised approach	–	27	–
22	of which: IMA	–	–	–
EU 22a	**Large exposures**	**–**	**–**	**–**
23	**Operational risk**	**1,131**	**1,131**	**90**
EU 23a	of which: basic indicator approach	15	15	1
EU 23b	of which: standardised approach	1,116	1,116	89
EU 23c	of which: advanced measurement approach	–	–	–
24	**Amounts below the thresholds for deduction (subject to 250 % risk weight)**	**384**	**385**	**31**
29	**Total**	**10,446**	**10,803**	**836**

In accordance with Annex II of Commission Implementing Regulation (EU) 2021/637, the disclosure of RWA of deferred tax assets in line 24 is only for information, since they are already reflected in line 2 of the disclosure table.

Regarding the causes of RWA changes during the fourth quarter of 2021, reference is made to the explanations in the chapter "Overview of regulatory key metrics".

In the following table EU CR10.5, the equity investments reported under the AIRBA and previously disclosed on a consolidated level – for which the simple risk-weighted approach is used exclusively pursuant to Article 155 (2) of the CRR – are disclosed separately according to the risk exposures determined in the Regulation.

The specialised lendings held in the portfolio as at the current disclosure date are not assigned any regulatory risk weights prescribed in accordance with Article 153 (5) of the CRR. Therefore, the tables EU CR10.1 to EU CR10.4 are not disclosed.

EU CR10.5: Equity IRB under the simple risk-weighted approach

Regulatory categories	a	b	c	d	e	f
	Equity exposures under the simple risk-weighted approach					
	On-balance sheet exposures	Off-balance sheet exposures	Risk weight	Exposure at default	RWAs	Expected loss amount
€ mn						
Private equity exposures	–	–	190 %	–	–	–
Listed investments	0	–	290 %	0	0	0
Other equity investments	205	–	370 %	205	757	5
Total	**205**	**–**		**205**	**757**	**5**

Countercyclical Buffer

The countercyclical capital buffer (CCB) is a macroprudential tool used by banking supervisors to counteract the risk of excessive credit growth in the banking sector and to contribute building up an additional capital buffer to provide for hard times. The purpose of the capital buffer is to increase the loss-absorbing capacity of banks throughout the credit cycle. The value for the CCB usually amounts to between 0 and 2.5 %; it is determined on a quarterly basis by the national supervisory authority of the respective country, based on a variety of economic factors, in particular the ratio of lending volumes to gross domestic product.

EU CCyB1: Geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer

	a	b	c	d	e	f
	General credit risk exposures		Relevant credit exposures – Market risk		Securitisation exposures – Exposure value in the banking book	Total risk exposure amount
	Exposure value under the Credit Risk Standard Approach	Exposure value under the IRB approach	Sum of long and short positions of trading book exposures under the standardised approach	Value of trading book exposures for internal models		
	€ mn	€ mn	€ mn	€ mn	€ mn	€ mn
010 Breakdown by country						
Germany	815	4,047	–	–	–	4,862
Belgium	–	443	–	–	–	443
Austria	–	373	–	–	–	373
Switzerland	0	330	–	–	–	330
France	235	3,471	–	–	–	3,706
UK	107	5,141	–	–	–	5,248
Ireland	0	58	–	–	–	58
Luxembourg	0	161	–	–	–	161
Netherlands	40	1,333	–	–	–	1,373
Denmark	–	104	–	–	–	104
Sweden	34	912	–	–	–	946
Finland	16	498	–	–	–	514
Norway	55	–	–	–	–	55
Hungary	–	10	–	–	–	10
Italy	0	1,172	–	–	–	1,172
Spain	0	1,526	–	–	–	1,526
Turkey	–	75	–	–	–	75
Czech Republic	0	149	–	–	–	149
Poland	–	1,384	–	–	–	1,384
Estonia	–	46	–	–	–	46
Russia	0	214	–	–	–	214

The institution-specific countercyclical capital buffer is calculated as the weighted average of the countercyclical capital buffers applicable to the countries where the respective institution is exposed to significant credit risks. The institution is obliged to maintain this weighted average as a percentage of risk-weighted assets (RWAs) in the form of Common Equity Tier I capital. Significant credit risk exposures are defined in section 36 of the German Solvency Regulation (Solvabilitätsverordnung – "SolvV") and comprise exposures to corporate and private clients.

The following two disclosure tables are based on the requirements set out in Article 5 of Commission Implementing Regulation (EU) 2021/637 dated 15 March 2021.

g	h	i	j	k	l	m
Regulatory capital requirements				Risk-weighted exposure amounts	Weightings of regulatory capital requirements	Countercyclical capital buffer ratio
Relevant credit risk exposures – Credit risk	Relevant credit exposures – Market risk	Relevant credit exposures – Securitisation exposures in the banking book	Total			
€ mn	€ mn	€ mn	€ mn	€ mn	%	%
210	–	–	210	2,621	30.66	–
6	–	–	6	75	0.88	–
4	–	–	4	53	0.62	–
4	–	–	4	50	0.58	–
36	–	–	36	447	5.24	–
62	–	–	62	780	9.12	–
1	–	–	1	9	0.10	–
4	–	–	4	53	0.62	0.50
19	–	–	19	236	2.76	–
1	–	–	1	12	0.14	–
4	–	–	4	53	0.62	–
8	–	–	8	106	1.23	–
0	–	–	0	6	0.06	
0	–	–	0	5	0.06	1.00
54	–	–	54	672	7.86	–
25	–	–	25	312	3.65	–
10	–	–	10	120	1.40	–
2	–	–	2	31	0.36	0.50
33	–	–	33	417	4.88	–
0	–	–	0	3	0.03	–
13	–	–	13	158	1.85	–

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	a	b	c	d	e	f
	General credit risk exposures		Relevant credit exposures – Market risk		Securitisation exposures – Exposure value in the banking book	Total risk exposure amount
	Exposure value under the Credit Risk Standard Approach	Exposure value under the IRB approach	Sum of long and short positions of trading book exposures under the standardised approach	Value of trading book exposures for internal models		
	€ mn	€ mn	€ mn	€ mn	€ mn	€ mn
USA	50	7,624	–	–	–	7,674
Cayman Islands	–	2	–	–	–	2
Canada	–	1,475	–	–	–	1,475
China	–	161	–	–	–	161
Maldives	–	435	–	–	–	435
Australia	–	616	–	–	–	616
020 Total	1,353	31,757	–	–	–	33,110

EU CCyB2: Amount of institution-specific countercyclical capital buffer

€ mn		a
010	Total risk exposure amount	10,446
020	Institution-specific countercyclical capital buffer rate	0.01 %
030	Institution-specific countercyclical capital buffer requirement	1

Credit Risks and General Information on Credit Risk Mitigation

Management of credit risks

Definition

Aareal Bank defines credit risk as the risk of losses being incurred due to (i) a deterioration in a business partner's credit quality (migration risk); (ii) a business partner defaulting on contractual obligations; (iii) collateral being impaired; or (iv) a risk arising upon realisation of collateral. Both credit business and trading activities may be subject to counterparty credit risk. Counterparty credit risk exposure from trading activities may refer to risk exposure vis-à-vis counterparties or issuers. Country risk is also defined as a form of counterparty credit risk.

Credit risk strategy

Based on the Bank's overall business strategy, Aareal Bank's credit risk strategy sets out all material aspects of the Group's credit risk management and policies. The credit risk strategy serves as a strategic guideline for dealing with each respective category of risk within Aareal Bank Group; it also provides a binding, overarching framework applicable to all divisions.

g	h	i	j	k	l	m
Regulatory capital requirements				Risk-weighted exposure amounts	Weightings of regulatory capital requirements	Counter-cyclical capital buffer ratio
Relevant credit risk exposures – Credit risk	Relevant credit exposures – Market risk	Relevant credit exposures – Securitisation exposures in the banking book	Total			
€ mn	€ mn	€ mn	€ mn	€ mn	%	%
125	–	–	125	1,563	18.29	–
0	–	–	0	2	0.02	–
30	–	–	30	377	4.41	–
7	–	–	7	93	1.08	–
19	–	–	19	234	2.73	–
5	–	–	5	62	0.73	–
684	**–**	**–**	**684**	**8,548**	**100.00**	

The credit risk strategy will be reviewed, at least once a year, as to its suitability regarding the Bank's risk-bearing capacity and its business environment; amendments will be made as necessary. In this context, we also incorporate ESG criteria to assess the properties' sustainable intrinsic value. The associated process is instigated by senior management, and implemented by Risk Controlling, which submits a proposal, which has been agreed upon with all divisions, to senior management. The credit risk strategy adopted is subsequently discussed by the Supervisory Board.

Designed in principle for a medium-term horizon, the credit risk strategy is adapted when necessary to reflect material changes in the Group's credit risk and business policies, or in the Group's business environment.

Risk measurement and monitoring

Regulatory requirements are taken into account for the organisation of operations and workflows in the credit and trading business.

Processes in the credit and trading businesses are designed to consistently respect the clear functional division of Sales units ("Markt") and Credit Management ("Marktfolge"), up to and including senior management level. The independent Risk Controlling division is responsible for identifying, quantifying and monitoring all material risks at portfolio level, and for maintaining a targeted risk reporting system.

Aareal Bank employs different risk classification procedures tailored to the requirements of the respective type of business for the initial, regular, or event-driven assessment of counterparty credit risk. Forward-looking as well as macro-economic information is taken into consideration for risk classification procedures, and in the valuation of collateral. The respective procedures and parameters are subject to regular review and adjustment. Responsibility for development, quality assurance, and monitoring implementation of procedures, is outside the Sales units.

Against the background of the Covid-19 pandemic, special attention is currently paid to macro-economic forecasts. In the context of this ongoing review, we also rely on projections published by the ECB, apart from those issued by our usual data providers. Yet estimation uncertainties are currently much higher than usual, as the pandemic has provoked a situation unprecedented in recent history. Data and experience are therefore both lacking.

We use two different credit risk models to measure, control and monitor concentration and diversification effects on a portfolio level. These are supplemented by limits on individual and sub-portfolio level to facilitate operating management. Based on these instruments, the Bank's decision-makers are regularly informed of the performance and risk content of property financing exposures, and of business with financial institutions. The models in question allow the Bank to include in particular rating changes and correlation effects in the assessment of the risk concentrations.

Within the process-oriented monitoring of individual exposures, the Bank uses various tools to monitor exposures on an ongoing basis: besides the tools already described, this includes rating reviews, the monitoring of payment arrears, and the regular, individual analysis of the largest exposures. The intensity of loan coverage is oriented upon the credit risk exposure.

Against the background of the Covid-19 pandemic, Aareal Bank was in close contact with most property financing clients with mandatory rating, and has amended contractual arrangements to clients' updated business plans to the extent necessary and possible. Given the lockdown, this primarily affected financings of hotels and shopping centres, as well as involving waivers of certain contractual agreements without impact on payments (covenants). Our clients and sponsors have provided a significant portion of the required liquidity from their own resources. In addition, funds obtained from government assistance were used and a few clients reduced their exposures. The gross carrying amount of the on-balance-sheet lending business under government moratoria amounted to € 4 million, whilst the gross carrying amount of on-balance sheet lending business subject to Covid-19-related forbearance measures amounted to € 6.6 billion.

On top of existing processes, additional measures were implemented for those portfolios particularly affected by the Covid-19 pandemic, such as retail, hotels, and student housing. These portfolios were subject to particular monitoring (regardless of whether liquidity facilities were provided), including ad-hoc valuation reviews of the financed properties, which were increasingly backed by external appraisals. The frequency for periodic monitoring and internal rating (which also comprise a detailed target/actual comparison of the business plan) was adjusted to a semi-annual cycle. The CRE Credit Risk Committee was closely involved in evaluating and assessing all credit or monitoring decisions. A separate reporting system was established for the affected portfolios, enabling follow-ups of individual exposures and providing credit-relevant information, in order to be able to derive suitable measures at portfolio level, at an early stage.

When accounting for these measures, we have taken the recommendations made by the IASB, and by relevant regulatory authorities such as the EBA, the ECB and ESMA, into consideration – with the objective of providing a realistic assessment of expected losses. Intensified handling triggers recognition of loss allowance, in the amount of lifetime expected credit loss for the financial instrument concerned (Stage 2). The same applies for financings for which a forbearance measure has been granted.

Monthly reporting covers the material aspects of credit risk; it is supplemented by detailed information – which also fully covers specific credit portfolio developments (broken down by country, property and

product type, risk classes, and collateral categories, for example), in line with regulatory requirements – at least on a quarterly basis. Risk concentrations are being taken into account in particular.

Trading activities are restricted to counterparties for whom the requisite limits are in place. All trades are immediately taken into account for the purposes of borrower-related limits. Compliance with limits is monitored in real time by Risk Controlling. Persons holding position responsibility are informed about relevant limits and their current usage, regularly and without delay.

In principle, Aareal Bank pursues a 'buy and manage' strategy in managing its credit portfolio – with the primary objective of holding the majority of loans extended on its balance sheet until maturity; at the same time, targeted exit measures are deployed for actively managing the portfolio and the risks involved.

In summary, during the period under review, the existing set of tools and methods continued to enable the Bank to adopt suitable risk management or risk mitigation measures, where required, without any undue delay.

Loss allowance

The best way to provide for risks is to carefully review such risks before granting a loan. We embrace this fundamental principle by adopting a multi-level review process, using (amongst others) our well-trained, experienced employees in the credit divisions.

As a property finance specialist, we not only focus on the borrower's credit rating but also carry out an in-depth analysis of the value and profitability of the property pledged as collateral.

Despite all the due care taken, events occasionally occur that can lead to impairment or even default. Our credit management teams are obliged to follow certain rules for these receivables when the first signs emerge that a loan might become impaired.

Our specialised and high-volume business requires us to maintain close contact with clients. Apart from events that can be determined objectively, such as when a loan is in arrears, or when a borrower fails to meet disclosure duties, the first signs of potential problems comprise a series of soft factors

The responsible loan manager is informed of such soft factors, for example, by analysing performance reports. If there is evidence of events that could hamper the continuity of payments, the exposure is flagged in line with the risks involved.

The intensity of the attendant measures to be taken depends on the extent of the potential default, the internal assessment of the borrower/property, plus time-related and legal issues. All events are examined on a case-by-case basis.

Definition of terms and allowance process

Regulatory disclosure follows accounting policies in accordance with IFRS 9. The loss allowance to be recognised in this context is based on the internal staging and expected credit loss (ECL/EL) model. For this purpose, financial instruments of the categories "measured at amortised cost" (ac) and "measured at fair value through other comprehensive income" (fvoci) as well as loan commitments and financial

guarantees are allocated to various stages at both initial recognition and subsequent measurement. The related loss allowances are recognised in the amount of the twelve-month or the lifetime expected credit loss (lifetime ECL or LEL).

Stage 1: All financial instruments without impairment trigger are allocated to this stage at initial recognition. Any disposal and addition involving a substantial modification does not result in a change of allocation. If the credit risk is not significantly increased, the financial instrument has to remain in Stage 1 for subsequent measurement. Loss allowances are recognised in the amount of the losses expected for the following twelve months and interest income is calculated on the basis of the gross carrying amount, applying the effective interest method. Loss allowances have to be recognised on a present value basis.

Stage 2: All financial instruments where credit risk has increased significantly since initial recognition are allocated to this stage. Any disposal and addition involving a substantial modification does not result in a change of allocation. Loss allowances are recognised in the amount of the losses expected for the entire remaining term of the instrument and interest income is calculated on the basis of the gross carrying amount, applying the effective interest method. Loss allowances have to be recognised on a present value basis. The significant increase in credit risk for the allocation to Stage 2 is determined using the so-called bank-internal expected downgrade staging model and taking into consideration quantitative and qualitative criteria such as the credit rating of the client, the intensity of client handling (intensified handling), the existence of forbearance measures and/or payment defaults. If the significant increase in credit risk no longer applies, the financial instrument is re-transferred to Stage 1.

Stage 3: This stage includes all financial instruments where there is objective evidence of impairment (impairment trigger or credit impaired). Loss allowances are recognised in the amount of the losses of the lifetime expected credit loss, and interest income is calculated on the basis of the net carrying amount (i. e. gross carrying amount less loss allowance) using the effective interest method. The lifetime expected credit loss in Stage 3 is determined as the difference between the gross carrying amount and the present value of expected future cash flows (discounted using the original effective interest). If the impairment triggers no longer apply, the financial instrument is re-transferred to Stage 1 or 2.

POCI (purchased or originated credit impaired): This category includes all financial instruments that were subject to an impairment trigger at initial recognition. The loss allowance is recorded in the amount of the lifetime expected credit loss.

The expected credit loss is generally determined by Aareal Bank using a model-based procedure where, depending on the stage, one- or multi-year parameters are used. The calculation of the expected loss in Stage 1 and of lifetime expected credit loss in Stage 2 is based on the one-year or lifetime probability of default (PD), respectively, the forecast loss given default (LGD), the expected exposure at default (EAD), a discount factor (DF) and the expected contractual term. Current and expected country-specific economic conditions such as the GDP, long-term interest rates and unemployment rate are included in the LGD by means of a scenario-weighted market value forecast. This probability-weighted scenario mix reflects the uncertainties as to how the Covid-19 pandemic will develop further and supplements our baseline scenario (swoosh) with the addition of divergent developments over an observation period of three years. In addition, the economic outlook is taken into consideration implicitly in the estimation of the future development of the borrowers' financial position and performance and the expected property cash flows and, hence, in the probability of default (PD).

A period of not more than twelve months is assessed for Stage 1, while the expected contractual term of the financial instrument has to be taken into account for Stages 2 and 3 (and, in addition, the expected term for repayment of the financial instrument in Stage 3).

The expected loss in Stage 3 is usually determined on the basis of individually estimated cash flows (ECF procedure) in three probability-weighted scenarios. The amount of the loss allowance is determined as being the difference between the carrying amount of the asset and the present value of the expected future cash flows, discounted using the original effective interest rate applicable at initial recognition or after the most recent interest rate adjustment in the case of variable-rate financial instruments (taking into account cash flows from realisation of collateral provided). Collateral is largely provided in the form of land charges or mortgages; these are measured at fair value of the respective scenario which is generally based on either the income capitalisation approach or the discounted cash flow method. Impairment triggers are strong indications for a decline of the borrower's credit quality, arrears, external expert opinions as well as further indications that not all interest and principal payments can be made as contractually agreed.

The loss allowance for debt instruments measured at amortised cost is reported in the item "Loss allowance (ac)", for debt instruments measured at fair value through other comprehensive income in the item "Reserve from the measurement of debt instruments (fvoci)" and for loan commitments and financial guarantees under provisions. Debt instruments reported under POCI are accounted for on a net basis, i.e. without any loss allowance. Changes in loss allowance are reflected by increasing or decreasing the carrying amount through other loss allowance.

If the receivables are not recoverable, the corresponding loss allowance is utilised and the receivable is derecognised. Direct write-offs are not made.

The loss allowance for receivables from other transactions is determined using a simplified procedure in the amount of the lifetime expected credit losses.

Aareal Bank believes that the impairment triggers provided as examples in IFRS 9 and the reasons for default set out in Article 178 of the CRR are identical in substance and can thus be applied interchangeably. Consequently, at the time of default, the risk exposure affected is allocated to stage 3 within the loss allowance process in accordance with Article 178 of the CRR and is considered to be defaulted, and hence non-performing, for both regulatory and accounting purposes.

According to the EBA guidelines on the application of the definition of default under Article 178 of the CRR (EBA/GL/2016/07), a default can be omitted, amongst other criteria, especially after a certain grace period (3 months or 12 months). This means that even if the economic reasons for a default do no longer apply (and the exposures are no longer allocated to stage 3), the financial instruments continue to be recorded as defaulted or non-performing for the grace period for supervisory purposes.

