Regulatory Disclosure Report for the 2020 financial year
of Aareal Bank Group

Aareal

YOUR COMPETITIVE ADVANTAGE.

Regulatory Disclosure Report for the 2020 financial year

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 guidelines of the European Banking Authority (EBA) on disclosure requirements under part 8 of the CRR (EBA/GL/2016/11).

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).

Aareal Bank Group is – in principle – not covered by the EBA guidelines and is therefore not formally required to meet the disclosure requirements formulated therein, as it is not classified by the ECB as a Global Systemically Important Institution (G-SII) on the basis of Delegated Regulation (EU) 1222/2014 or as an Other Systemically Important Institution (O-SII) on the basis of Article 131 (3) CRD IV. Nor is it obliged to meet the EBA guidelines. Nonetheless, Aareal Bank Group meets the EBA guidelines in full, on a voluntary basis.

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”. Furthermore, selected details from various disclosure tables which are considered relevant for the Bank are published there in a summarised form. Aareal Bank AG publishes the Regulatory Disclosure Report on a quarterly basis. The scope is oriented on the guidelines EBA/GL/2016/11 in conjunction with the revised guidelines EBA/GL/2014/14.

Summary

Aareal Bank AG, whose registered office is in Wiesbaden, Germany, is the parent institution of the Group.

Aareal Bank complies with the requirements of parts 2 and 3 of the CRR at a Group level, due to the fact that Aareal Bank Group has elected to use the waiver option provided by section 2a (1) sentence 1 of the German Banking Act (Kreditwesengesetz – “KWG”) (in conjunction with Article 7 (3) of the CRR), whereby reports for financial holding companies or banking groups may be prepared on a consolidated basis.

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.

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

The Regulatory Disclosure Report includes the requirements of the CRR, provided the necessary information is not already disclosed elsewhere.

The following outline provides an overview as to where the information on the disclosure requirements pursuant to part 8 of the CRR is published.

Furthermore, if facts are already described in the Annual Report, reference is made specifically to the information included in the corresponding source references.

CRR article	Contents	Chapter in the Regulatory Disclosure Report	Reference to other publications of Aareal Bank
431	Scope of application of disclosure obligations	“Preface”	
435 (1)	Institution risk management approach (EU OVA)	“Risk management”	Aareal Bank Group Annual Report: – Risk Report: “Aareal Bank Group Risk Management”
435 (1)	General qualitative information about credit risk (EU CRA)	“Credit risk and general information on credit risk mitigation”	Aareal Bank Group Annual Report: – Risk Report “Lending business” – Risk Report “Loan loss risks”
435 (1)	Qualitative disclosure requirements related to counterparty credit risk (EU CCRA)	“Counterparty credit risk”	Aareal Bank Group Annual Report: – Risk Report “Trading activities” – Risk Report “Credit risk mitigation for trading activities”
435 (1)	Qualitative disclosure requirements related to market risk (EU MRA)	“Market risks”	Aareal Bank Group Annual Report: – Risk Report: “Market risks”
435 (1)	Disclosure of Liquidity Coverage Ratio and liquidity risk management	“Liquidity risks”	Aareal Bank Group Annual Report: – Risk Report: “Liquidity risks” – Report on the Economic Position: “Treasury portfolio”
435 (2)	Corporate governance regulations	“Information about corporate governance regulations”	Aareal Bank Group Annual Report: – Risk Report “Risk Management – Scope of application and areas of responsibility” – “Report of the Supervisory Board of Aareal Bank, Wiesbaden” Website: www.aareal-bank.com/en/about-us/corporate-governance/ www.aareal-bank.com/en/about-us/company-profile/the-management-board/ www.aareal-bank.com/en/about-us/company-profile/supervisory-board/
436	Scope of application	“Scope of application of the regulatory framework”	Aareal Bank Group Annual Report: – Group Management Report: “Fundamental information about the Group”
437	Own funds	“Regulatory capital”	Aareal Bank Group Annual Report: – Notes to the Consolidated Financial Statements: “(78) Regulatory capital and capital management” Website: – Main features of capital instruments: www.aareal-bank.com/en/investors-portal/finance-information/regulatory-disclosures/archive/2020/ – Full terms and conditions of capital instruments: www.aareal-bank.com/en/investors-portal/finance-information/terms-and-conditions-of-issue-pursuant-to-article-437-1-c-of-the-crr/archive/2020/
438	Regulatory capital requirements	“Regulatory capital requirements”	Aareal Bank Group Annual Report: – Consolidated Financial Statements “(78) Regulatory capital and capital management”