For financial instruments of the category "measured at fair value through profit or loss (fvpl)", the default of a borrower does not lead to the recognition of loss allowance in Stage 3, but to a creditinduced fair value adjustment.

In the absence of any other reasons for default, all liabilities of a borrower that are up to 90 days past due are deemed overdue, but not defaulted.

Forbearance

"Forbearance" means concessions in the form of contractual amendments vis-à-vis a debtor which is in financial difficulty (or would be in financial difficulty, at the time of the contractual amendments, without the forbearance measure), enabling the debtor to continue or resume to meet its payment obligations. Such a modification of the loan agreement is deemed to constitute a significant increase in credit risk since the recognition of the financial instrument. The financial instrument is allocated to stage 2 and loss allowance is recognised in the amount of the lifetime ECL.

Credit quality of exposures

In the following tables, the breakdown of exposures and the related loss allowances required by Article 442 lit. c) – g) of the CRR, as submitted to banking supervisors in the context of Financial Reporting (FINREP), are disclosed with different levels of detail. In this context, exposures resulting from counterparty credit risk exposures are not taken into account; these are disclosed separately in this report.

The information is based on the requirements set out in Annex XVI of Commission Implementing Regulation (EU) 2021/637 on the disclosure of non-performing and forborne exposures.

The NPL ratio determined in accordance with Article 8 (3) (4) of the Implementing Regulation mentioned above amounts to 5.3 % as at 31 December 2021.

Table EU CQ1 provides information on the gross carrying amount of forborne exposures (i.e. exposures with forbearance measures), and on the coverage of existing risks through loss allowance as well as collateral received. In this context, the measurement of collateral received differs from the current market value of such collateral, due to the fact that a different internal realisation rate is being applied, depending on the type of property and the country where the property is located; and reflecting a cap on any collateral at the carrying amount.

EU CQ1: Credit quality of forborne exposures

	a	b	c	d	e	f	g	h
	Gross carrying amount/nominal amount of exposures with forbearance measures				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collateral received and financial guarantees received on forborne exposures	
	Performing forborne exposures	Non-performing forborne exposures			On performing forborne exposures	On non-performing forborne exposures		of which: collateral received and financial guarantees received on non-performing exposures with forbearance measures
€ mn			of which: defaulted	of which: impaired				
005 Cash balances at central banks and other demand deposits	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
010 Loans and advances	**6,755**	**1,294**	**1,294**	**1,121**	**-55**	**-437**	**7,326**	**731**
020 Central banks	–	–	–	–	–	–	–	–
030 General governments	–	–	–	–	–	–	–	–

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€ mn		a	b	c	d	e	f	g	h
		Gross carrying amount/nominal amount of exposures with forbearance measures				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collateral received and financial guarantees received on forborne exposures	
		Performing forborne exposures	Non-performing forborne exposures			On performing forborne exposures	On non-performing forborne exposures		of which: collateral received and financial guarantees received on non-performing exposures with forbearance measures
				of which: defaulted	of which: impaired				
040	Credit institutions	–	–	–	–	–	–	–	–
050	Other financial corporations	81	27	27	27	0	-21	84	3
060	Non-financial corporations	6,674	1,267	1,267	1,093	-55	-415	7,242	728
070	Households	–	1	1	1	–	-1	–	–
080	**Debt securities**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
090	**Loan commitments given**	**66**	**6**	**6**	**6**	**1**	**–**	**60**	**–**
100	**Total**	**6,821**	**1,301**	**1,301**	**1,127**	**-54**	**-437**	**7,386**	**731**

Table EU CQ2 shows the gross carrying amount of all loans and advances to borrowers which were forborne more than twice in the past due to financial difficulties (forbearance measures). On the reporting date, the Bank's portfolio contained one borrower which fails to comply with exit criteria for being classified as nonperforming after a forbearance measure (line 020).

EU CQ2: Quality of forbearance

€ mn		a Gross carrying amount of forborne exposures
010	Loans and advances which were forborne more than twice	984
020	Non-performing forborne loans and advances that failed to meet the non-performing exit criteria	17

Table EU CR1 does not take into account financial assets held for trading. In addition to the disclosures on non-performing exposures, the table also discloses loss allowances and provisions attributable to performing exposures.

Besides information on accumulated impairment for non-performing exposures, columns j to l also require disclosure of negative changes in fair value due to credit risk. The limitation to negative changes in a borrower's credit risk is due to such negative changes being de facto equivalent to an impairment implied by fair value, whereby no impairment is recognised for assets carried at fair value through profit and loss. Accordingly, the gross carrying amount of these exposures was increased by the fair value change induced by credit quality.

In addition, columns n and o specify the collateral (property, financial collateral, deposits held with third-party institutions) and financial guarantees (as defined by the CRR) which Aareal Bank has received for the exposures analysed. However, the respective values are capped at the carrying amount of the respective exposure.

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

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
	Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions						Accumulated partial write-off	Collateral and financial guarantees received	
	Performing exposures			Non-performing exposures			Performing exposures – accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions				On performing exposures	On non-performing exposures
€ mn		of which: Stage 1	of which: Stage 2		of which: Stage 2	of which: Stage 3		of which: Stage 1	of which: Stage 2		of which: Stage 2	of which: Stage 3			
005 Cash balances at central banks and other demand deposits	**8,018**	**8,016**	**3**	**–**	**–**	**–**	**0**	**0**	**0**	**–**	**–**	**–**	**–**	**–**	**–**
010 Loans and advances	**29,935**	**20,951**	**8,984**	**1,680**	**1**	**1,505**	**-88**	**-10**	**-78**	**-495**	**0**	**-403**	**-99**	**27,132**	**1,002**
020 Central banks	6	6	–	–	–	–	0	0	–	–	–	–	–	–	–
030 General governments	2,014	2,014	0	–	–	–	0	0	0	–	–	–	–	–	–
040 Credit institutions	48	48	–	–	–	–	0	0	–	–	–	–	–	–	–
050 Other financial corporations	898	589	309	32	–	32	-3	-1	-2	-24	–	-24	-4	827	6
060 Non-financial corporations	26,608	18,194	8,414	1,643	–	1,470	-82	-8	-73	-469	–	-377	-94	26,006	994
070 of which: SMEs	19,097	11,765	7,332	1,577	–	1,426	-69	-4	-64	-424	–	-354	-94	18,773	973
080 Households	360	99	260	5	1	3	-3	0	-3	-2	0	-2	0	298	2
090 Debt securities	**6,663**	**6,477**	**186**	**–**	**–**	**–**	**-3**	**-1**	**-2**	**–**	**–**	**–**	**–**	**–**	**–**
100 Central banks	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
110 General governments	4,809	4,623	186	–	–	–	-2	0	-2	–	–	–	–	–	–
120 Credit institutions	1,219	1,219	–	–	–	–	0	0	–	–	–	–	–	–	–
130 Other financial corporations	635	635	–	–	–	–	0	0	–	–	–	–	–	–	–
140 Non-financial corporations	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
150 Off-balance sheet exposures	**1,197**	**953**	**245**	**6**	**–**	**6**	**6**	**1**	**5**	**–**	**–**	**–**		**605**	**–**
160 Central banks	–	–	–	–	–	–	–	–	–	–	–	–		–	–
170 General governments	–	–	–	–	–	–	–	–	–	–	–	–		–	–
180 Credit institutions	–	–	–	–	–	–	–	–	–	–	–	–		–	–
190 Other financial corporations	12	12	–	–	–	–	0	0	–	–	–	–		12	–
200 Non-financial corporations	1,185	940	245	6	–	6	6	1	5	–	–	–		593	–
210 Households	0	0	0	–	–	–	0	–	0	–	–	–		–	–
220 Total	**45,814**	**36,396**	**9,417**	**1,686**	**1**	**1,512**	**-85**	**-10**	**-75**	**-495**	**0**	**-403**	**-99**	**27,737**	**1,002**

Table EUR CR1-A provides an overview of the net carrying amounts of loans and advances previously disclosed in table EU CR1 as well as debt securities, broken down by remaining term to maturity. The remaining term to maturity is determined on the basis of the contractually agreed term of the exposure. Column a comprises exposures due on demand.

EU CR1-A: Maturity of exposures

	a	b	c	d	e	f
	Net carrying amount					
€ mn	On demand	up to 1 year	> 1 year ≤ 5 years	> 5 years	No stated maturity	Total
1 Loans and advances	475	3,756	21,717	5,069	15	**31,032**
2 Debt securities	–	1,015	1,681	3,965	–	**6,661**
3 Total	**475**	**4,771**	**23,398**	**9,034**	**15**	**37,693**

Past-due exposures shown in table EU CQ3 (whether impaired or not) are broken down across specified past-due maturity bands. For a definition of “past due”, please refer to the statements in the chapter “Loss allowance” (page 47).

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

	a	b	c	d	e	f	g	h	i	j	k	l
	Gross carrying amount/nominal amount											
	Performing exposures			Non-performing exposures								
€ mn		Not past due or past due ≤ 30 days	Past due > 30 days ≤ 90 days		Unlikely to pay that are not past due or are past due ≤ 90 days	Past due > 90 days ≤ 180 days	Past due > 180 days ≤ 1 year	Past due > 1 year ≤ 2 years	Past due > 2 years ≤ 5 years	Past due > 5 years ≤ 7 years	Past due > 7 years	of which: defaulted
005 Cash balances at central banks and other demand deposits	**8,018**	**8,018**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
010 Loans and advances	**29,935**	**29,913**	**22**	**1,680**	**991**	**133**	**221**	**21**	**90**	**5**	**219**	**1,680**
020 Central banks	6	6	–	–	–	–	–	–	–	–	–	–
030 General governments	2,014	2,014	–	–	–	–	–	–	–	–	–	–
040 Credit institutions	48	48	–	–	–	–	–	–	–	–	–	–
050 Other financial corporations	898	898	–	32	–	–	–	–	27	5	1	32
060 Non-financial corporations	26,608	26,587	22	1,643	989	133	220	20	63	–	218	1,643
070 of which: SMEs	19,097	19,075	22	1,577	986	133	220	20	40	–	177	1,577
080 Households	360	360	0	5	2	0	0	1	0	0	0	5

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	a	b	c	d	e	f	g	h	i	j	k	l
	Gross carrying amount/nominal amount											
	Performing exposures			Non-performing exposures								
€ mn		Not past due or past due ≤ 30 days	Past due > 30 days ≤ 90 days		Unlikely to pay that are not past due or are past due ≤ 90 days	Past due > 90 days ≤ 180 days	Past due > 180 days ≤ 1 year	Past due > 1 year ≤ 2 years	Past due > 2 years ≤ 5 years	Past due > 5 years ≤ 7 years	Past due > 7 years	of which: defaulted
090 Debt securities	**6,663**	**6,663**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
100 Central banks	–	–	–	–	–	–	–	–	–	–	–	–
110 General governments	4,809	4,809	–	–	–	–	–	–	–	–	–	–
120 Credit institutions	1,219	1,219	–	–	–	–	–	–	–	–	–	–
130 Other financial corporations	635	635	–	–	–	–	–	–	–	–	–	–
140 Non-financial corporations	–	–	–	–	–	–	–	–	–	–	–	–
150 Off-balance sheet exposures	**1,197**			**6**								**6**
160 Central banks	–			–								–
170 General governments	–			–								–
180 Credit institutions	–			–								–
190 Other financial corporations	12			–								–
200 Non-financial corporations	1,185			6								6
210 Households	0			–								–
220 Total	45,814	44,594	22	1,686	991	133	221	21	90	5	219	1,686

In line with tables EU CR1 and EU CQ3, table EU CQ4 also does not take into account financial assets held for trading. In addition to the disclosures on non-performing exposures, this table also discloses loss allowances and provisions attributable to performing exposures. The information is broken down by relevant countries. In this context, a country with an exposure of at least € 300 million is considered relevant. The allocation is based on the borrower's country of domicile.

EU CQ4: Credit quality of non-performing exposures by geography

		a	b	c	d	e	f	g
		Gross carrying/nominal amount				Accumulated impairment	Provisions on off-balance sheet commitments and financial guarantees given	Accumulated negative changes in fair value due to credit risk on non-performing exposures
			of which: non-performing		of which: subject to impairment			
				of which: defaulted				
€ mn								
010	**On-balance sheet exposures**	**46,296**	**1,680**	**1,680**	**46,123**	**-494**		**-92**
020	Germany	15,638	7	7	15,638	-16		–
030	France	3,565	150	150	3,565	-6		–
040	Netherlands	1,353	–	–	1,353	-2		–
050	Austria	774	–	–	774	0		–
060	UK	5,505	416	416	5,441	-216		-45
070	Finland	667	101	101	667	-6		–
080	Sweden	899	–	–	899	0		–
090	Italy	1,905	281	281	1,884	-106		0
100	Spain	1,619	205	205	1,619	-57		–
110	Poland	1,311	66	66	1,245	-1		-25
120	Canada	1,472	31	31	1,472	-14		–
130	USA	7,433	398	398	7,433	-57		–
140	Australia	598	–	–	598	0		–
150	Switzerland	314	–	–	314	0		–
160	Maldives	410	–	–	410	-3		–
170	Other countries	2,833	23	23	2,810	-9		-22
180	**Off-balance sheet exposures**	**1,204**	**6**	**6**			**6**	
200	Germany	593	–	–			3	
210	France	226	–	–			1	
220	Netherlands	15	–	–			0	
230	Austria	25	–	–			0	
240	UK	23	2	2			0	
250	Finland	18	–	–			0	
260	Sweden	26	–	–			0	
270	Italy	13	–	–			0	
280	Spain	17	–	–			0	
290	Poland	40	–	–			0	
300	Canada	16	–	–			0	
310	USA	171	5	5			1	
320	Australia	5	–	–			0	
330	Maldives	16	–	–			0	
350	Other countries	3	–	–			0	
360	**Total**	**47,500**	**1,686**	**1,686**	**46,123**	**-494**	**6**	**-92**

In accordance with Annex XVI of Commission Implementing Regulation, table EU CQ5 only shows exposures to non-financial institutions.

The presentation based on industries corresponds to the differentiation by NACE codes in the context of Financial Reporting (FINREP).

As the Group's business is focused on commercial property financing, the real estate activities sector is by far the most relevant industry.

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

		a	b	c	d	e	f
		Gross carrying amount				Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures
			of which: non-performing		of which: loans and advances subject to impairment		
				of which: defaulted			
€ mn							
010	Agriculture, forestry and fishing	–	–	–	–	–	–
020	Mining and quarrying	–	–	–	–	–	–
030	Manufacturing	–	–	–	–	–	–
040	Electricity, gas, steam and air conditioning supply	0	–	–	0	0	–
050	Water supply	2	–	–	2	0	–
060	Construction	75	74	74	58	-11	–
070	Trading	139	61	61	79	0	-42
080	Transport and storage	1	–	–	1	0	–
090	Accommodation and food service activities	1,906	86	86	1,906	–11	–
100	Information and communication	–	–	–	–	–	–
110	Financial and insurance activities	–	–	–	–	–	–
120	Real estate activities	25,823	1,353	1,353	25,727	-405	-50
130	Professional, scientific and technical activities	211	–	–	211	-9	–
140	Administrative and support service activities	3	–	–	3	0	–
150	Public administration and defence; compulsory social security	–	–	–	–	–	–
160	Education	–	–	–	–	–	–
170	Health and social services	–	–	–	–	–	–
180	Arts, entertainment and recreation	0	–	–	0	0	–
190	Other services	90	70	70	90	-23	–
200	**Total**	**28,252**	**1,643**	**1,643**	**28,078**	**-458**	**-92**

As an international property lender, we focus on property in the context of collateralisation. This is also reflected in table EU CQ6, which provides an overview of the quality of collateral received. As the table shows, exposures are almost completely collateralised by property. Our performing property financing portfolio has an average loan-to-value (LtV) ratio of 58%. Please refer to our Annual Report for a breakdown of average LtV ratios by region and by property type.[1]

[1] "Aareal Bank Group 2021 Annual Report": chapter "Financial position", in the Report on the Economic Position of the Group Management Report, page 50 et seqq.

EU CQ6: Collateral valuation – loans and advances

	a	b	c	d	e	f	g	h	i	j	k	l
	Loans and advances											
		Performing		Non-performing								
					Unlikely to pay that are not past due or are past due ≤ 90 days	Past due > 90 days						
€ mn			of which: past due > 30 days ≤ 90 days				of which: past due > 90 days ≤ 180 days	of which: past due > 180 days ≤ 1 year	of which: past due > 1 year ≤ 2 years	of which: past due > 2 years ≤ 5 years	of which: past due > 5 years ≤ 7 years	of which: past due > 7 years
010 Gross carrying amount	31,615	29,935	22	1,680	991	689	133	221	21	90	5	219
020 of which: secured	29,102	27,426	0	1,676	990	686	133	221	21	89	3	219
030 of which: secured with immovable property	28,925	27,250	0	1,675	990	684	133	221	21	89	2	218
040 of which: instruments with LTV higher than 60 % and lower or equal to 80 %	10,667	10,585		82	15	67						
050 of which: instruments with LTV higher than 80 % and lower or equal to 100 %	1,112	704		408	313	95						
060 of which: instruments with LTV higher than 100 %	1,195	74		1,121	660	461						
070 Accumulated impairment for secured assets	-572	-80	0	-492	-280	-212	-93	-30	-4	-46	-1	-38
080 Collateral												
090 of which: value capped at the value of exposure	28,108	27,107	0	1,001	586	415	40	188	16	41	1	128
100 of which: immovable property	27,906	26,926	0	980	565	415	40	188	16	41	1	128
110 of which: value above the cap	485	452	22	33	30	3	–	–	–	–	–	–
120 of which: immovable property	466	432	22	33	30	3	–	–	–	–	–	–
130 Financial guarantees received	26	25	–	1	–	1	–	–	–	–	0	1
140 Accumulated partial writeoffs	-99	-4	–	-94	-11	-84	-19	–	–	-65	–	–

In accordance with EBA requirements set out in Annex XVI of the Implementing Regulation, in table EU CQ7, credit institutions must also disclose negative changes in fair value, in addition to the gross carrying amount at initial recognition of the property when taking possession in order to secure value. Since this information is also disclosed in columns c and d of the following table EU CQ8, with the same level of granularity, we do not assign any additional informational value to the disclosures in table EU CQ7.

Given that Aareal Bank generally pursues the strategy of preventing any further losses from a loan exposure, some of the properties disclosed in table EU CQ8 (p. 58) are investments, some of which are subject to re-positioning and further development, and which may thus be held over several years. Hence, fair value (as well as the carrying amount) can be increased by valueenhancing measures. The following table does not provide any such information. Accumulated impairment and accumulated negative changes in fair value,

as shown in line 010, fully refer to recognised write-downs on the property. Properties shown in line 040 are assigned to current assets. therefore, no separate values are disclosed in columns k and l.

EU CQ8: Collateral obtained by taking possession and execution processes – vintage breakdown (initial recognition)

€ mn	a	b	c	d	e	f	g	h	i	j	k	l
			Total collateral obtained by taking possession									
	Debt balance reduction				Foreclosed ≤ 2 years		Foreclosed > 2 years ≤ 5 years		Foreclosed > 5 years		of which: non-current assets held for sale	
	Gross carrying amount	Accumulated negative changes	Value at initial recognition	Accumulated negative changes	Value at initial recognition	Accumulated negative changes	Value at initial recognition	Accumulated negative changes	Value at initial recognition	Accumulated negative changes	Value at initial recognition	Accumulated negative changes
010 Collateral obtained by taking possession classified as PP&E	59	–	89	–								
020 Collateral obtained by taking possession other than that classified as PP&E	374	-89	305	–	25	–	112	–	168	–	–	–
030 Residential immovable property	13	-4	8	–	–	–	8	–	0	–	–	–
040 Commercial immovable property	361	-85	297	–	25	–	104	–	168	–	–	–
050 Movable property (auto, shipping, etc.)	–	–	–	–	–	–	–	–	–	–	–	–
060 Equity and debt instruments	–	–	–	–	–	–	–	–	–	–	–	–
070 Other collateral	–	–	–	–	–	–	–	–	–	–	–	–
080 Total	**433**	**-89**	**394**	**–**	**25**	**–**	**112**	**–**	**168**	**–**	**–**	**–**

Table EU CR2a outlines the changes within the portfolio of non-performing exposures during the second half of the reporting year 2021. Besides new defaulted loans and advances (shown in line 020), the amounts of exposures removed from the non-performing portfolio (as shown in line 030) are broken down further: in addition to recoveries (line 040), the outflows from the non-performing portfolio are due to partial or full repayments (line 050), proceeds from the liquidation of collateral (either as a result of enforcement against the client, or on the basis of a voluntary bilateral agreement with the borrower), as well as proceeds from individual sales of loans and advances (line 080). Any losses realised due to the factors shown in lines 060 to 090 are not disclosed again in line 100.

Since the information to be disclosed in table EU CR2 is also fully depicted in table EU CR2a, we do not assign any additional informational value to the disclosures in table EU CR2.

EU CR2a: Changes in the stock of non-performing loans and advances and related net accumulated recoveries

€ mn		a Gross carrying amount	b Related net accumulated recoveries
010	**Initial stock of non-performing loans and advances**	**1,714**	
020	Inflows to non-performing portfolios	627	
030	Outflows from non-performing portfolios	-661	
040	Outflow to performing portfolio	-2	
050	Outflow due to loan repayment, partial or total	-146	
060	Outflow due to collateral liquidations	-153	62
070	Outflow due to taking possession of collateral	–	–
080	Outflow due to sale of instruments	-198	127
090	Outflow due to risk transfers	–	–
100	Outflows due to write-offs	-118	
110	Outflow due to other situations	-44	
120	Outflow due to reclassification as held for sale	–	
130	**Final stock of non-performing loans and advances**	**1,680**	

Exposures subject to a general payment moratorium

As a result of the Covid-19 pandemic, both national and European supervisory authorities initiated a number of regulatory activities in the first half of 2020. These include the following disclosure requirements. They are based on the requirements introduced by EBA that were specified as part of the guidelines on reporting and disclosure of exposures subject to measures[1] applied in response to the Covid-19 crisis (EBA/GL/2020/07) and had to be implemented for the first time as at 30 June 2020.

In the following table, only those exposures are assessed that meet the conditions for a general payment moratorium in accordance with Article 10 of EBA Guidelines EBA/GL/2020/02 ("Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the Covid-19 crisis"). As at the reporting date under review, Aareal Bank held no loans or advances newly extended under state guarantee schemes in the context of the Covid-19 crisis. Disclosure of table 3 of EBA guidelines EBA/GL/2020/07 is therefore not required. Moreover, there are no loans and advances in the portfolio which are subject to an ongoing moratorium.

Table 2 shows the exposures for which the moratorium was offered, and their number. In addition, columns e to i show the gross carrying amount of all exposures which are (or were) subject to a payment moratorium, presented by residual maturity of the moratorium. Where the moratorium has already expired (in Germany, in the case at hand), this has also been indicated.

[1] Regarding specific measures related to Covid-19, please refer to the chapter "Management of credit risks" in this Disclosure Report (page 44 et seqq.).

Table 2: Loans and advances by residual maturity of moratoria

	a	b	c	d	e	f	g	h	i
	Number of obligors	Gross carrying amount							
					Residual maturity of moratoria				
€ mn			of which: legislative moratoria	of which: expired	≤ 3 months	> 3 months ≤ 6 months	> 6 months ≤ 9 months	> 9 months ≤ 12 months	> 1 year
1 Loans and advances for which a moratorium was offered	**34**	**4**							
2 Loans and advances for which a moratorium was granted	**34**	**4**	**4**	**4**	**–**	**–**	**–**	**–**	**–**
3 of which: households		4	4	4	–	–	–	–	–
4 of which: collateralised by residential immovable property		4	4	4	–	–	–	–	–
5 of which: non-financial corporations		–	–	–	–	–	–	–	–
6 of which: SMEs		–	–	–	–	–	–	–	–
7 of which: collateralised by commercial immovable properties		–	–	–	–	–	–	–	–

Overall, 34 borrowers were granted legislative moratoria on the basis of requests by the clients. These moratoria refer to consumer credit agreements within the discontinued business in Germany where the moratorium rules have no longer applied since 30 June 2020. No more receivables are affected by ongoing deferrals.

General information on credit risk mitigations

The Bank's Credit Manual contains further details regarding collateral to be used within the Bank. The regulatory inclusion of the collateral reflects our conservative hedging strategy. The collateral employed fulfils the extensive impairment checks and enforcement reviews that are part of the credit process.

For the purpose of the internal estimation of the loss ratio in the case of a borrower default, only collateral that can be allocated to the following categories is taken into account:

- property-related collateral,
- warranties, and
- financial collateral.

The legal minimum requirements regarding collateral and the security interest are reviewed by legal counsels of the Credit Management units. The internal estimation of the loss ratio only uses collateral that is included in Bank-internal approved lists. These security interests are always enforceable. A Bank-internal process ensures that the legal enforceability of all CRR-relevant collateral is subjected to permanent legal monitoring in the jurisdictions relevant for us. If this results in changes, corresponding measures are initiated.

Any collateral must be reviewed in the case of new business, loan extensions, material changes to the collateral structure as well as at certain time intervals and upon certain events. The review covers the legal minimum requirements and the value of the collateral.

In addition to the inclusion of real property liens, we developed a methodology in cooperation with external law firms. This methodology is used to assess other property-related security interests for international financings, including pledges of unlisted shares in a property company or special-purpose entity. On this basis, the rights are taken into consideration for the purpose of the internal loss ratio estimation.

In contrast to the AIRBA, only certain types of impersonal collateral, indemnities and guarantees as well as financial collateral may be used under the CRSA. Commercial and residential property collateral is eligible for inclusion in accordance with the CRSA, albeit not for mitigating credit risk. Loans secured by a real property lien are included instead in a separate exposure class with a preferable risk weight. All collateral values in foreign currency are translated into euro on a daily basis, using the official foreign currency rates.

Regulatory haircuts based on mismatches related to term/lifetime or currencies are applied during netting of collateral.

Property-related collateral

As an international property lender, Aareal Bank focuses on property in the context of collateralisation. Real property liens – or any equivalent security interests in terms of quality depending on the location of the property – are the main types of security interests used for the internal loss ratio estimations for property loans.

Market or fair values of the property are set in accordance with the responsibilities for decision-making on lending, and form an integral part of the lending decision.

Valuation reports are used for propertyrelated collateral. The provisions of Article 208 (3) of the CRR are complied with during the valuation. The property's market or fair values are subjected to a defined internal monitoring and review process:

Step 1: Monitoring

The property values are monitored using statistical methods. The annual monitoring for properties located in Germany is based on a Bank-internal procedure as well as on the market fluctuations concept pursued by the banking associations vdp and VÖB. Properties located abroad are monitored exclusively on the basis of a Bank-internal procedure. In addition to regular monitoring, a review is initiated as soon as there are indications of substantial value fluctuations for the relevant property types.

Step 2: Review
The properties identified in Step 1 are analysed more closely. This review is made by an independent valuer, or a loan manager with applicable expertise. In addition, all properties have to be reviewed every twelve months if the exposures reach a certain threshold. Smaller properties are reviewed every three years if they exceed this minimum exposure. Event-driven reviews are carried out immediately.

Step 3: Revaluation
In Step 3, the properties identified in Step 2 are generally revalued when the assumptions underlying the most recent valuation would lead to a reduction in value, considering the current market situation.

Warranties

Warranties include indemnities and guarantees. The guarantors include rated clients from the segments "Sovereign states", "Regional governments" and "Local authorities" as well as "Institutions" and "Corporates". Credit risk mitigation focuses on the creditworthiness of the guarantor. In the case of large-sized property lending, if a warranty is provided, the guarantor has to be rated using the applicable rating procedure when the lending decision is based (among other things) upon the creditworthiness of the guarantor. The rating process for guarantors is subject to the same requirements applicable to the borrower. Assigned life insurance policies are only included under the AIRBA and are treated – by analogy with assigned balances held at third-party institutions – like warranties.

Financial collateral

Pledged balances held at the Bank are included as financial collateral. Financial collateral in the form of pledged securities play a minor role. Their current market values are taken into account as credit risk mitigation, also applying haircuts.

We use the comprehensive method for financial collateral under the CRSA.

Collateralising loans through balances saved under home loan and savings contracts and fund units is insignificant in our business model.

Included collateral

Collateral in the amount of € 28,134 million was applied within the scope of credit risk mitigation. This figure comprises no financial collateral included for derivatives transactions.

The following table shows all collateral eligible to collaterise loans and advances as well as debt securities. The respective values are capped at the carrying amount of the respective exposure. The real property liens relevant for Aareal Bank as an international property specialist are disclosed in column c along with the financial collateral, whereas warranties (financial guarantees) are disclosed under column d. Aareal Bank currently does not hold any credit derivatives which may be used for collateralisation purposes. Therefore, table EU CR7 (IRB approach – Effect on the Risk Weighted Exposure amounts of credit derivatives used as CRM techniques) is not disclosed.

In addition to the eligible collateral and secured exposures (column b), column a discloses the amount of all generally unsecured exposures.

EU CR3: Overview of credit risk mitigation techniques

€ mn	a	b	c	d	e
	Exposures unsecured	Exposures secured	of which: Exposures secured by collateral	of which: Exposures secured by financial guarantees	of which: Exposures secured by credit derivatives
1 Loans and advances	10,916	28,134	28,108	26	–
2 Debt securities	6,666	–	–	–	
3 Total	**17,582**	**28,134**	**28,108**	**26**	**–**
4 of which: non-performing exposures	1,173	1,002	1,001	1	–
EU-5 of which: defaulted	1,173	1,002			

As defaulted exposures are considered non-performing, the net carrying amount reported in line EU-5 is equivalent to the amount shown in line 4. This is further described in the chapter "Loss allowance" in this Disclosure Report (page 49).

The disclosure table EU CR7-A is limited to the presentation of the collateral considered for the commercial property lending portfolio subject to the Advanced IRBA. These are shown for each IRBA collateral as a percentage of the respective IRBA exposure.

Aareal Bank considers the relevant types of collateral within the scope of its LGD estimation in accordance with Article 181 (1) lit. e) and f) of the CRR.

Column m generally remains blank, as we do not make any substitution within the scope of the collateralisation of our exposures treated in AIRBA by guarantees. If the guarantor's rating is better than the borrower's rating, the guarantor's rating reduces the LGD.

EU CR7-A: IRB approach – Disclosure of the extent of the use of CRM techniques

IRBA exposure class	a	b	c	d	e	f	g
		Credit risk mitigation techniques					
		Funded Credit Protection (FCP)					
	Total exposures	Part of exposures covered by Financial collateral	Part of exposures covered by Other eligible collateral	Part of exposures covered by Immovable property collateral	Part of exposures covered by Receivables	Part of exposures covered by Other physical collateral	Part of exposures covered by Other funded credit protection
	€ mn	%	%	%	%	%	%
3 Corporates	30,870	0.00	96.54	95.82	–	0.72	0.04
3.1 of which: Corporates – SMEs	1,340	0.09	85.34	85.34	–	–	–
3.2 of which: Corporates – Specialised lending	27,908	–	98.12	97.37	–	0.75	–
3.3 of which: Corporates – Other	1,622	0.01	78.70	77.90	–	0.80	0.69
5 Total	**30,870**	**0.00**	**96.54**	**95.82**	**–**	**0.72**	**0.04**

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IRBA exposure class	h	i	j	k	l	m	n
	Credit risk mitigation techniques					Credit risk mitigation methods in the calculation of RWAs	
	Funded Credit Protection (FCP)			Unfunded Credit Protection (UFCP)			
	Part of exposures covered by Cash on deposit	Part of exposures covered by Life insurance policies	Part of exposures covered by Instruments held by a third party	Part of exposures covered by Guarantees	Part of exposures covered by Credit derivatives	RWA without substitution effects (reduction effects only)	RWA with substitution effects (both reduction and substitution effects)
	%	%	%	%	%	€ mn	€ mn
3 Corporates	–	0.04	–	0.07	–	–	6,511
3.1 of which: Corporates – SMEs	–	–	–	1.15	–	–	380
3.2 of which: Corporates – Specialised lending	–	–	–	0.03	–	–	5,504
3.3 of which: Corporates – Other	–	0.69	–	–	–	–	627
5 Total	**–**	**0.04**	**–**	**0.07**	**–**	**–**	**6,511**

Risk concentrations

According to our statements in the previous chapter, real property liens represent the major portion of our eligible collateral. However, risk concentrations are minimised through diversification by countries and types of property.

The qualitative and quantitative processes to assess and control risk concentrations are described in the chapter “Management of credit risks” (page 46 et seqq).

Netting framework agreements

The netting framework agreements used at Aareal Bank are presented in the chapter “Credit risk mitigation for trading activities” in this Disclosure Report (page 80 et seqq).

Qualitative information on the use of the IRB Approach

We follow the Advanced Internal Ratings-Based Approach (AIRBA) to determine the risk-weighted exposure amounts in relation to counterparty credit risk for the large-sized commercial property lending business within the “Corporates” exposure class. This was approved by the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht – “BaFin”) in February 2011, with retrospective effect as at 31 December 2010.

Internal rating systems

As regards the Advanced IRB Approach (AIRBA) used to determine the regulatory capital requirements for exposures, the Bank is required to make internal estimates of the probability of default (PD), and to determine the expected loss given default (LGD) as well as credit conversion factors (CCFs). One risk model per risk parameter has been approved for Aareal Bank’s exposure class “Corporates”. Additional approved models do not exist.

The internal rating procedure for borrowers is approved by the supervisory authorities and determines a borrower's probability of default (PD). In addition, the Bank uses an approved procedure to determine the loss given default (LGD) for the "Corporates" exposure class.

Within the framework of this rating procedure, a rating is established for large-sized commercial lending business (our core business) with a total exposure of at least € 2.5 million, and for the commercial housing industry with a total exposure of at least € 750,000.

The contractual positions relevant for reporting duties are maintained in the relevant Sales unit systems, while the assignment of IRBA items and borrowers to the IRBA exposure class "Corporates" is made fully automatically on the basis of the characteristics of the transaction and the client.

The internal rating procedure to determine a client's probability of default consists of two main components: a property rating and a corporate rating. The relative impact of the two components on the rating result is determined by the structure of the exposure concerned. The borrower's current and future default probability is determined based on specific financial indicators, together with qualitative aspects and expert knowledge. The result of the rating process is reflected in the classification of the borrower into one of the rating classes. The Bank currently uses 15 rating classes – within the rating procedure for large-sized commercial property financing – for borrowers that are not deemed to have defaulted pursuant to the CRR criteria. Borrowers in default pursuant to the CRR are allocated to a special rating class. Within the framework of the Bank's external reporting, the borrower rating is reconciled to a master scale.

When determining internal credit ratings and default rates, Aareal Bank does not use assessments by external rating agencies, in accordance with Article 180 (1) lit. f) of the CRR. Hence, there is no relation between internal and external credit assessments.

Credit Management is responsible for the determination of the borrower rating; this responsibility is regulated in the Bank's credit manuals. The relevant authorised person makes a decision on the rating which ensures an independent rating allocation from a process view.

The second step involves the calculation of the expected loss given a borrower's default for the internally rated large-sized commercial property financings under the AIRB approach. The LGD estimates the extent of the economic loss in the event of a borrower defaulting. In simple terms, this is the amount of the claim not covered by the proceeds from the realisation of collateral.

The LGD is determined based on a bottom-up approach, where the components relevant for the LGD level and their driving factors – in the form of recovery rates, waivers of principal and interest as well as direct and indirect costs – are estimated.

The LGD determination is based on the definition of economic loss (Article 5 (2) of the CRR). As the future development of a borrower cannot be anticipated in case of a borrower's default, the alternatives – recovery, restructuring and re-ageing – are included in the LGD calculation using weightings based on the respective probability. The LGD is driven primarily by the expected proceeds from the realisation of collateral and from unsecured portions of loans and advances. The proceeds from property-related collateral are determined based on the recovery rate in the form of a haircut applied to a previously forecast market value. For financings of domestic properties, recovery rates are taken from an inter-bank pool of data, whilst recovery rates for international properties are derived using an internal approach. An internal

projection model based on macro-economic inputs has been developed by the Bank for market value outlooks.

In addition to the nature and extent of the collateralisation of a financing, the estimated exposure at the borrower's default (Exposure at Default, EaD) is the second major parameter for the LGD calculation.

Reporting

In addition, the risk parameters are a major element of our internal and external reporting. The Bank's reporting comprises various portfolio analyses based on the rating procedures used in the Bank. Accordingly, the MaRisk report (as the central risk report for credit risks) includes comprehensive information on the development of the credit portfolio, e.g. by rating classes and their changes. Compliance with rating updates and property monitoring is reported on a monthly basis.

Additional uses of internal estimates

The internally-estimated risk parameters are central factors for the Bank's lending process, the recognition of loss allowance, and its risk management. The credit risk strategy incorporates the rating; it is based – with regard to its specific requirements – on the rating and the parameters underlying the LGD, among other things. The basic prerequisite and foundation for the loan approval is a detailed risk evaluation of each lending exposure of a borrower. The risk evaluation includes the borrower's creditworthiness, as well as the risks and collateral underlying the lending exposure. The resulting risk classification is subject to approval powers with regard to approval and prolongation of lending exposures. The extent of monitoring activities depends on the risk classification. The basis for granting a commitment is the preparation of a borrower rating.

The credit documentation includes the collateral influencing the LGD as well as assessments of this collateral.

The relevant authorised person approves the credit application and the determination of the borrower rating.

The rating result is one of the many indicators – within the framework of early risk identification – to classify an exposure as on-watch, intensive-handling, restructuring, or recovery exposure.

The Bank primarily uses a credit risk model to monitor concentration and diversification effects on a portfolio level. Both expected and unexpected loss can be derived. The basis for determining the relevant values are the risk parameters PD, LGD and EaD.

During the estimating phase of the acquisition process, risk costs and capital requirements are determined using the risk parameters PD and LGD, and are then included as parameters for risk-adjusted pricing. The individual financings are subjected to an economic assessment for the current profit centre calculation (accounting for individual transactions/final costing). This economic assessment takes into account the parameters PD and LGD via capital and standard risk costs.

PD and LGD procedures are applied for accounting purposes in the context of determining model-based loss allowance. Concerning the scenario analyses to be taken into account when determining individual LGDs, we applied an updated scenario mix, going beyond the customary process. This probability-weighted scenario mix reflects the uncertainties as to how the Covid-19 pandemic will develop further

and supplements our baseline scenario (swoosh) with the addition of divergent developments over an observation period of three years.

Control mechanisms

The Credit Management unit is responsible for the correct and regular determination of the rating results as well as for data quality within the IT and rating systems. The rating is prepared using the principle of dual control. The authorities for determining the rating are based on the authority regulations for lending and monitoring decisions.

The uniformity of the rating for a borrower or a guarantor is ensured through a number of measures. All rating users are trained to become familiar with the procedure, and there is also documentation dealing with interpretation issues in the context of the rating preparation.

Manual adjustments may be made within the scope of overruling, and are documented subsequently in the rating system.

The internal rating procedure to determine a borrower-specific probability of default for large-sized property financing is validated, both on the basis of the underlying data pool and through internal validation of Aareal Bank's portfolio, once per year. The validation covers all measures required pursuant to the CRR. The further development of the rating procedure is made under the umbrella of CredaRate, on behalf of – and with the participation of – the banks involved.

The procedures used by the Bank for determining LGD and CCF are also validated on an annual basis. As these procedures represent Bank-internal developments, validation is made mostly by the Bank itself. Exceptions to this are the parameters used within the LGD calculation process (recovery rates and settlement periods for properties in Germany). A two-stage process takes effect here. The data gathered for Germany within the scope of pooling under the umbrella of the Association of German Pfandbrief Banks (Verband deutscher Pfandbriefbanken – "vdp") is the basis. The central validation of these parameters for the entire pool is carried out by vdp. Aareal Bank draws on the already centrally validated pool data for its own validation of these parameters.

The loss given default percentage and the EaD for property financings are derived automatically in the system on the basis of the transaction and collateral data stored in the system where data is maintained. The provision of data is subject to strict quality standards for data entries of the system where data is maintained; these quality standards are set out in the Bank's quality manuals. The necessary reviews with regard to information on collateral are the responsibility of Credit Management.

Irrespective of the treatment of the bank portfolio under the CRSA, applicable internal rating procedures to determine PD and LGD continue to be carried out internally, once a year.

Risk Controlling is responsible for developing rating models, whilst Non-Financial Risks (which is independent from Risk Controlling) is responsible for validating all rating models. The validation results are discussed within the Risk Executive Committee (RiskExCo) and adopted by the Management Board.

The Internal Audit division, as a process-independent unit, reviews the adequacy of the internal rating systems on a regular basis, including compliance with the minimum requirements for using rating systems.

Quantitative information on the use of the IRB Approach

The property lending portfolio (treated under the AIRBA) shall be disclosed in table EU CR6, which considers clearly-defined PD classes. Expected loss (EL) is also reported per PD class, thus also ensuring a statement concerning the collateral quality.

EU CR6: IRB Approach – Credit risk exposures by exposure class and PD range

IRBA exposure class	a	b	c	d	e	f
	PD range	On-balance sheet exposures	Off-balance sheet exposures pre-CCF	Average CCF	Exposure post-CRM and post-CCF	Average PD
	%	€ mn	€ mn	%	€ mn	%
Corporates – SMEs	0.00 to < 0.15	42	–	–	42	0.10
	0.00 to < 0.10	–	–	–	–	–
	0.10 to < 0.15	42	–	–	42	0.10
	0.15 to < 0.25	82	9	100.00	91	0.22
	0.25 to < 0.50	206	39	100.00	245	0.38
	0.50 to < 0.75	44	9	100.00	53	0.70
	0.75 to < 2.50	374	14	100.00	388	1.24
	0.75 to < 1.75	374	14	100.00	388	1.24
	1.75 to < 2.50	–	–	–	–	–
	2.50 to < 10.00	354	0	100.00	354	4.86
	2.50 to < 5.00	207	0	100.00	207	2.62
	5.00 to < 10.00	147	–	–	147	8.02
	10.00 to < 100.00	–	–	–	–	–
	10.00 to < 20.00	–	–	–	–	–
	20.00 to < 30.00	–	–	–	–	–
	30.00 to < 100.00	–	–	–	–	–
	100.00 (Default)	167	–	–	167	100.00
	Subtotal	**1,269**	**71**	**100.00**	**1,340**	**14.25**
Corporates – specialised lending	0.00 to < 0.15	196	–	–	196	0.09
	0.00 to < 0.10	44	–	–	44	0.06
	0.10 to < 0.15	152	–	–	152	0.10
	0.15 to < 0.25	459	4	100.00	462	0.22
	0.25 to < 0.50	3,506	125	100.00	3,631	0.43
	0.50 to < 0.75	5,811	73	100.00	5,885	0.70
	0.75 to < 2.50	8,021	140	100.00	8,161	1.33
	0.75 to < 1.75	8,021	140	100.00	8,161	1.33
	1.75 to < 2.50	–	–	–	–	–
	2.50 to < 10.00	7,878	277	100.00	8,155	3.23
	2.50 to < 5.00	7,571	275	100.00	7,846	3.04
	5.00 to < 10.00	307	3	100.00	310	8.02
	10.00 to < 100.00	–	–	–	–	–
	10.00 to < 20.00	–	–	–	–	–
	20.00 to < 30.00	–	–	–	–	–
	30.00 to < 100.00	–	–	–	–	–
	100.00 (Default)	1,418	6	–	1,418	100.00
	Subtotal	**27,289**	**625**	**98.98**	**27,908**	**6.62**

Exposures subject to counterparty credit risk pursuant to Article 92 (3) lit. f) of the CRR and treated under the IRBA are not covered in the statements. They are disclosed in the table EU CCR4 in the chapter “Counterparty Credit Risk”.

g	h	i	j	k	l	m
Number of obligors	Average LGD	Average maturity	Risk-weighted assets (RWAs)	RWA density	Expected loss amount (EL)	Value adjustments and provisions
	%		€ mn	%	€ mn	€ mn
4	23.74	3	5	11.95	0	0
1	–	–	–	–	–	–
3	23.74	3	5	11.95	0	0
26	12.39	3	8	9.14	0	0
40	21.59	3	58	23.76	0	0
18	22.10	2	15	27.66	0	0
30	13.41	3	88	22.69	1	-1
30	13.41	3	88	22.69	1	-1
–	–	–	–	–	–	–
10	19.99	2	178	50.18	5	-8
6	4.52	3	19	9.17	0	0
4	41.79	2	159	107.99	5	-8
–	–	–	–	–	–	–
–	–	–	–	–	–	–
–	–	–	–	–	–	–
–	–	–	–	–	–	–
9	60.72	3	28	16.62	99	-16
137	**23.15**	**2**	**380**	**28.33**	**106**	**-25**
7	4.21	3	4	1.89	0	0
2	4.12	3	1	1.44	0	0
5	4.23	3	3	2.02	0	0
17	7.62	3	26	5.62	0	0
114	7.31	3	377	10.38	1	-1
156	5.49	3	534	9.07	2	-1
140	9.14	3	1,383	16.95	11	-9
140	9.14	3	1,383	16.95	11	-9
–	–	–	–	–	–	–
124	12.23	3	2,328	28.55	35	-63
118	12.03	3	2,175	27.73	30	-57
6	17.28	2	153	49.35	4	-6
–	–	–	–	–	–	–
–	–	–	–	–	–	–
–	–	–	–	–	–	–
–	–	–	–	–	–	–
37	20.84	2	853	60.13	227	-385
595	**9.57**	**3**	**5,504**	**19.72**	**276**	**-459**

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IRBA exposure class	a	b	c	d	e	f
	PD range	On-balance sheet exposures	Off-balance sheet exposures pre-CCF	Average CCF	Exposure post-CRM and post-CCF	Average PD
	%	€ mn	€ mn	%	€ mn	%
Corporates – Others	0.00 to < 0.15	–	–	–	–	–
	0.00 to < 0.10	–	–	–	–	–
	0.10 to < 0.15	–	–	–	–	–
	0.15 to < 0.25	235	5	100.00	240	0.23
	0.25 to < 0.50	143	213	100.00	356	0.36
	0.50 to < 0.75	74	48	100.00	121	0.70
	0.75 to < 2.50	812	49	100.00	861	1.17
	0.75 to < 1.75	812	49	100.00	861	1.17
	1.75 to < 2.50	–	–	–	–	–
	2.50 to < 10.00	28	15	100.00	44	2.62
	2.50 to < 5.00	28	15	100.00	44	2.62
	5.00 to < 10.00	–	–	–	–	–
	10.00 to < 100.00	–	–	–	–	–
	10.00 to < 20.00	–	–	–	–	–
	20.00 to < 30.00	–	–	–	–	–
	30.00 to < 100.00	–	–	–	–	–
	100.00 (Default)	–	–	–	–	–
	Subtotal	**1,292**	**330**	**100.00**	**1,622**	**0.86**
	Total	**29,850**	**1,027**	**99.38**	**30,870**	**6.65**

The following table EU CR8 provides an overview of the RWA changes and the associated causes to be analysed since 30 September 2021.

The starting and end balances represent the sums of figures disclosed in lines 4a and 5 of table EU OV1 for the respective reporting date. IRBA exposures subject to counterparty credit risk were not taken into account for this purpose.

EU CR8: RWA flow statements of credit risk exposures under the IRB approach

		a
€ mn		RWAs
1	**RWAs as at 30 September 2021**	**8,299**
2	Asset size	53
3	Asset quality	-525
4	Model updates	–
5	Methodology and policy	–
6	Acquisitions and disposals	0
7	Foreign exchange movements	76
8	Other	–
9	**RWAs as at 31 December 2021**	**7,904**

g	h	i	j	k	l	m
Number of obligors	Average LGD	Average maturity	Risk-weighted assets (RWAs)	RWA density	Expected loss amount (EL)	Value adjustments and provisions
	%		€ mn	%	€ mn	€ mn
–	–	–	–	–	–	–
–	–	–	–	–	–	–
–	–	–	–	–	–	–
6	15.60	5	58	24.11	0	0
23	37.32	4	258	72.56	0	0
8	23.61	3	48	39.25	0	0
42	9.84	4	234	27.19	1	0
42	9.84	4	234	27.19	1	0
–	–	–	–	–	–	–
3	26.77	2	29	67.30	0	0
3	26.77	2	29	67.30	0	0
–	–	–	–	–	–	–
–	–	–	–	–	–	–
–	–	–	–	–	–	–
–	–	–	–	–	–	–
–	–	–	–	–	–	–
–	–	–	–	–	–	–
82	**18.21**	**4**	**627**	**38.67**	**2**	**0**
814	10.61	3	6,511	21.09	384	-484

Besides exposures from new business originated, the changes reported in line 2 also include RWA changes from existing exposures – where we also include investments and other non-credit related assets, except for changes purely related to exchange rate fluctuations, which are presented separately in line 7. Moreover, this line also includes the RWA change due to the continued reduction of non-performing loans.

Line 3 reports changes in risk-weighted exposures resulting from changed borrower probabilities of default (PD) or loss given default (LGD).

At present, line 4 does not show any changes; this is due to the fact that no new models for estimating risk parameters were implemented, nor were any adjustments made to internal models already approved.

Line 5 only requires disclosure of any changes resulting from a changed RWA calculation methodology – for example, where exposures previously subject to the CRSA are being included under the Advanced IRB Approach. No such changes applied as at the reporting date.

The RWA effect from the addition of an immaterial investment is disclosed in line 6.

No figures are shown in line 8 since we were able to assign RWA changes within Aareal Bank Group to the aforementioned categories.

Coverage ratio

The coverage ratio represents the portion of all on-balance sheet and off-balance sheet exposures in the portfolio of a credit institution for which the regulatory own funds requirement is determined using the IRB approach.

In the following two tables, the exposures addressed under the CRSA and the IRBA are allocated to the IRBA exposure classes set out in Article 147 of the CRR. While the exposure value of IRBA exposures has to be disclosed in column a without taking into account specific credit risk adjustments, column b shows the exposure values of all CRSA and IRBA exposures taking into account specific credit risk adjustments.

Since counterparty credit risks are not a component of table EU CR6-A pursuant to Annex XXII to Implementing Regulation 2021/637 and therefore there is no alignment with the corresponding template for solvency reporting based on EBA mapping, we disclose the table by additionally disclosing counterparty credit risk.

EU CR6-A: Scope of the use of IRB and SA approaches (excluding CCR)

		a	b	c	d	e
		Exposure value as defined in Article 166 of the CRR for exposures subject to IRB approach	Total exposure value for exposures subject to the CRSA and to the IRBA	Percentage of total exposure value subject to the permanent partial use of the CRSA from column b	Percentage of total exposure value subject to IRBA from column b	Percentage of total exposure value subject to a roll-out plan from column b
		€ mn	€ mn	%	%	%
1	Central governments or central banks	–	15,159	100.00	–	–
1.1	of which: Regional governments or local authorities		3,924	100.00	–	–
1.2	of which: Public-sector entities		1,404	100.00	–	–
2	Institutions	–	935	100.00	–	–
3	Corporates	30,870	29,633	1.81	98.19	–
3.1	of which: Specialised lending, excluding slotting approach		26,547	–	100.00	–
3.2	of which: Specialised lending under slotting approach		26,547	–	100.00	–
4	Retail	–	258	100.00	–	–
4.1	of which: Secured by real estate (SMEs)		–	–	–	–
4.2	of which: Secured by real estate (non-SMEs)		239	100.00	–	–
4.3	of which: Qualifying revolving		–	–	–	–
4.4	of which: Other SMEs		–	–	–	–
4.5	of which: Other non-SMEs		19	100.00	–	–
5	Equity exposures	–	205	–	100.00	–
6	Other non-credit obligation assets	–	636	–	100.00	–
7	**Total**	**30,870**	**46,825**	**36.07**	**63.93**	**–**

The advanced IRB approach covers 63.93 % of the total exposure value as at 31 December 2021. Apart from the commercial property financings, the equity exposures and the other non-credit obligation assets, the Aareal Bank Group does not hold any further exposures in its portfolio for which a sequential implementation of the IRB approach in accordance with Article 148 of the CRR is planned at the moment.

The variation in the exposure values to be disclosed in columns a and b mainly results from the variation in the handling of the specific credit risk adjustments (see above) as well as from valuation differences between the carrying amounts under IFRSs and EaD for on-balance sheet exposures disclosed in column a. This is attributable to adjustments due to the methodology for determining EaD for credit risk exposures under the AIRBA.

EU CR6-A: Scope of the use of IRB and CRS approaches (including CCR)

		a	b	c	d	e
		Exposure value as defined in Article 166 of the CRR for exposures subject to IRB approach	Total exposure value for exposures subject to the CRSA and to the IRBA	Percentage of total exposure value subject to the permanent partial use of the CRSA from column b	Percentage of total exposure value subject to IRBA from column b	Percentage of total exposure value subject to a roll-out plan from column b
		€ mn	€ mn	%	%	%
1	Central governments or central banks	–	15,161	100.00	–	–
1.1	of which: Regional governments or local authorities		3,924	100.00	–	–
1.2	of which: Public-sector entities		1,406	100.00	–	–
2	Institutions	–	1,366	100.00	–	–
3	Corporates	30,912	29,852	2.39	97.61	–
3.1	of which: Specialised lending, excluding slotting approach		26,547	–	100.00	–
3.2	of which: Specialised lending under slotting approach		26,547	–	100.00	–
4	Retail	–	258	100.00	–	–
4.1	of which: Secured by real estate (SMEs)		–	–	–	–
4.2	of which: Secured by real estate (non-SMEs)		239	100.00	–	–
4.3	of which: Qualifying revolving		–	–	–	–
4.4	of which: Other SMEs		–	–	–	–
4.5	of which: Other non-SMEs		19	100.00	–	–
5	Equity exposures	–	205	–	100.00	–
6	Other non-credit obligation assets	–	636	–	100.00	–
7	**Total**	**30,912**	**47,478**	**36.86**	**63.14**	**–**

Backtesting of default probabilities

The following section compares the PDs used for the commercial property lending portfolio subject to the Advanced IRBA with the effective default rates of borrowers. The average historical annual default rate for the past five years is used for comparison.

In accordance with Implementing Regulation (EU) 2021/637, counterparty credit risk exposures are outside the observed IRBA exposure classes.

In accordance with the information disclosed in table EU CR6, the RWA of the commercial property financing portfolio, which was subjected to back-testing of the probability of default (PD), amounted to € 6,511 million as at the reporting date, most of which (84.5 %) is attributable to the IRBA exposure class "Corporates – specialised lending".

The PD ranges do not correspond to Aareal Bank's internal master scale – comprised of 21 PD classes (20 rating classes for borrowers not subject to default, one default class). Instead, the granularity corresponds to the breakdown in table EU CR6.

When determining internal credit ratings and default rates, Aareal Bank does not use assessments by external rating agencies.

The observed average default rate to be disclosed in column e of table EU CR9 is consistent with the one-year default rate pursuant to Article 4 (1) no. 78 of the CRR, which represents the percentage share of obligors defaulted in 2021 out of the total number of all obligors assigned to a PD range as of 31 December 2020. Calculation of the observed average default rate is based on non-overlapping one-year windows.

While column f shows an EaD-weighted average, the average PD disclosed in column g is weighted for the number of obligors. Where a PD range includes only one credit rating of our internal master scale, the figures disclosed in the columns mentioned above are consistent.

In the current year, a total of ten borrowers in the Corporates asset class defaulted pursuant to Article 178 of the CRR. All of the borrowers who defaulted had already been financed as at the end of the previous reporting period. There are restrictions to the interpretation of comparing average PD to historical average annual default rates as shown in the table; this is due to the small number of defaults in few rating classes.

As at 31 December 2021, Aareal Bank's portfolio contained 161 borrowers with short-term contracts (mostly in the IRBA exposure class "Corporates – specialised lending"). Short-term contracts are contracts with a remaining term of less than twelve months.

EU CR9: Back-testing of PD per exposure class – SMEs

a	b	c	d	e	f	g	h
		Number of obligors at the end of previous year					
Corporates exposure class – SMEs	PD range		of which: number of obligors which defaulted in the year	Observed average PD	Exposures weighted average PD	Average PD	Average historical annual default rate
	%			%	%	%	%
	0.00 to < 0.15	4	–	–	0.10	0.09	–
	0.00 to < 0.10	1	–	–	–	0.05	–
	0.10 to < 0.15	3	–	–	0.10	0.10	–
	0.15 to < 0.25	23	–	–	0.22	0.22	–
	0.25 to < 0.50	63	–	–	0.38	0.43	–
	0.50 to < 0.75	23	–	–	0.70	0.70	0.27
	0.75 to < 2.50	29	1	3.45	1.24	1.40	1.41
	0.75 to < 1.75	29	1	3.45	1.24	1.40	1.41
	1.75 to < 2.50	–	–	–	–	–	–
	2.50 to < 10.00	14	–	–	4.86	3.72	6.30
	2.50 to < 5.00	12	–	–	2.62	3.00	4.38
	5.00 to < 10.00	2	–	–	8.02	8.02	12.30
	10.00 to < 100.00	–	–	–	–	–	–
	10.00 to < 20.00	–	–	–	–	–	–
	20.00 to < 30.00	–	–	–	–	–	–
	30.00 to < 100.00	–	–	–	–	–	–
	100.00 (Default)	11	–	–	100.00	100.00	–

a	b	c	d	e	f	g	h
		Number of obligors at the end of previous year					
Corporates exposure class – specialised lending	PD range		of which: number of obligors which defaulted in the year	Observed average PD	Exposures weighted average PD	Average PD	Average historical annual default rate
	%			%	%	%	%
	0.00 to < 0.15	6	–	–	0.09	0.08	–
	0.00 to < 0.10	2	–	–	0.06	0.05	–
	0.10 to < 0.15	4	–	–	0.10	0.10	–
	0.15 to < 0.25	24	–	–	0.22	0.21	–
	0.25 to < 0.50	76	–	–	0.43	0.43	–
	0.50 to < 0.75	106	1	0.94	0.70	0.70	0.19
	0.75 to < 2.50	141	2	1.42	1.33	1.35	0.59
	0.75 to < 1.75	141	2	1.42	1.33	1.35	0.59
	1.75 to < 2.50	–	–	–	–	–	–
	2.50 to < 10.00	127	6	4.72	3.23	3.50	12.06
	2.50 to < 5.00	118	3	2.54	3.04	3.15	12.18
	5.00 to < 10.00	9	3	33.33	8.02	8.02	6.67

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a Corporates exposure class – specialised lending	b PD range	c Number of obligors at the end of previous year	d of which: number of obligors which defaulted in the year	e Observed average PD	f Exposures weighted average PD	g Average PD	h Average historical annual default rate
	%			%	%	%	%
	10.00 to < 100.00	–	–	–	–	–	–
	10.00 to < 20.00	–	–	–	–	–	–
	20.00 to < 30.00	–	–	–	–	–	–
	30.00 to < 100.00	–	–	–	–	–	–
	100.00 (Default)	33	–	–	100.00	100.00	–

a Corporates exposure class – Other	b PD range	c Number of obligors at the end of previous year	d of which: number of obligors which defaulted in the year	e Observed average PD	f Exposures weighted average PD	g Average PD	h Average historical annual default rate
	%			%	%	%	%
	0.00 to < 0.15	–	–	–	–	–	–
	0.00 to < 0.10	–	–	–	–	–	–
	0.10 to < 0.15	–	–	–	–	–	–
	0.15 to < 0.25	6	–	–	0.23	0.23	–
	0.25 to < 0.50	22	–	–	0.36	0.41	–
	0.50 to < 0.75	20	–	–	0.70	0.70	–
	0.75 to < 2.50	40	–	–	1.17	1.26	–
	0.75 to < 1.75	40	–	–	1.17	1.26	–
	1.75 to < 2.50	–	–	–	–	–	–
	2.50 to < 10.00	5	–	–	2.62	2.62	–
	2.50 to < 5.00	5	–	–	2.62	2.62	–
	5.00 to < 10.00	–	–	–	–	–	–
	10.00 to < 100.00	–	–	–	–	–	–
	10.00 to < 20.00	–	–	–	–	–	–
	20.00 to < 30.00	–	–	–	–	–	–
	30.00 to < 100.00	–	–	–	–	–	–
	100.00 (Default)	–	–	–	–	–	–

Qualitative information on the use of the Credit Risk Standard Approach

Calculation approaches

Article 107 (1) of the CRR allows different approaches to be taken when calculating the risk-weighted exposure amounts in relation to counterparty credit risk.

The Credit Risk Standard Approach (CRSA) continues to be used within the framework of the partial-use method (Article 150 of the CRR). This partial-use method covers the following CRSA exposure classes on a continuous basis:

- institutions,
- central governments or central banks,
- regional governments and similar entities,
- other public-sector entities,
- multilateral development banks,
- international organisations,
- corporates (only non-core business, legacy business),
- retail lending business (discontinued business, legacy business),
- exposures secured by property (only non-core business, legacy business), and
- exposures in default (only non-core business, legacy business).

Under the CRSA, parameters defined by the regulatory framework are used to determine risk-weighted exposure amounts. Only specific collateral defined by the regulatory framework may be used to mitigate credit risk.

External rating for CRSA exposures

A key element of the economic and regulatory assessment is the borrower's credit rating. This rating is determined by rating agencies recognised by the regulatory authorities. These agencies' assessments and valuations facilitate a uniform classification of borrowers across all banks. The ratings of governments, banks and exchange-listed companies, as well as investment fund units, are generally assessed externally.

We have retained three agencies: Fitch Ratings, Moody's Investors Service, and Standard & Poor's, to classify borrowers and guarantors in accordance with Article 138 of the CRR. The ratings determined by these three agencies apply for all the aforementioned rating-related exposure classes in relation to the Credit Risk Standard Approach. Assessments by export credit insurance agencies are not used.

Exposures rated by at least one rating agency are deemed as "rated" CRSA exposures pursuant to Article 138 of the CRR. The "unrated" CRSA exposures are rated in accordance with Article 139 (2) of the CRR. In line with our business model, most of our exposures are in the "Corporates" exposure class under the AIRBA. Legacy business from Aareal Bank AG's non-core business remains included in the "Corporates" and "Exposures secured by mortgages on immovable property" exposure classes, which are reported as unrated CRSA exposures with the prescribed standard risk weighting.

At present, we have neither transactions within the portfolio for which an issue rating has been migrated to receivables nor any for which a comparable rating is determined pursuant to Article 139 (2) of the CRR.

The external credit ratings are allocated to the risk weights pursuant to Article 114 et seqq. of the CRR using the regulatory standardised approach as set out in the Implementing Regulation (EU) 2016/1799.

Quantitative information on the use of the Credit Risk Standard Approach

Identical types of collateral respond differently, depending on what transactions they can be offset against.

This is due to the composition of the CRSA exposure amount as well as the exposure categories for undrawn credit facilities and other off-balance sheet transactions (Article 111 of the CRR in conjunction with Annex I of the CRR). The credit conversion factors assigned to each exposure category ensure that lower regulatory capital requirements are calculated for loan commitments and other off-balance sheet transactions than for on-balance sheet receivables.

Cash deposits as financial collateral and warranties within the meaning of the CRR can be distinguished in terms of how they mitigate credit risk:

- Financial collateral reduces the assessment basis to which the credit conversion factor is applied. The risk weight impacts the exposure amount.
- Warranties do not impact on the assessment basis, but on the risk weighting. A loan collateralised through a warranty is taken into account, with the warranty amount to be included and the risk weight of the guarantor in the guarantor's exposure class.

The following table shows CRSA exposure amounts both before and after mitigating credit risk, shown separately as on- and off-balance sheet exposures. In addition, risk-weighted assets (RWAs) are disclosed for each exposure class.

EU CR4: Credit Risk Standard Approach – credit risk exposure and credit risk mitigation effects

	Exposure classes	a	b	c	d	e	f
		Exposures before CCF		Exposures post CCF and post CRM		RWAs and RWA density	
		On-balance sheet exposure	Off-balance sheet exposures	On-balance sheet exposures	Off-balance sheet exposures	RWAs	RWA density
		€ mn	€ mn	€ mn	€ mn	€ mn	%
1	Central governments or central banks	8,756	–	9,020	–	13	0.14
2	Regional governments or local authorities	3,924	–	3,929	–	390	9.93
3	Other public-sector entities	1,389	–	1,279	–	2	0.14
4	Multilateral development banks	180	–	180	–	–	–
5	International organisations	894	–	894	–	–	–
6	Institutions	414	–	288	–	66	22.80
7	Corporates	350	189	318	70	365	94.05
8	Retail	16	0	16	0	12	75.00
9	Secured by mortgages on immovable property	346	–	346	–	121	34.99
10	Exposures in default	4	–	3	–	3	110.25
11	Exposures associated with particularly high risk	–	–	–	–	–	–
12	Covered bonds	492	–	492	–	49	10.00
13	Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–	–
14	Collective investment undertakings (CIU)	45	–	45	–	8	18.39
15	Equity exposures	–	–	–	–	–	–
16	Other items	–	–	–	–	–	–
17	**Total**	**16,811**	**190**	**16,811**	**70**	**1,030**	**6.10**

Table EU CR5 shows the exposure amount after mitigating credit risk and after taking into consideration the credit conversion factors of all exposures to which the CRSA is applied, for each exposure class and broken down according to risk weight pursuant to Article 114 et seqq. of the CRR. The exposures disclosed in column q are exposures for which no external rating is used to derive the risk weight.

EU CR5: Credit Risk Standard Approach

Exposure classes	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
	Risk weight																
	0 %	2 %	4 %	10 %	20 %	35 %	50 %	70 %	75 %	100 %	150 %	250 %	370 %	1,250 %	Others	Total	of which: unrated
€ mn																	
1 Central governments or central banks	8,956	–	–	–	64	–	–	–	–	–	–	–	–	–	–	**9,020**	8,714
2 Regional governments or local authorities	3,743	–	–	–	33	–	–	–	–	–	–	153	–	–	–	**3,929**	3,720
3 Other public-sector entities	1,270	–	–	–	9	–	–	–	–	–	–	–	–	–	–	**1,279**	1,270
4 Multilateral development banks	180	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**180**	180
5 International organisations	894	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**894**	894
6 Institutions	–	–	–	–	261	–	27	–	–	–	–	–	–	–	–	**288**	82
7 Corporates	–	–	–	–	–	–	22	–	–	367	–	–	–	–	–	**388**	367
8 Retail	–	–	–	–	–	–	–	–	16	–	–	–	–	–	–	**16**	16
9 Secured by mortgages on immovable property	–	–	–	–	–	293	54	–	–	–	–	–	–	–	–	**346**	346
10 Exposures in default	–	–	–	–	–	–	–	–	–	2	1	–	–	–	–	**3**	3
11 Exposures associated with particularly high risk	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
12 Covered bonds	–	–	–	492	–	–	–	–	–	–	–	–	–	–	–	**492**	–
13 Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
14 Collective investment undertakings (CIU)	16	–	–	–	30	–	–	–	–	–	–	–	–	0	–	**45**	16
15 Equity exposures	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
16 Other exposures	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
17 Total	**15,059**	**–**	**–**	**492**	**396**	**293**	**102**	**–**	**16**	**369**	**1**	**153**	**–**	**0**	**–**	**16,882**	**15,609**

Counterparty Credit Risk

Management of counterparty credit risk

Definition

The counterparty credit risk results from derivatives and securities financing transactions, the risk being that the transaction's counterparty defaults. Thus, the transaction could not be settled as intended.

Derivatives are defined for regulatory purposes as "... unconditional forward transactions or option contracts (including financial contracts for differences) that are structured as a purchase, exchange or other

acquisition of an underlying instrument, whose value is determined by reference to the underlying instrument and whose value may change in future for at least one counterparty due to future settlement" (section 19 (1a) of the KWG).

Aareal Bank Group's derivatives positions have substantially been entered into in order to hedge interest rate and currency risk exposure, and for refinancing purposes.

Risk measurement and monitoring

For information on risk measurement and monitoring of counterparty credit risk, please refer to the chapter "Management of credit risks" of this Disclosure Report (page 45).

Other qualitative disclosures on counterparty credit risk

Internal capital allocation

Within the framework of the economic capital model for credit risks, derivatives are taken into account in the amount of their positive market value plus the regulatory add-on, determined depending on the type and term of the transaction. The netting framework agreements concluded by the Bank to reduce counterparty credit risks within the trading business are taken into account in the calculation. This also applies to additional agreements on the furnishing of collateral.

Internal limitation of risks from derivative transactions

To assess counterparty credit risk from derivative transactions in the trading business, an internal rating is prepared for all counterparties on a regular or event-driven basis. The internal rating constitutes a key indicator for determining counterparty-specific limits for the derivatives business.

Credit risk mitigation for trading activities

To reduce counterparty risk in Aareal Bank's trading business, the master agreements for financial derivatives and master agreements for securities repurchase transactions (repos) used by the Bank[1] provide for various credit risk mitigation techniques, via mutual netting framework agreements.

The master agreements for financial derivatives used by the Bank contain netting framework agreements at a single transaction level (so-called "payment netting"), and arrangements for the termination of individual transactions under a master agreement (so-called "close-out netting").

In general, all master agreements are based on the principle of a common agreement. This means that, in the case of a termination, the individual claims are netted, and that only such net amount can and may be claimed with regard to the defaulted counterparty. This claim must not be affected by any insol-

[1] Any comments below referring to the German Master Agreement on Financial Derivatives (Deutscher Rahmenvertrag für Finanztermingeschäfte – "DRV") also pertain to the master agreement issued by the International Swaps and Derivatives Association Inc. (ISDA) (the "ISDA Master Agreement"). Both agreements are standardised agreements recommended by leading associations – among others, by the Association of German Banks (Bundesverband deutscher Banken – "BdB").

vency, i. e. it must be legally valid and enforceable. This, in turn, means that the jurisdictions concerned must recognise the concept of a common agreement which protects the net amount of the claim from imminent access by the insolvency administrator.

Above all, the close-out netting is subject to (international) legal risks. The Bank reviews these legal risks by reference to legal opinions regarding the validity and enforceability of mutual netting framework agreements in the case of a counterparty's insolvency. These legal opinions are evaluated based on various criteria such as product type, jurisdiction of the registered office and branch office of the counterparty, individual contract supplements and other criteria, and using a database developed for this purpose. In doing so, the Bank decides for each individual transaction whether or not netting is possible. The Bank uses eligible bilateral netting framework agreements within the meaning of the CRR for all transactions with financial institutions; in most cases there are additional collateral agreements which further reduce the relevant credit risk.

The Bank enters into repo transactions both on a bilateral basis and via Eurex Clearing AG as a central counterparty. For repo transactions, depending on the counterparty, payment or delivery netting is agreed upon. Master agreements for repo transactions generally contain provisions on close-out netting. So far, the Bank does not use the option permitted by regulatory authorities to reduce capital requirements for repo transactions.

Furthermore, counterparty risk is reduced through derivatives settlement via central counterparties (CCPs): Aareal Bank uses Eurex Clearing AG and LCH Limited.

The Bank uses an internal rating system to assess the credit quality of counterparties. Credit Transaction Management is responsible for the daily valuation of the Bank's trades, including collateral accepted or pledged, and using validated valuation procedures.

Collateral for derivative transactions is usually provided in cash. Repo transactions are usually collateralised through securities, pledged on a daily basis.

Some collateral agreements provide for higher collateral levels in the event of material downgrades to a contracting party's rating.

Loss allowance

No loss allowance was recognised for hedging derivatives, since these are recognised at fair value through profit or loss pursuant to IFRSs.

Correlation risks

Correlation risks are insignificant for Aareal Bank Group.

Impact of a rating downgrade on collateral to be furnished

In general, the collateral agreements concluded provide for rating-independent minimum transfer amounts. In individual cases, the collateral agreements the Bank has entered into require that a higher amount of collateral be provided in the event of a downgrade of the Bank's external rating. However, the risk is immaterial due to the low volume and in relation to liquidity.

Valuation approach

For the purpose of regulatory reporting, the equivalent value of derivatives and the related counterparty credit risk are determined according to the standardised approach for measuring counterparty credit risk (SA-CCR) (Article 274 et seqq. of the CRR). For this reason, disclosure of table EU CCR7 (RWA flow statements of credit risk exposures, the counterparty credit risks of which are measured taking the internal model method into consideration) is not required.

Quantitative disclosures on counterparty credit risk

Pursuant to Article 439 of the CRR, Aareal Bank is obliged to disclose details on the methods of calculating the exposure value, and on the methods to include financial collateral for securities financing transactions (SFTs), as set out in table EU CCR1. However, this excludes trades concluded with a central counterparty (CCP) or CCP-related transactions, as well as capital requirements for credit valuation adjustment (CVA). These transactions are analysed in the following tables.

The Bank held no securities financing transactions on the reporting date under review.

EU CCR1: Analysis of CCR exposures by approach

		a	b	c	d	e	f	g	h
		Replace-ment cost	Potential future exposure	Effective expected positive exposure (EEPE)	Alpha used for computing regulatory exposure value	Exposure value pre-CRM	Exposure value post-CRM	Exposure value	RWAs
€ mn									
EU-1	EU – Original Exposure Method (for derivatives)	–	–		1.4	–	–	–	–
EU-2	EU – Simplified SA-CCR (for derivatives)	–	–		1.4	–	–	–	–
1	SA-CCR (for derivatives)	32	240		1.4	1,584	380	380	207
2	IMM (for derivatives and SFTs)			–	1.4	–	–	–	–
2a	of which: securities financing transactions netting sets			–		–	–	–	–
2b	of which: derivatives and long settlement transactions netting sets			–		–	–	–	–
2c	of which: from contractual cross-product netting sets			–		–	–	–	–
3	Financial collateral simple method (for SFTs)					–	–	–	–
4	Financial collateral comprehensive method (for SFTs)					–	–	–	–
5	VaR for SFTs					–	–	–	–
6	**Total**					**1,584**	**380**	**380**	**207**

The following table, EU CCR2, gives an overview of the credit valuation adjustment (CVA) calculations, resulting in additional capital requirements aimed at absorbing the risk of a negative change in the market value of OTC derivatives in case of a decline in the counterparty's credit quality. Aareal Bank uses the standard method pursuant to Article 384 of the CRR for calculating the CVA charge.

EU CCR2 Transactions subject to own funds requirements for CVA risk

		a EAD	b RWAs
€ mn			
1	Transactions subject to the advanced method	–	–
2	i) VaR component (including the 3x multiplier)		–
3	ii) Stressed VaR component (sVaR, including the 3x multiplier)		–
4	Transactions subject to the standardised method	338	169
EU-4	Transactions subject to the alternative approach (based on the original exposure method)	–	–
5	**Total transactions subject to own funds requirements for CVA risk**	**338**	**169**

Table EU CCR8 discloses the exposure value and risk-weighted exposure (RWA) for exposures to central counterparties. As at the reporting date, Eurex Clearing AG (in short: Eurex) and LCH Limited (which are both qualified counterparties) acted as central counterparties to Aareal Bank. There were no exposures to non-qualified CCPs as at the reporting date of 31 December 2021. In accordance with Article 306 (2) of the CRR, for the purpose of solvency reporting, Aareal Bank assigns an exposure value of zero to initial margin pledged to Eurex and LCH Limited.

EU CCR8: Exposures to CCPs

		a EAD	b RWAs
€ mn			
1	**Exposures to QCCPs (total)**		5
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which:	37	1
3	(i) OTC derivatives	37	1
4	ii) Exchange-traded derivatives	–	–
5	iii) SFTs	–	–
6	iv) Netting sets where cross-product netting has been approved	–	–
7	Segregated initial margin	64	
8	Non-segregated initial margin	–	–
9	Pre-funded default fund contributions	25	4
10	Unfunded default fund contributions		–

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€ mn	a EAD	b RWAs
11 Exposures to non-QCCPs (total)		**–**
12 Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which:	–	–
13 (i) OTC derivatives	–	–
14 ii) Exchange-traded derivatives	–	–
15 iii) SFTs	–	–
16 iv) Netting sets where cross-product netting has been approved	–	–
17 Segregated initial margin	–	
18 Non-segregated initial margin	–	–
19 Pre-funded default fund contributions	–	–
20 Unfunded default fund contributions	–	–

Table EU CCR3 discloses the exposure amount after mitigating credit risk of all counterparty credit risk exposures to which the CRSA is applied, by analogy with table EU CR5 for each exposure class, and broken down according to risk weight pursuant to Article 114 et seqq. of the CRR.

EU CCR3: Credit Risk Standard Approach – CCR exposures by regulatory exposure class and risk weights

Exposure classes	a	b	c	d	e	f	g	h	i	j	k	l
	Risk weight											
€ mn	0 %	2 %	4 %	10 %	20 %	50 %	70 %	75 %	100 %	150 %	Other	Total
1 Central governments or central banks	–	–	–	–	–	–	–	–	–	–	–	**–**
2 Regional governments or local authorities	–	–	–	–	–	–	–	–	–	–	–	**–**
3 Public-sector entities	0	–	–	–	–	–	–	–	–	–	–	**0**
4 Multilateral development banks	–	–	–	–	–	–	–	–	–	–	–	**–**
5 International organisations	–	–	–	–	–	–	–	–	–	–	–	**–**
6 Institutions	–	37	–	–	71	238	–	–	–	–	–	**346**
7 Corporates	–	–	–	–	24	3	–	–	2	–	–	**29**
8 Retail	–	–	–	–	–	–	–	–	–	–	–	**–**
9 Institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	–	–	–	–	–	**–**
10 Other items	–	–	–	–	–	–	–	–	–	–	–	**–**
11 Total	**0**	**37**	**–**	**–**	**95**	**242**	**–**	**–**	**2**	**–**	**–**	**375**

The following table EU CCR4 shows the derivative exposures treated in AIRBA – by analogy with the table EU CR6 within clearly-defined PD classes. IRBA exposures classified as specialised lending as at the reporting date under review do not include any derivative exposures.

Certain derivatives fulfil the conditions set out in Article 274 (5) of the CRR; as a result, they are shown with a zero risk exposure value.

The derivatives held by Aareal Bank Group, and entered into with internally rated property clients whose share in EaD after mitigating the credit risk of the entire AIRBA client portfolio is below one per cent, are mainly used to hedge interest rate and currency risks. As the available collateral is fully considered within the scope of determining the LGD of the respective property financing, a default LGD of 90% is used for calculating the expected loss.

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

Exposure class	PD scale	a	b	c	d	e	f	g
		Exposure value	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density
		€ mn	%		%	Years	€ mn	%
Corporates – SMEs	0.00 to < 0.15	–	–	1	–	–	–	–
	0.15 to < 0.25	4	0.23	2	90.00	3	2	66.84
	0.25 to < 0.50	2	0.34	10	90.00	3	2	82.51
	0.50 to < 0.75	11	0.70	5	90.00	2	12	111.52
	0.75 to < 2.50	6	1.63	28	90.00	1	8	141.38
	2.50 to < 10.00	11	2.99	9	90.00	2	23	212.30
	10.00 to < 100.00	–	–	–	–	–	–	–
	100.00 (Default)	–	–	–	–	–	–	–
	Subtotal	**33**	**1.54**	**55**	**90.00**	**2**	**47**	**143.32**
Corporates – Others	0.00 to < 0.15	–	–	–	–	–	–	–
	0.15 to < 0.25	–	–	–	–	–	–	–
	0.25 to < 0.50	–	–	4	–	–	–	–
	0.50 to < 0.75	–	–	2	–	–	–	–
	0.75 to < 2.50	9	1.16	5	90.00	3	19	211.10
	2.50 to < 10.00	–	–	2	–	–	–	–
	10.00 to < 100.00	–	–	–	–	–	–	–
	100.00 (Default)	–	–	–	–	–	–	–
	Subtotal	**9**	**1.16**	**13**	**90.00**	**3**	**19**	**211.10**
	Total	42	1.46	68	90.00	2	66	158.12

Pursuant to Article 439 lit. e) of the CRR, Aareal Bank is obliged to disclose information on collateral received or posted in table EU CCR5. For this purpose, this collateral must be broken down by type of financial instrument, and by segregated and non-segregated collateral. Collateral is deemed to be segregated if client assets are bankruptcy-remote as defined in Article 300 no. 1 of the CRR.

As the Bank currently does not hold any credit derivatives, disclosure of the information required under Article 439 lit. j) of the CRR in table EU CCR6 is not included.

EU CCR5: Composition of collateral for CCR exposures

	a	b	c	d	e	f	g	h
	Collateral used in derivative transactions				Collateral used in SFTs			
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received		Fair value of posted collateral	
€ mn	Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated
1 Cash – domestic currency	–	251	–	877	–	–	–	–
2 Cash – other currencies	3	26	50	–	–	–	–	–
3 Domestic sovereign debt	–	–	–	–	–	–	–	–
4 Other sovereign debt	–	–	–	–	–	–	–	–
5 Government agency debt	–	–	41	–	–	–	–	–
6 Corporate bonds	–	–	–	–	–	–	–	–
7 Equity securities	–	–	–	–	–	–	–	–
8 Other collateral	–	–	23	–	–	–	–	–
9 Total	**3**	**276**	**114**	**877**	**–**	**–**	**–**	**–**

Liquidity Risks

Management of liquidity risks

Definition

Liquidity risk in the narrower sense is defined as the risk that current or future payment obligations cannot be met in full or on time. Aareal Bank Group's liquidity risk management system is designed to ensure that the Bank has sufficient cash and cash equivalents to honour its payment obligations at any future point in time. The risk management processes have been designed to cover not only the liquidity risk in the narrower sense (insolvency risk), but also market liquidity risk and refinancing risk, including cost risk which is measured and limited accordingly as a component of the IRRBB. All elements have been integrated in an overarching ILAAP, which maps liquidity risks in both the normative and the economic perspective. Within the framework of Group planning, in addition to ICAAP risk parameters taken into account for capital planning purposes, ILAAP risk parameters for a three-year horizon are also considered.

Liquidity risk strategy

The objective of the liquidity risk strategy is to ensure the Bank's solvency at all times, even in the case of serious crisis events. The degree of crisis events to be covered is determined by Aareal Bank's risk appetite and reflected in the risk tolerances.

The Bank's portfolio comprises a broad range of liquid and high-quality securities, ensuring the Bank's ability to generate large volumes of liquidity at short notice, and thus prevent liquidity shortages, even in a tight market environment or a crisis scenario.

Within the framework of the refinancing strategy, various money and capital market instruments are used to achieve a broadly-diversified range of funding vehicles. In addition to the issuance of Pfandbriefe, which make up a significant share of its long-term funding, Aareal Bank uses a wide range of other refinancing tools, including senior preferred and senior non-preferred bonds, as well as other promissory notes, bonds and Euro Commercial Paper (ECP). Depending on market conditions, the Bank places large-sized public issues or private placements. The targeted maturity of the refinancings is generally based on the maturity profiles of the credit portfolio. In addition, the Bank aims to achieve a balanced maturity structure of liabilities. In this context, the respective market conditions and investor demand are taken into account. In the Banking & Digital Solutions segment, the Bank also generates bank deposits from the housing industry, which represent a strategically important additional source of funding. Furthermore, it has recourse to institutional money market investor deposits and enters into repo transactions in the interbank market and on Eurex as well as into open market transactions with the ECB as required.

Risk measurement and monitoring

Treasury is responsible for managing liquidity risks, and thus for the strategic and tactical management of liquidity risk for Aareal Bank Group within the framework of the defined limits and directions, whilst Risk Controlling ensures the continuous monitoring, including a daily liquidity report submitted to Treasury, and a contribution to the monthly risk report to the entire Management Board. Aareal Bank generally aims to monitor liquidity risks across all of its entities using standardised methods and procedures. This applies also if companies are taken over. The following tools are used for this purpose:

Cash flow forecast

We have developed a cash flow forecast, tracking cash flows from all balance sheet items and derivatives, on a daily basis, over a ten-year period. This liquidity risk information helps to assess the Bank's short-term liquidity position, broken down by currency or product. Strategic liquidity is taken into account using this ten-year cash flow profile. We use statistical modelling to incorporate the expected cash flow profile of products without a fixed contractual lifetime.

Liquidity run-off profile

The appropriateness of the Bank's liquidity from an economic perspective is assessed using a liquidity run-off profile (liquidity risk model): the aggregate of all conservatively expected cash inflows and outflows over a three-month period is compared to the liquidity stock. This liquidity stock comprises all assets that can be liquidated at very short notice. The difference of both figures (in absolute terms) indicates excess liquidity, once all claims assumed in the run-off profile have been fulfilled through the liquidity stock. There were no liquidity shortages throughout the period under review.

Time to illiquidity

To safeguard adequate liquidity beyond the three-month horizon covered by the liquidity run-off profile, we use the concept of time to illiquidity as a parameter. For this purpose, a liquidity run-off profile was developed which compares liquidity requirements occurring with the liquidity stock, for a one-year period. Time to illiquidity ("TtI") denotes the remaining period (expressed in days) during which Aareal Bank Group can be regarded as sufficiently liquid, even under adverse conditions. In other words, liquidity requirements (including security add-ons for adverse future events) do not exceed the liquidity stock.

The calculations are based on contractual cash flows and the short-term risk assessment methodology (liquidity run-off profile), as well as the portfolio development within the current plan scenario.

Funding profile

Diversifying the Bank's funding profile by type of investor, and by product, represents a further key aspect of our approach to liquidity risk management. Core sources of funding such as client deposits and funds invested by institutional clients – alongside covered and uncovered bond issues – constitute the foundation of our liability profile.

Generally, in addition to deposits from housing industry clients and institutional investors, Aareal Bank also uses interbank and repo transactions for short-term refinancing, the latter being used primarily to manage liquidity and cash positions.

Aareal Bank Group is solidly funded, which is underscored by its major share of long-term funding. This encompasses registered and bearer Pfandbriefe, promissory note loans, medium-term notes, other bonds and subordinated capital. As they legally qualify as debt securities, ECP are included as well, even though they usually have a term of less than one year. Subordinated capital includes subordinated liabilities and the Additional Tier 1 (AT1) bond.

Concentration limits

Besides the pure measurement of risk indicators, we also monitor concentrations of liquid assets and of funding sources, determining the percentage share of the ten largest counterparties and/or positions, relative to the total portfolio.

A limit is set for each indicator in order to restrict the dependency upon individual positions or counterparties.

LCR forecast

We have developed the LCR forecast as a measurement tool designed to ensure that we maintain compliance with the regulatory Liquidity Coverage Ratio. A preview of the Liquidity Coverage Ratio is calculated over a horizon of up to three years, determining the ratio of highly liquid assets to cumulative net cash outflows for various end-of-month dates – thus identifying any potential liquidity shortfalls or reserves.

NSFR forecast

The NSFR forecast, which is a projection of the Net Stable Funding Ratio over a period of up to three years, represents another important component of our liquidity management. This measurement tool allows us to forecast the regulatory Net Stable Funding Ratio for future dates, thus identifying any potential liquidity shortfalls or reserves in terms of the NSFR at an early stage.

Long Term LAB

The long-term liquidity run-off profile (Long Term LAB) provides a forecast of the economic perspective and enables an outlook of the liquidity run-off profile (liquidity risk model) over a period of up to three years. This liquidity run-off profile compares the expected liquidity requirements and available liquidity for different scenarios at various points in time in the future; thus, any potential liquidity shortfalls or liquidity reserves arising in the future are identified with regard to the liquidity run-off profile.

Stress testing

Moreover, we employ stress tests and scenario analyses to assess the impact of sudden stress events onto the Bank's liquidity situation. This involves conducting historical as well as hypothetical stress tests for all material risks. In order to be able to assess cross-relationships between the various types of risk, we also apply both risk type-specific and cross-risk type scenarios (so-called global stress tests), supplemented by additional inverse stress tests. The results of the listed stress analyses are reported to the Management Board on a quarterly basis.

As part of the daily reporting, various standardised liquidity-specific scenarios, which include at least one historic, one idiosyncratic and one combined scenario, are evaluated based on the liquidity run-off profile. We generally consider the withdrawal of deposits from the housing industry as the most significant scenario. Even in this stress scenario, liquidity is sufficient to cover the expected liquidity needs under stress conditions.

Liquidity emergency plan

Aareal Bank AG's liquidity emergency plan describes the governance regulations, internal provisions as well as roles in the wake of a liquidity crisis, and reflects the Bank's liquidity-specific risk profile. In addition, the plan defines qualitative and quantitative early warning indicators and the measures to remedy liquidity bottlenecks under stress conditions. This ensures that material potential disruptions of the Bank's funding capacity can be addressed in a timely and appropriate manner.

Liquidity Coverage Ratio

The LCR helps to measure whether the liquidity buffer of an institution is high enough. Pursuant to Article 412 (1) of the CRR, the Liquidity Coverage Ratio is calculated as the ratio of the liquidity buffer relative to net outflows during a stress phase of 30 calendar days. The LCR must amount to at least 100%.

The calculation of the LCR is based on the market values of liquid assets and cash flows from all asset and liability items.

The following table is based on the requirements set out in Annex XIV of Commission Implementing Regulation (EU) 2021/637 on the disclosure of the Liquidity Coverage Ratio. Quantitative details are disclosed using the weighted and unweighted average values of the last 12 reporting days of the respective quarter.

The table EU LIQ1 contains all positions that Aareal Bank deems relevant for its liquidity profile.

EU LIQ1: Quantitative information of LCR

Scope of consolidation		a	b	c	d	e	f	g	h
		Total unweighted value (average)				Total weighted value (average)			
		Quarter ending on 31 Mar 2021	Quarter ending on 30 Jun 2021	Quarter ending on 30 Sep 2021	Quarter ending on 31 Dec 2021	Quarter ending on 31 Mar 2021	Quarter ending on 30 Jun 2021	Quarter ending on 30 Sep 2021	Quarter ending on 31 Dec 2021
€ mn									
EU 1b	Number of data points used for the calculation of averages	12	12	12	12	12	12	12	12
Highquality liquid assets									
1	Total highquality liquid assets (HQLA)					6,988	7,035	6,695	6,643
Cash outflows									
2	**Retail deposits and deposits from small business customers, of which:**	**5,137**	**5,289**	**5,434**	**5,578**	**272**	**280**	**288**	**295**
3	Stable deposits	4,780	4,925	5,071	5,207	239	246	254	260
4	Less stable deposits	323	331	336	344	33	34	34	35

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Scope of consolidation		a	b	c	d	e	f	g	h
		Total unweighted value (average)				Total weighted value (average)			
		Quarter ending on 31 Mar 2021	Quarter ending on 30 Jun 2021	Quarter ending on 30 Sep 2021	Quarter ending on 31 Dec 2021	Quarter ending on 31 Mar 2021	Quarter ending on 30 Jun 2021	Quarter ending on 30 Sep 2021	Quarter ending on 31 Dec 2021
€ mn									
5	**Unsecured wholesale funding**	**6,126**	**6,202**	**6,251**	**6,409**	**2,253**	**2,238**	**2,224**	**2,298**
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	3,953	4,064	4,146	4,200	948	975	995	1,007
7	Non-operational deposits (all counterparties)	2,099	2,079	2,058	2,131	1,231	1,204	1,182	1,213
8	Unsecured debt	74	59	47	78	74	59	47	78
9	**Secured wholesale funding**					**1**	**1**	**1**	**1**
10	**Additional requirements**	**1,132**	**1,163**	**1,170**	**1,108**	**349**	**310**	**274**	**240**
11	Outflows related to derivative exposures and other collateral requirements	244	209	175	148	239	204	170	143
12	Outflows related to loss of funding on debt products	5	–	–	–	5	–	–	–
13	Credit and liquidity facilities	883	954	995	960	105	106	104	97
14	**Other contractual funding obligations**	**121**	**119**	**140**	**136**	**98**	**96**	**116**	**112**
15	**Other contingent funding obligations**	**872**	**987**	**1,043**	**1,247**	**121**	**120**	**117**	**134**
16	**Total cash outflows**					**3,094**	**3,045**	**3,020**	**3,080**
Cash inflows									
17	Secured lending (e.g. reverse repos)	146	60	56	56	7	3	3	3
18	Inflows from fully performing exposures	389	410	396	413	284	301	295	310
19	Other cash inflows	151	143	152	159	151	143	152	159
EU-19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)					–	–	–	–
EU-19b	(Excess inflows from a related specialised credit institution)					–	–	–	–
20	**Total cash inflows**	**686**	**613**	**604**	**628**	**442**	**447**	**450**	**472**
EU-20a	Fully exempt inflows	–	–	–	–	–	–	–	–
EU-20b	Inflows subject to 90 % cap	–	–	–	–	–	–	–	–
EU-20c	Inflows subject to 75 % cap	686	613	604	628	442	447	450	472
						Total adjusted value			
EU-21	**Liquidity buffer**					**6,988**	**7,035**	**6,695**	**6,643**
22	**Total net cash outflows**					**2,651**	**2,598**	**2,570**	**2,607**
23	**Liquidity Coverage Ratio (%)**					**265.02 %**	**271.66 %**	**261.15 %**	**255.42 %**

A large portion of securities held in the Treasury portfolio serve as the Bank's liquidity reserve, both from an economic and a normative perspective. Around 80 % of the Treasury portfolio fulfils the criteria for inclusion as high-quality liquid assets (HQLA); high quality and value stability play a decisive role in this respect.

The Bank's HQLA predominantly comprise the asset class "public-sector borrowers" and deposits with central banks. Key drivers impacting LCR results are largely related to changes in our asset portfolio, as well as outflows connected with housing industry client deposits.

The Group's LCR was approximately 255 % last year.

Regarding the causes of LCR changes over time, reference is made to the explanations in the chapter "Overview of regulatory key metrics".

Concentration of funding sources

In addition to the issuance of Pfandbriefe, which make up a significant share of its long-term funding, Aareal Bank uses a wide range of other refinancing tools, including senior preferred and senior non-preferred bonds, as well as other promissory notes and bonds. Depending on market conditions, the Bank places large-sized public issues or private placements. In the Banking & Digital Solutions segment, the Bank also generates deposits from the housing industry, which represent a strategically important additional source of funding. Furthermore, it has recourse to institutional money market investor deposits.

Diversifying the Bank's funding profile by type of investor, and by product, represents a key aspect to Aareal Bank's approach to liquidity risk management. Besides the pure measurement of risk indicators, the concentrations of funding sources are also monitored. For this purpose, the percentage share of the ten largest counterparties and/or positions in relation to the total portfolio are determined.

A limit is set for each indicator in order to restrict the dependencies upon individual positions or counterparties.

Currency mismatches in the Liquidity Coverage Ratio

Pursuant to Article 415 (2) of the CRR, Aareal Bank Group has no significant foreign currency exposure in its portfolio. As at the reporting date 31 December 2021, the largest foreign currency portfolio in USD amounts to 2.42 % of total liabilities. The Bank monitors the portfolio as to the existence of significant foreign currency exposures on a regular basis.

Derivatives positions and potential hedging requests

Pursuant to Article 423 (3) of the CRR, an additional liquidity outflow is to be provided for collateral which is required due to the impact of unfavourable market conditions on derivatives and financing transactions as well as on other contracts. The aim is to consider additional outflows from collateral potentially arising in an unfavourable market environment. Aareal Bank Group determines the additional outflow as per the historical look-back approach (HLBA). The LCR calculation includes the largest absolute collateral net flow within a period of 30 days which occurred in the last 24 months. As at the reporting date 31 December 2021, the annual average of additional liquidity requirements stood at € 118 million.

Net Stable Funding Ratio (NSFR)

As opposed to the LCR, the focus of the NSFR – to be disclosed as at the reporting date – is exclusively on holdings of assets and liabilities as well as on off-balance sheet items (contingent liabilities). The fundamental idea of the NSFR is that the repayment structure of an institution's asset and liability items should largely correspond to each other so that the institution is able to refinance less liquid asset items using the respective non-current liabilities, even under stress conditions.

To calculate the NSFR, available stable funding (ASF) is set in relation to the required stable funding (RSF).

In addition to liquid assets, the LCR only includes items that are due within 30 days, while the NSFR comprises all of the institution's balance sheet holdings according to their remaining term. In contrast to the LCR, which is based on the market values of liquid assets and cash flows from all asset and liability items, the NSFR calculation uses the balance sheet as a reference and is therefore generally based on the carrying amounts.

In accordance with Article 451a (3) lit. a) of the CRR, the quarter-end figures shall be published for each quarter of the relevant disclosure period. As a large institution, Aareal Bank is bound to disclose its NSFR information on a semi-annual basis. Therefore, in principle, the Bank shall publish its figures for the respective current disclosure date as well as for the previous quarter.

The following table EU LIQ2 generally discloses the carrying amount as the unweighted value by residual maturity (columns a to d). However, derivatives at fair value are excluded from this. The weighted value of stable funding disclosed in column e is the product of the unweighted value and the factors defined in the CRR for individual asset and liability items.

The available stable funding items disclosed in column a ("no maturity") are either unlimited or have no maturity specifications.

EU LIQ2: Net Stable Funding Ratio as at 31 December 2021

		a	b	c	d	e
		Unweighted value by residual maturity				
€ mn		No maturity	< 6 months	6 months to < 1 year	≥ 1 year	Weighted value
	Available stable funding (ASF) Items					
1	**Capital items and instruments**	**2,649**	**10**	**12**	**475**	**3,124**
2	Own funds	2,649	10	12	371	3,020
3	Other capital instruments		–	–	105	105
4	**Retail deposits**		**5,835**	**1**	**–**	**5,526**
5	Stable deposits		5,473	1	–	5,200
6	Less stable deposits		363	–	–	326
7	**Wholesale funding**		**14,855**	**3,149**	**18,450**	**23,923**
8	Operational deposits		4,370	–	–	399
9	Other wholesale funding		10,484	3,149	18,450	23,524
10	**Interdependent liabilities**		**–**	**–**	**–**	**–**

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€ mn		a	b	c	d	e
		Unweighted value by residual maturity				
		No maturity	< 6 months	6 months to < 1 year	≥ 1 year	Weighted value
11	**Other liabilities**	**81**	**213**	**18**	**428**	**438**
12	NSFR derivative liabilities	81				
13	All other liabilities and capital instruments not included in the above categories		213	18	428	438
14	**Available stable funding (ASF)**					**33,011**
	Required stable funding (RSF) Items					
15	**Total high-quality liquid assets (HQLA)**					**266**
EU-15a	**Assets encumbered for a residual maturity of one year or more in a cover pool**		**30**	**248**	**12,603**	**10,949**
16	**Deposits held at other financial institutions for operational purposes**		**–**	**–**	**–**	**–**
17	**Performing loans and securities**		**1,590**	**2,154**	**14,114**	**13,652**
18	Performing securities financing transactions with financial customers collateralised by Level 1 HQLA subject to 0 % haircut		–	–	–	–
19	Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions		548	29	159	228
20	Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:		1,005	2,117	13,476	13,153
21	with a risk weight of less than or equal to 35 % under the Basel II Standardised Approach for credit risk		1	77	439	550
22	Performing residential mortgages, of which:		5	8	206	–
23	with a risk weight of less than or equal to 35 % under the Basel II Standardised Approach for credit risk		5	8	206	–
24	Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products		31	–	274	271
25	**Interdependent assets**		**–**	**–**	**–**	**–**
26	**Other assets**		**1,622**	**123**	**1,562**	**2,143**
27	Physically traded commodities				–	–
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs		–	–	91	77
29	NSFR derivative assets		–			–
30	NSFR derivative liabilities before deduction of variation margin posted		1,007			50
31	All other assets not included in the above categories		614	123	1,470	2,015
32	**Off-balance sheet items**		**51**	**35**	**1,110**	**48**
33	**Total RSF**					**27,064**
34	**Net Stable Funding Ratio (%)**					**121.98 %**

EU LIQ2: Net Stable Funding Ratio as at 30 September 2021

€ mn		a	b	c	d	e
		Unweighted value by residual maturity				
		No maturity	< 6 months	6 months to < 1 year	≥ 1 year	Weighted value
	Available stable funding (ASF) Items					
1	**Capital items and instruments**	**2,563**	**–**	**17**	**553**	**3,116**
2	Own funds	2,563	–	17	404	2,967
3	Other capital instruments		–	–	150	150
4	**Retail deposits**		**5,729**	**–**	**–**	**5,425**
5	Stable deposits		5,376	–	–	5,107
6	Less stable deposits		354	–	–	318
7	**Wholesale funding**		**8,581**	**6,916**	**19,234**	**26,038**
8	Operational deposits		4,016	–	–	417
9	Other wholesale funding		4,565	6,916	19,234	25,621
10	**Interdependent liabilities**		**–**	**–**	**–**	**–**
11	**Other liabilities**	**62**	**191**	**29**	**404**	**418**
12	NSFR derivative liabilities	62				
13	All other liabilities and capital instruments not included in the above categories		191	29	404	418
14	**Available stable funding (ASF)**					**34,997**
	Required stable funding (RSF) Items					
15	**Total high-quality liquid assets (HQLA)**					**2,903**
EU-15a	**Assets encumbered for a residual maturity of one year or more in a cover pool**		**36**	**35**	**12,402**	**10,602**
16	**Deposits held at other financial institutions for operational purposes**		**–**	**–**	**–**	**–**
17	**Performing loans and securities**		**1,775**	**1,608**	**14,730**	**14,171**
18	Performing securities financing transactions with financial customers collateralised by Level 1 HQLA subject to 0 % haircut		–	–	–	–
19	Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions		186	398	207	424
20	Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:		1,584	1,172	13,984	13,414
21	with a risk weight of less than or equal to 35 % under the Basel II Standardised Approach for credit risk		26	27	429	541
22	Performing residential mortgages, of which:		5	7	224	–
23	with a risk weight of less than or equal to 35 % under the Basel II Standardised Approach for credit risk		5	7	224	–
24	Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products		–	32	316	332

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€ mn		a	b	c	d	e
		Unweighted value by residual maturity				
		No maturity	< 6 months	6 months to < 1 year	≥ 1 year	Weighted value
25	**Interdependent assets**		**–**	**–**	**–**	**–**
26	**Other assets**	**–**	**1,422**	**29**	**1,603**	**2,074**
27	Physically traded commodities				–	–
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs		–	–	89	76
29	NSFR derivative assets		–			–
30	NSFR derivative liabilities before deduction of variation margin posted		820			41
31	All other assets not included in the above categories		602	29	1,513	1,957
32	**Off-balance sheet items**		**67**	**51**	**1,192**	**50**
33	**Total RSF**					**29,807**
34	**Net Stable Funding Ratio (%)**					**117.41 %**

Assets and liabilities are considered interdependent if they have the same capital amounts and maturity structures and if the role of the reporting institution is limited to transferring the funds from liabilities to assets (Article 428 et seq. of the CRR). These liabilities and assets can be included in the calculation of the NSFR with a weighting of 0 % of the RSF and ASF, if the competent authorities have approved their classification as interdependent. Aareal Bank refrains from obtaining such approval until further notice.

Operational Risks

Management of operational risks

Definition

The Bank defines operational risk as the threat of losses caused by inappropriate internal procedures, human resources and systems (or their failure), or through external events. This definition also includes legal risks. To the extent that they are caused by operational risks, reputational risks are also taken into consideration within this type of risk. ESG risk factors have also been taken into account within operational risk since 2021. Systemic risks (or their impact on operational risks) are not affected by this.

Strategy for the treatment of operational risks

The strategy pursued by the Bank which is based on specialised and individualised businesses results in less standardised and mechanised processes and workflows when compared with institutions that focus on standardised businesses.

Within the framework of the operational risk strategy, a decision is made with regard to avoiding (incl. relevant risk mitigation strategies), accepting/entering into or transferring/hedging risk positions. Deciding factors for the related decisions are both the economic reasonableness of the decisions and the Bank's

risk appetite. The aim of all these efforts is to generate an accepted risk profile on the basis of a regularly applied risk analysis.

Against the background of this risk environment, we generally avoid a concentration of operational risk exposure. This is achieved, among other things, via adequate long-term measures (such as increased communication through round table events or interlinking with the Internal Control System) as well as through the consistent implementation of a precisely defined set of controlling instruments for the identification and monitoring of operational risks and resulting loss events. These instruments are tailored to the Bank and its specific risk profile.

The general management of operational risks is organised according to the Three Lines of Defence model. In this context, the general second line of defence is supplemented by specialised monitoring functions with their own management approach. These are based on processes throughout the risk management cycle and focus on the qualitative management of the defined risk appetite.

The Group-wide objective of the compliance management system is to mitigate liability risks in the form of potential fines and penalties for the Bank or its subsidiaries and their board members. In addition, Aareal Bank Group's positive reputation as a group of companies with integrity vis-à-vis external stakeholders such as business partners, counterparties and investors is to be maintained and further strengthened.

The Anti Financial Crime (AFC) strategy serves to manage risks related to money laundering, terrorist financing, sanction breaches and fraud in a professional and conscious manner. It encompasses applicable qualitative standards (for example, listing businesses areas and sectors not served) and quantitative key risk indicators (such as thresholds for high-risk clients and politically exposed persons) for the purpose of risk monitoring.

In order to mitigate legal risks, Aareal Bank's legal department monitors any litigation the Bank is involved in (whether in court or out-of-court), and deals with any legal issues of fundamental importance. Legal also compiles all information concerning any legal disputes involving Aareal Bank Group, whether in or out of court. The Bank's decentralised operating legal entities, as well as the legal departments of subsidiaries submit quarterly reports on legal risks identified to Aareal Bank's legal department; where particular risks have occurred, such reports are submitted on an event-driven basis. When required, Aareal Bank's legal department discusses and coordinates any concrete measures with the reporting unit. The legal department reports to the Management Board, (at least) on a quarterly basis, as well as on an event-driven basis.

Tax risks including related legal risks are monitored and managed separately by Aareal Bank's tax department. The tax compliance management system actively reduces the risk related to tax law compliance and fraud cases, for example by setting standardised work instructions and controls, both within the tax department and in interfaces with other divisions.

Information Security & Data Protection defines Bank-wide requirements and orchestrates different measures in order to mitigate the information security risk and to achieve the level of security targeted in the Information Security Framework Directive. This includes raising awareness amongst internal and external employees through corresponding training courses and the exchange of information on cyber threats via the communication channels with ECB, BaFin and BSI.

To mitigate the outsourcings risk, the responsible outsourcing organisational unit regularly assesses the performance of external service providers, using defined criteria. The results of this process, and control measures taken, are consolidated and communicated to the Bank's Management.

Business Continuity Management (BCM) mitigates business continuity risks by identifying the Bank's time-critical business processes. Responsibilities and communication channels are defined by the person with overall BC responsibility via the BC managers within the overall organisation.

Process-inherent risks and/or risks that derive from the procedures implemented in practice are addressed through the internal control system (ICS). In the design of Aareal Bank Group's ICS, emphasis is placed upon mitigating material process-inherent risks through appropriate and effective key controls.

Risk measurement and monitoring

It is the objective of the policy pursued by Aareal Bank to achieve a risk-minimising or loss-limiting effect at an early stage by employing a pro-active approach.

The Bank currently uses the following risk control tools to manage operational risks:

- Self-assessments: analysis thereof can provide management with indicators of any potential risks within the organisational structure.
- Risk inventories and subsequent risk assessments that include a periodic systematic identification and compilation of all relevant risks and their qualitative and quantitative assessment.
- A loss database, in which relevant damages incurred are reported, and in which they can be monitored until they are officially closed.
- Operational risk indicators for all risk levels defined in the NFR framework that show current threat potential using a defined 'traffic light' system.
- Execution of stress tests: these are hypothetical scenarios (taking external data into account) and historical scenarios as well as sensitivity analyses on the risk inventories. They serve as an indicator for potential developments within the operational risks that could jeopardise the continued existence of the Group.

The tools described above are used to prepare the regular risk reporting to the Bank's senior management. Taken together, these tools for managing operational risks result in an integrated control circuit which leads to risk identification, evaluation, and management – through to risk control. The responsibility for implementing operative risk-reducing measures rests with those responsible for the Bank's risk management. The utilisation of freely available funds for operational risks – as part of the Bank's risk-bearing capacity – are determined using the regulatory standardised approach.

No material risk concentrations were evident in the 2021 financial year. Even though loss cases are recorded in the loss database on an ongoing basis, the aggregate impact of such losses during the year under review amounted to less than 20 % of the regulatory capital to be maintained for operational risks. Additional operational risk management tools – in particular, the monitoring of indicators, stress tests and the self-assessment – do not indicate potential elevated risk either.

For information on the responsibilities in connection with operational risks on organisational unit level, we refer to the overview in the chapter “Risk management – scope of application and areas of responsibility” in this Disclosure Report (page 8).

Regulatory assessment

As a rule, the capital charge for the Group’s operational risks is calculated according to the Standardised Approach pursuant to Article 317 et seqq. of the CRR. Aareal Bank uses the basic indicator approach in accordance with Article 315 et seqq. for former Düsseldorfer Hypothekenbank AG (“Düsselhyp”), which was acquired as at 31 December 2018. Given the fact that the gross profit of Düsselhyp has to be considered for a period of three years, we still use the approach as described in Article 314 (4) of the CRR for regulatory reporting purposes, despite the now-complete integration of Düsselhyp. The separate consideration of Düsselhyp’s gross profit for a period of three years expires as at the first quarter of 2022.

As an international property specialist, we limit our operations to trading and sales, commercial banking, retail banking, plus payment and settlement provided within the scope of the Standardised Approach.[1)]

Article 317 (2) of the CRR defines regulatory risk weights (so-called ‘beta factors’) for the individual business lines forming the basis of the Standardised Approach. We use these defined weightings rather than exercising the option to apply proprietary beta factors.

The information included in relation to the relevant indicator is based on segment reporting as at financial year end based on the regulatory scope of consolidation pursuant to IFRSs. As segment reporting is not in line with the breakdown of business lines pursuant to the CRR, the individual items of the segment report are re-allocated on the basis of factually logical arguments. Statistical values are partially used as further supporting data (such as the ratio of private vs. commercial loans).

The following table provides an overview of the calculation of own funds requirements and of the RWA for the operational risk based on the Basic Indicator Approach and the Standardised Approach. While the own funds requirement under the Basic Indicator Approach amounts to 15 % of the relevant indicator, the own funds requirement for operational risk as determined under the Standardised Approach is the three-year average of the combined total of the own funds requirements of each business line and taking into consideration the reporting dates set out in the table. In this context, the annual own funds requirement of a business line equals the product of the beta factor defined for each business line and the relevant indicator calculated for each business line.

The “commercial banking” business line accounts for 95.6 % of the relevant indicator.

[1)] Due to the fact that the CRR does not provide for a separate adequate business line for the Banking & Digital Solutions segment, the relevant income of that segment is weighted using the highest beta factor (18 %, corresponding, inter alia, to the beta factor for the trading and sales business).

EU OR1: Operational risk regulatory capital requirements and RWAs

	a	b	c	d	e
	Relevant indicator			Regulatory capital requirements	RWAs
€ mn	31 Dec 2018	31 Dec 2019	31 Dec 2020		
1 Banking activities subject to basic indicator approach (BIA)	23	–	–	1	15
2 Banking activities subject to standardised (TSA)/ alternative standardised (ASA) approaches	604	592	586	89	1,116
3 Subject to TSA	604	592	586		
4 Subject to ASA	–	–	–		
5 Banking activities subject to advanced measurement approaches AMA	–	–	–	–	–

Market Risks

Management of market risks

Definition

Market risks are broadly defined as the threat of losses due to changes in market parameters; this refers to market risks which are not assigned to the IRRBB. In particular, this also encompasses any type of spread risk exposure of instruments held in the banking book which are sensitive to changes in interest rates, and which are neither included in IRRBB nor in counterparty credit risk. Specifically, for Aareal Bank this includes:

- risks resulting from fluctuations of spot foreign exchange (FX) rates (spot FX risk);
- risks resulting from fluctuations of forward foreign exchange rates (forward FX risk); and
- risks from the regulatory review of the trading book (Financial Risk in the Trading Book – FRTB).

Being authorised to maintain a trading book, Aareal Bank AG is the Group entity that is in a position to assign transactions to the trading portfolio as defined by the CRR. Given that no such trades were concluded during the financial year under review, trading book risks did not occur in the overall risk scenario during the reporting period.

Commodities are irrelevant for the Bank's business. Currency risks are controlled through derivatives.

Additional elements of market risk are:

- valuation risks due to changes in credit spreads (credit spread risk);
- specific price risks from the bond portfolio, wherein the bonds are mainly sovereign bonds (sovereign risk);
- risks from adjustments to the credit valuation of OTC-derivatives (CVA risk).

To differentiate spread risks (credit spread risk and sovereign risk) in terms of their credit risk exposure, reported market risk is adjusted accordingly.

Market risk strategy

Aareal Bank's exposure to the capital market is based on a responsible and sustainable strategy. Identified risks are offset, for example, through hedging agreements.

Interest rate positions from the current lending and refinancing business, which are intended to be hedged, are closed out using interest rate derivatives. Generally, we use one-to-one hedges to meet IFRS hedge accounting criteria. Macro positions for which IFRS hedge accounting cannot be applied are monitored and controlled within the overall position.

The lending and refinancing business in foreign currencies is managed using money market transactions, FX swaps and cross-currency basis swaps in the respective currency. The currency positions from accumulated lending and refinancing margins are reviewed regularly and closed out on a timely basis. Basic risks from differing fixing dates are largely avoided for each currency by selecting suitable roll dates.

We do not invest in precious metals or other commodities or raw materials. Similarly, there are currently no amounts to be included for net equity or equity index positions. We calculate the regulatory capital requirements for foreign currency risk based on the rights and obligations, cash on hand as well as investments in foreign currencies.

Risk measurement and monitoring

Risk Controlling informs the members of the Management Board responsible for Treasury and risk monitoring about the risk position and exposure to other market risks on a daily basis.

Risk management is performed within the Treasury division and monitored by the Risk Controlling division. Based on the daily risk report, all changes of the present value in all currencies are analysed on a daily basis; if necessary, risk-reducing measures are taken.

The Asset Liability Committee (ALCO) reports comprehensively on the Bank's position regarding the management of market and interest rate risks, as well as additional indicators, on a monthly basis. In addition to the Management Board member responsible for Treasury, the ALCO comprises the head of Treasury, the Management Board member responsible for Risk Controlling, as well as the heads of Risk Controlling, Finance & Controlling and Regulatory Affairs as voting members.

The VaR concept has been broadly accepted as the predominant method for measuring economic market risk. VaR quantifies risk as the maximum loss that will occur within a certain period of time, and given a defined probability.

A variance-covariance approach (delta-normal method) is used throughout the Group to determine the VaR indicator. Determined on a daily basis for the Group, the VaR figure takes into account the correlation between individual risk types. Statistical parameters used in the VaR model are calculated directly from a historical data pool maintained within the Bank, which covers at least 250 days[1]. The loss potential is determined applying a 99.9 % confidence interval.

[1] Historical data covering two years is used for the sub-risk type of credit spread risk.

Backtesting

The quality of forecasts made using statistical models is checked through a monthly backtesting process. The quality of the statistical procedure used to measure risk is checked using a binomial test, whereby daily profits and losses from market fluctuations are compared with the upper projected loss limit (VaR) forecast on the previous day (known as 'clean backtesting'). In line with the selected confidence level of 99.9 %, only a small number of events are expected to break out of the VaR projection.

Regulatory assessment

We do not use an internal model for the regulatory assessment of market risk, but employ standard regulatory procedures instead.

The option provided in Article 340 of the CRR, as well as the duration-based approach, are used to calculate general risks.

We do not apply any lump-sum weighting amounts for investment fund units in accordance with Article 348 (1) of the CRR.

The table EU MR1 (Market risk under the standardised approach) is used to disclose RWA for various market risk exposures pursuant to Article 92 (3) lit. c) of the CRR. As at 31 December 2021, only currency risk applies to Aareal Bank. Since the sum total of the aggregate net foreign exchange position does not exceed the threshold of 2 % of own funds, Aareal Bank has neither determined regulatory capital requirements for foreign exchange risk, nor reported these to the supervisory authorities. Accordingly, the table mentioned above is not disclosed.

Interest Rate Risk in the Banking Book

Management of interest rate risk in the banking book

Definition

Interest rate risk in the banking book (IRRBB) is defined as the risk exposure of instruments held in the banking book which are sensitive to changes in interest rates, caused by yield curve shifts.

Specifically, for Aareal Bank this includes:

- risks arising from maturity transformation in the event of yield curve shifts (so-called gap risk), which, in turn, are broken down into:
  - risks from cash flows which are sensitive to interest rates, relative to the general yield curve (interest rate risk or repricing risk);
  - risks arising from the valuation of future cash flows, relative to the general yield curve (yield curve risk);

- risks from cash flows which are sensitive to interest rates, in terms of spreads to the general yield curve (basis risk);
- risks from explicit and implied options (option risk);
- risks arising from changing valuation of pension liabilities (pension risk);
- risks from fluctuations in the value of fund assets (fund risk); and
- risks from changes in Aareal Bank's specific funding spreads (funding risk).

Risk measurement and monitoring

Risk Controlling informs the members of the Management Board responsible for Treasury and risk monitoring about the risk position and the present value effects of interest rate risk in the banking book on a daily basis (economic value of equity perspective).[1] This is supplemented on a monthly basis by a presentation of potential plan deviations of income in case adverse interest rate scenarios occur (earnings perspective). The interest rate scenarios used for the measurement of potential plan deviations comprise interest rate shocks (both increases and reductions) as well as time-based increases or reductions of the interest rate projection used to determine planned interest income.

The present value based VaR concept has been broadly accepted as the predominant method for measuring economic interest rate risk in the banking book. VaR quantifies risk as the maximum loss that will occur within a certain period of time, and given a defined probability.

A variance-covariance approach (delta-normal method) is used throughout the Group to determine the VaR indicator. Determined on a daily basis for the Group, the VaR figure takes into account the correlation between individual risk types. Statistical parameters used in the VaR model are calculated directly from a 250-day historical data pool maintained within the Bank. The loss potential is determined applying a 99.9 % confidence interval under the economic perspective.

By their very nature, VaR calculations are based on numerous assumptions regarding the future development of the business, and the related cash flows. Key assumptions used include current account balances and deposits at notice which are factored into calculations for a period of up to ten years (2.75 years on average), using the average residual amount of deposits observed in the past. Loans are taken into account using their fixed-interest period (for fixed-rate exposures), or using their expected maturity (variable-rate exposures). Aareal Bank Group's consolidated equity is not taken into account as a risk-mitigating item. This tends to overstate VaR, demonstrating our goal to pursue a conservative approach adopted in our risk measurement processes.

In addition to this and in line with EBA/GL/2018/02 (Guidelines on the management of interest rate risk arising from non-trading book activities), the change in net interest income is determined in the relevant interest rate shock scenarios. Net interest income is the difference between interest income and interest expenses from all interest-bearing assets and liabilities of the banking book, including derivatives and off-balance sheet positions under IFRSs. In contrast to the present value approach, net interest income includes not only the earnings contributions of the modelled existing business as at the planning or forecast date, but also the income and expenses from planned new business and prolongations. The changes are mainly the result of various developments of forward interest rates before and after interest rate shocks and the resulting modelled impact on client behaviour.

[1] The responsibilities with respect to interest rate risks in the banking book on organisational unit level can be found in the overview on page 8.

An additional instrument used to quantify interest rate risk exposure is the calculation of interest rate sensitivity, expressed by the so-called 'delta' parameter. The first step to determine this parameter requires calculating the present values of all asset and equity/liability items on the statement of financial position. In a second step, the interest rates of yield curves used for this calculation are subjected to a one basis point parallel shift up (a method known as the 'key rate method'). Delta is the present value of the profit or loss resulting from this yield curve change.

Effect of hedging

Treasury manages the general interest rate risk as well as the basis risk of the banking group in line with the principles of the IRRBB strategy within the framework of the limits set under the RAF and the approval powers defined in the Schedule of Powers (Kompetenzordnung) for Treasury. The focus is on linear risks, while optional risks are largely hedged.

Based on the daily risk report, all changes of the present value in all currencies are analysed by TR; if necessary, risk-reducing measures are taken. Structured and/or puttable financial instruments are hedged externally using interest rate derivatives by transforming them to the management target (SONIA (GBP), SARON (CHF), 3m other) using swaps. The same applies to fixed-income exposures which remain unhedged without any such intention within the framework of asset/liability macro exposures.

In the context of foreign currency transactions, IRRBB is hedged through interest rate swaps in the respective currency or through FX or cross CCY swaps, respectively. There is no present value based hedge of margins or spread components, which results in stable interest income. The corresponding present value risk is taken by Aareal Bank Group deliberately and contributes to stabilising income.

The management of the interest risk exposure is effected by Treasury on the basis of the objective of a broad-based immunisation of the IFRS income statement over several reporting periods as well as the hedge of the Bank's full fair value (economic value of equity, EVE). At Aareal Bank, micro hedge relationships, based on fair value hedge accounting under IFRS 9, play a major role in this context.

This procedure is complemented by selective macro management of interest rate risks and the management of deposit modelling within the context of the above-mentioned asset/liability macro exposure.

Regulatory assessment

To meet the quantitative disclosures set out in Article 448 (1) of the CRR, Aareal Bank follows the final draft implementing technical standards on disclosure of information on exposures to interest rate risks on positions held in the trading book (EBA/ITS/2021/07).

In accordance with these requirements, the Bank discloses present value changes and net interest income in the table EU IRRBB1 in case of a change in the yield curves for the interest rate shock scenarios presented in EBA/GL/2018/02 (Guidelines on the management of interest rate risk arising from non-trading book activities).

EU IRRBB1: Interest rate risk in the banking book

		a	b	c	d
		Changes of EVE		Changes of NII	
		31 Dec 2021	30 Jun 2021	31 Dec 2021	30 Jun 2021
€ mn					
1	Parallel shock up	29	17	14	-3
2	Parallel shock down	80	74	112	103
3	Steepener shock	64	59		
4	Flattener shock	-26	-16		
5	Short rates shock up	-22	-19		
6	Short rates shock down	81	84		

The change in economic value of equity (EVE) corresponds to the present value change resulting from a change in interest rates in relation to all non-trading book positions sensitive to interest rates, assuming that these positions will expire at a later date.

Net interest income (NII) is a metric based on the income statement. The earnings risk is measured based on the changes in net interest income of the next twelve months as a result of a parallel shift of the yield curve by 200 basis points. In this context, assumptions regarding client behaviour and the competitive environment in such a scenario are especially subject to idealised model parameters.

The change in EVE compared to 30 June 2021 mainly resulted from general market and interest rate developments. Thanks to interest rate hedges, the sensitivity of the present value to strong interest rate fluctuations remains low. Hedges of reference-rate-linked loans against negative interest rates have the greatest impact. Due to the rise in interest rates in the reference period, these have a reduced present value loss potential in the event of an increase in interest rates and, in the overall picture, allow for a small increase in profit potential in a scenario of sharply rising interest rates.

In the event of a rise in interest rates, the effects from the loss of income from floors in the lending business and the modelled margins in the deposit-taking business largely offset each other. It is important to bear in mind that contributions from zero floor agreements in particular only change proportionally to the development of the underlying reference interest rates in a negative interest rate environment. Floors are therefore the key drivers of the presented increase in net interest income in case of a parallel downward interest rate shift – especially since in this scenario, floor agreements for transactions in additional currencies create value in terms of net interest income. Changes between the reporting dates are due in particular to the development of market interest rates in the baseline scenario and the increase in the credit portfolio and/or the volume of transactions with floor agreements.

Encumbered and Unencumbered Assets

Asset Encumbrance provides an overview of the degree of asset encumbrance and – derived from this overview – an assessment of the Bank's ability to meet its financial obligations. The Asset Encumbrance Ratio, a key indicator of asset encumbrance, presents total encumbered assets and total collateral reused in proportion to total assets and total collateral received.

Assets are considered encumbered or used if they are not freely available to the institution. This is always the case if an asset is pledged or subject to lending arrangements or any form of arrangement to secure, collateralise or credit-enhance any originated loans or potential commitments from derivative transactions or any on-balance-sheet or off-balance-sheet transaction.

The following explanations are based on the requirements set out in Article 18 of Commission Implementing Regulation (EU) 2021/637. Accordingly, quantitative information has to be disclosed as median values of the data reported to the supervisory authorities on a quarterly basis; these data are determined based on the IFRS accounting framework.

The scope of consolidation used for determining the asset encumbrance is not different from the scope of consolidation used for liquidity requirements.

As both total assets and the percentage-based asset encumbrance level as at 31 December 2021 were above the thresholds set out in point 6 of the Annex XXXVI of the Commission Implementing Regulation mentioned above, additional disclosures are made with respect to assets that, if unencumbered, would be eligible for a classification as assets of extremely high liquidity and credit quality (EHQLA) or assets of high liquidity and credit quality (HQLA).

EU AE1: Encumbered and unencumbered assets

		Carrying amount of encumbered assets		Fair value of encumbered assets	
			of which: notionally eligible unencumbered EHQLA and HQLA		of which: notionally eligible unencumbered EHQLA and HQLA
€ mn		010	030	040	050
010	**Assets of the disclosing institution**	**22,458**	**5,857**		
030	Equity instruments	–	–	–	–
040	Debt securities	5,972	5,854	5,922	5,805
050	of which: covered bonds	320	320	320	320
060	of which: securitisations	–	–	–	–
070	of which: issued by general governments	4,516	4,516	4,463	4,463
080	of which: issued by financial corporations	1,625	1,538	1,622	1,537
090	of which: issued by nonfinancial corporations	–	–	–	–
120	Other assets	16,506	5		

€ mn	Carrying amount of unencumbered assets		Fair value of unencumbered assets	
		of which: EHQLA and HQLA		of which: EHQLA and HQLA
	060	080	090	100
010 Assets of the disclosing institution	**24,008**	**6,390**		
030 Equity instruments	105	–	105	–
040 Debt securities	691	666	689	665
050 of which: covered bonds	17	–	17	–
060 of which: securitisations	–	–	–	–
070 of which: issued by general governments	528	528	526	526
080 of which: issued by financial corporations	135	135	135	135
090 of which: issued by nonfinancial corporations	–	–	–	–
120 Other assets	23,141	5,909		

EU AE2: Collateral received and own debt securities issued

€ mn	Fair value of encumbered collateral received or own debt securities issued		Unencumbered Fair value of collateral received or own debt securities issued available for encumbrance	
		of which: notionally eligible unencumbered EHQLA and HQLA		of which: EHQLA and HQLA
	010	030	040	060
130 Collateral received by the disclosing institution	**–**	**–**	**–**	**–**
140 Loans on demand	–	–	–	–
150 Equity instruments	–	–	–	–
160 Debt securities	–	–	–	–
170 of which: covered bonds	–	–	–	–
180 of which: securitisations	–	–	–	–
190 of which: issued by general governments	–	–	–	–
200 of which: issued by financial corporations	–	–	–	–
210 of which: issued by nonfinancial corporations	–	–	–	–
220 Loans and advances other than loans on demand	–	–	–	–
230 Other collateral received		–	–	–
240 Own debt securities issued other than own covered bonds or securitisations	**–**	**–**	**20**	**–**
241 Own covered bonds and securitisations issued and not yet pledged			**–**	**–**
250 Total collateral received and own debt securities issued	**22,458**	**5,857**		

EU AE3: Sources of encumbrance

€ mn	Matching liabilities, contingent liabilities or securities lent 010	Assets, collateral received and own debt securities issued other than covered bonds and securitisations encumbered 030
010 Carrying amount of selected financial liabilities	**19,957**	**22,251**

Information on importance of encumbrance

Aareal Bank determines the encumbrance of assets in accordance with Implementing Regulation (EU) 2015/79.

Commercial property financing is a major element of Aareal Bank Group's business model. Accordingly, Pfandbriefe (German covered bonds) represent a significant portion in long-term funding and are therefore a major source of asset encumbrance.

Apart from Pfandbriefe, other major sources of asset encumbrance are deposits from institutional investors, the derivatives business (occasionally securities repurchase agreements) as well as deposits from the housing industry. Moreover, Aareal Bank increased the existing Targeted Longer-Term Refinancing Operations (TLTRO) of the ECB by € 1 billion in the financial year under review. With regard to commercial property financing and related refinancing, encumbrance within Aareal Bank Group is mainly concentrated on Aareal Bank AG.

As at 31 December 2021, the cover assets pools held for issuance of its own bonds accounted for encumbrance of assets in a total amount of € 22.3 billion.

The changes in the total amounts of encumbered assets and collateral received, as well as the shift in the ratio of both totals, compared to the previous reporting period, was largely attributable to an increase in lending volume.

On a Group level, no structure of encumbrance between entities within Aareal Bank Group existed, due to consolidation. A significant over-collateralisation only applied to the cover assets pool. Besides compliance with statutory minimum excess cover requirements, the over-collateralisation of Mortgage Pfandbriefe also serves to satisfy the requirements of rating agency Moody's. Public-Sector Pfandbriefe are currently not subject to any rating.

Collateral is provided and accepted predominantly on the basis of standardised agreements on securities repurchase transactions and on the collateralisation of forward transactions. Derivatives transactions are generally entered into only on the basis of the German Master Agreement for Financial Derivatives, or the ISDA Master Agreement. Such master agreements provide for the netting of claims and liabilities in the event of insolvency or counterparty default, and thus further reduce counterparty risk.

As at 31 December 2021, unencumbered other assets included approximately € 2.2 billion in assets which cannot be encumbered within the scope of current business operations. This included € 1.1 billion

in hedging derivatives and financial assets held for trading. The remainder of € 1.1 billion was largely related to other properties accounted for in accordance with IAS 2 (€ 0.4 billion), as well as to tax reclaims and deferred tax assets (€ 0.2 billion).

Remuneration

The qualitative and quantitative disclosure requirements in accordance with Article 450 of the CRR in conjunction with Section 16 of the German Regulation on Remuneration in Financial Institutions (Institutsvergütungsverordnung – InstVergV) are met by Aareal Bank through a separate Remuneration Report which will be published at a later date on our website in the same section as this Regulatory Disclosure Report.

Leverage Ratio

The Bank manages the risk of excessive leverage on a quarterly basis, within the scope of forecasting own funds. For this purpose, both Tier 1 capital and total assets are forecast for the year-end dates of the two following years, after the end of each quarter. In this context, the minimum 3 % Leverage Ratio, as set out in Article 92 (1) lit. d) of the CRR, must be complied with at any time. The information is then submitted to senior management.

Aareal Bank determines the Leverage Ratio to be disclosed, taking into account the regulatory scope of consolidation, based on the requirements set out in the CRR.

The following disclosure tables are based on the requirements set out in the Implementing Regulation (EU) 2021/637 dated 15 March 2021.

EU LR1: Summary reconciliation of accounting assets and leverage ratio exposures

€ mn		a Applicable amount
1	**Total assets as per published financial statements**	**48,728**
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of prudential consolidation	-175
3	Adjustment for securitised exposures that meet the operational requirements for the recognition of risk transference	–
4	Adjustment for temporary exemption of exposures to central banks (if applicable)	–
5	Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the total exposure measure in accordance with Article 429a (1) lit. i) of the CRR	–
6	Adjustment for regular-way purchases and sales of financial assets subject to trade date accounting	–
7	Adjustment for eligible cash pooling transactions	–
8	Adjustments for derivative financial instruments	-479
9	Adjustment for securities financing transactions (SFTs)	–
10	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	446
11	Adjustment for prudent valuation adjustments and specific and general provisions which have reduced Tier 1 capital	–
EU-11a	Adjustment for exposures exempted from the total exposure measure in accordance with Article 429a (1) lit. c) of the CRR	–
EU-11b	Adjustment for exposures exempted from the total exposure measure in accordance with Article 429a (1) lit. j) of the CRR	–
12	Other adjustments	-795
13	**Total exposure measure**	**47,724**

EU LR2: Leverage Ratio common disclosure

€ mn		a	b
		CRR leverage ratio exposures	
		31 Dec 2021	30 Jun 2021
	On-balance sheet exposures (excluding derivatives and SFTs)		
1	On-balance sheet items (excluding derivatives and SFTs, but including collateral)	47,460	45,007
2	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	–	–
3	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	-791	-611
4	(Adjustment for securities received under securities financing transactions that are recognised as an asset)	–	–
5	(General credit risk adjustments to on-balance sheet items)	–	–
6	(Asset amounts deducted in determining Tier 1 capital)	-43	-35
7	**Total on-balance sheet exposures (excluding derivatives and SFTs)**	**46,626**	**44,361**
	Derivative exposures		
8	Replacement cost associated with all derivatives transactions under SA-CCR (i. e. net of eligible cash variation margin)	133	145
EU-8a	Derogation for derivatives: Replacement costs contributions under the simplified standardised approach	–	–
9	Add-on amounts for potential future exposure value associated with SA-CCR derivatives transactions	519	478
EU-9a	Derogation for derivatives: Potential future exposure contribution under the simplified standardised approach	–	–
EU-9b	Exposure determined under Original Exposure Method	–	–
10	(Exempted CCP leg of client-cleared trade exposures) (SA-CCR)	–	–
EU-10a	(Exempted CCP leg of client-cleared trade exposures) (simplified standardised approach)	–	–
EU-10b	(Exempted CCP leg of client-cleared trade exposures) (original exposure method)	–	–
11	Adjusted effective notional amount of written credit derivatives	–	–
12	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	–	–
13	**Total derivatives exposures**	**652**	**623**
	SFT exposures		
14	Gross SFT assets (with no recognition of netting), after adjusting for transactions posted as sales	–	–
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)	–	–
16	Counterparty credit risk exposure for SFT assets	–	–
EU-16a	Derogation for SFTs: Counterparty credit risk exposure pursuant to Article 429e (5) and Article 222 of the CRR	–	–
17	Agent transaction exposures	–	–
EU-17a	(Exempted CCP leg of client-cleared SFT exposures)	–	–
18	**Total SFT exposures**	**–**	**–**
	Other off-balance sheet exposures		
19	Off-balance sheet exposures at gross notional amount	1,194	1,612
20	(Adjustments for conversion to credit equivalent amounts)	-749	-990
21	(General provisions deducted in determining Tier 1 capital and specific provisions associated with off-balance sheet exposures)	–	–
22	**Total other off-balance sheet exposures**	**446**	**622**
	Excluded exposures		
EU-22a	(Exposures excluded from the total exposure measure in accordance with Article 429a (1) lit. c) of the CRR)	–	–
EU-22b	(Exposures exempted in accordance with Article 429a (1) lit. j) of the CRR (on- and off-balance sheet))	–	–
EU-22c	(Excluded exposures of public development banks (or units) – public-sector investments)	–	–

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€ mn		a	b
		CRR leverage ratio exposures	
		31 Dec 2021	30 Jun 2021
EU-22d	(Excluded exposures of public development banks (or units) – promotional loans)	–	–
EU-22e	(Excluded passing-through promotional loan exposures by non-public development banks (or units))	–	–
EU-22f	(Excluded guaranteed parts of exposures arising from export credits)	–	–
EU-22g	(Excluded excess collateral deposited at triparty agents)	–	–
EU-22h	(Excluded CSD related services of CSD/institutions in accordance with Article 429a (1) lit. o) of the CRR)	–	–
EU-22i	(Excluded CSD related services of designated institutions in accordance with Article 429a (1) lit. p) of the CRR)	–	–
EU-22j	(Reduction of the exposure value of pre-financing or intermediate loans)	–	–
EU-22k	**Total exempted exposures**	**–**	**–**
	Tier 1 capital and total exposure measure		
23	Tier 1 capital	2,622	2,598
24	Total exposure measure	47,724	45,607
	Leverage Ratio		
25	Leverage Ratio (%)	5.49 %	5.70 %
EU-25	Leverage ratio (excluding the impact of the exemption of public sector investments and promotional loans) (%)	5.49 %	5.70 %
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) (%)	5.49 %	5.70 %
26	Regulatory minimum leverage ratio requirement (%)	3.00 %	3.00 %
EU-26a	Additional own funds requirements to address the risk of excessive leverage (%)	–	–
EU-26b	of which: to be made up of CET1 capital	–	–
27	Leverage ratio buffer requirement (%)	–	–
EU-27a	Overall leverage ratio requirement (%)	3.00 %	3.00 %
	Choice on transitional arrangements and relevant exposures		
EU-27b	Choice on transitional arrangements for the definition of the capital measure	Fully implemented	Fully implemented
	Disclosure of mean values		
28	Mean of daily values of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivable	–	221
29	Quarter-end value of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables	–	–
30	Total exposure measure (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	47,724	45,828
30a	Total exposure measure (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	47,724	45,828
31	Leverage ratio (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	5.49 %	5.67 %
31a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	5.49 %	5.67 %

Regarding the causes of changes in the leverage ratio during the fourth quarter of 2021, reference is made to the explanations in the chapter “Overview of regulatory key metrics”.

The following table provides a breakdown of on-balance sheet risk exposures (excluding derivatives, securities financing transactions, and exempted risk exposures).

EU LR3: Split-up of on-balance sheet exposures

€ mn		a CRR leverage ratio exposures
EU-1	**Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:**	**46,670**
EU-2	Trading book exposures	–
EU-3	Banking book exposures, of which:	46,670
EU-4	Exposures in the form of covered bonds	492
EU-5	Exposures treated as sovereigns	14,885
EU-6	Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	110
EU-7	Institutions	471
EU-8	Exposures secured by mortgages on immovable properties	27,396
EU-9	Retail exposures	16
EU-10	Exposures to corporates	974
EU-11	Exposures in default	1,185
EU-12	Other exposures (e.g. equity, securitisations, and other non-credit obligation assets)	1,139

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