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CRR article	Contents	Chapter in the Regulatory Disclosure Report	Reference to other publications of Aareal Bank
439	Counterparty Credit Risk	"Counterparty credit risk"	Aareal Bank Group Annual Report: – Risk Report "Trading activities" – Risk Report "Credit risk mitigation for trading activities"
440	Capital buffers	"Countercyclical buffer"	
441	Indicators of global systemic importance	n/a	n/a
442	Credit risk adjustments	"Credit risk and general information on credit risk mitigation"	Aareal Bank Group Annual Report: – Risk Report "Loan loss risks" – Notes to the Consolidated Financial Statements "(9) Recognition and measurement of financial instruments"
443	Unencumbered assets	"Encumbered and unencumbered assets"	
444	Utilisation of ECAI	"External rating for CRSA exposures"	
445	Market risk	"Market risks"	Aareal Bank Group Annual Report: – Risk Report: "Market risks"
446	Operational risk	"Operational risks"	
447	Risks from investments not included in the trading book	"Investment risks"	Aareal Bank Group Annual Report: – Risk Report: "Investment risks" – Notes to the Consolidated Financial Statements: "(3) Consolidation" and "(17) Investments accounted for using the equity method"
448	Interest rate risks from holdings not included in the trading book	"Interest rate risk in the banking book"	Aareal Bank Group Annual Report: – Risk Report "Interest rate risk in the banking book"
449	Risk from securitisation exposures	n/a	n/a
450	Remuneration policy	"Remuneration"	Qualitative disclosures: Aareal Bank Group Annual Report: "Remuneration Report" Quantitative disclosures: www.aareal-bank.com/en/investors-portal/finance-information/regulatory-disclosures/archive/2020/
451	Leverage	"Leverage ratio"	
452	Application of the IRB approach for credit risks	"Qualitative information on the use of the IRB Approach" "Quantitative information on the use of the IRB Approach"	
453	Use of credit risk mitigation techniques	"General qualitative information on credit risk mitigation"	Aareal Bank Group Annual Report: – Risk Report "Credit risk mitigation"
454	Use of advanced measurement approaches for operational risks	n/a	n/a
455	Use of internal models for market risk	n/a	n/a

Risk Management

Risk management deals with identifying, assessing, limiting and managing risks. Therefore, risk management is an essential part of corporate governance.

Aareal Bank also includes sustainability risks or ESG (environmental, social and governance) risks in the Bank’s risk management. Aareal Bank considers sustainability risks to include cross-type risks or risk drivers that are influenced directly or indirectly by the environment, social issues or governance 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.

According to section 25a (1) of the KWG in conjunction with the specifications provided in the Minimum Requirements for Risk Management (MaRisk), credit institutions are obliged to implement appropriate and effective risk management to ensure their risk-bearing capacity.

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.

Please refer to the Annual Report for further information concerning risk management pursuant to Article 435 (1) of the CRR, as presented in the overview of the previous chapter.

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

Please refer to the list of offices held in the Annual Report for an overview of the number and nature of management and supervisory functions held by members of the Management Board and Supervisory Board.[1] This is based on the requirements set out in section 285 of the German Commercial Code (Handelsgesetzbuch – HGB) and Article 435 (2) of the CRR, in conjunction with the EBA Guidelines (EBA/GL/2016/11) and the Joint ESMA and EBA Guidelines on the assessment of the suitability of members of the management body and key function holders (EBA/GL/2017/12).

Selecting 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 (with respect to personal reliability, conflicts of interest, and independence) to be guided by the corporate and risk culture set out in the Code of Conduct and/or the Risk Appetite Framework of Aareal Bank when performing their

[1] “Aareal Bank Group 2020 Annual Report”: chapter “Other Notes”, Note (90) in the Notes to the consolidated financial statements, page 264 et seqq.

duties. The composition of the respective entire Board shall facilitate 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 for the evaluation of Management Board and Supervisory Board members, as well as when selecting candidates for appointment to the Management Board, or for shareholder representatives to the Supervisory Board. When establishing these processes, it has taken into account the legal requirements of the German Public Limited Companies Act (Aktiengesetz – "AktG"), the German Banking Act (Kreditwesengesetz – "KWG"), the EBA Guidelines on the assessment of the suitability of members of the management body and key function holders (EBA/GL/2017/12), the ECB guide to fit and proper assessment and the recommendations of the German Corporate Governance Code. In addition, the regulatory guidelines of the European Banking Authority for internal governance were also incorporated, as well as the corporate governance guidelines for the 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 prior to taking up their duties, using the so-called "fit & proper" approach.

In accordance with the internal rules of procedure for the Supervisory Board, it is the duty of the Executive and Nomination Committee to identify suitable candidates for appointment to the Management Board, and to nominate members of the shareholder representatives of the Supervisory Board. Moreover, the Executive and Nomination Committee is responsible for regularly assessing the skills, knowledge and experience of individual Management Board and Supervisory Board members, as well as of the respective executive body in its entirety. Additional information concerning the strategy for selecting members of the management bodies and their actual knowledge, abilities and experience is published in the Corporate Governance Statement in the Annual Report (pages 280 et seqq.). The curricula vitae of the members of the Management Board and of the Supervisory Board are detailed on Aareal Bank AG's website.

Diversity strategy for selecting members of the management bodies

The chapter "Concept of diversity" of the Corporate Governance Statement (pages 290 et seqq.) contains comprehensive information about the strategies, objectives and the extent to which targets were achieved with regard to the composition of the Management Board and the Supervisory Board. Any necessary amendments will be communicated in good time through corresponding press releases.

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 types of risk Aareal Bank is exposed to in its business activities and is also responsible for reviewing the contents of the risk strategies. The submission of the credit risk strategy to the plenary meeting of the Supervisory Board remains unaffected by this function, as is intended by the MaRisk. Please refer to the Report of the Supervisory Board provided in the Annual Report for further information on the work of the Risk Committee and the number of committee meetings during the period under review (pages 294 et seqq.). The report also includes details on the flow of information towards the Supervisory Board.

Flow of information towards the Management Board and the Supervisory Board

Reporting to the Management Board and the Supervisory Board is described in the Risk Report, the Corporate Governance Statement as well as in the Report of the Supervisory Board.

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 areas of Aareal Bank Group are commercial property financing and services, software products and digital solutions for the property sector and related industries; these activities are structured into three segments.

In the Structured Property Financing segment, Aareal Bank facilitates property investments for its domestic and international clients, and is active in this respect 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 Consulting/Services Bank segment[1)], we offer our clients from the institutional housing industry, commercial property companies, as well as the energy and utilities industries, services for managing properties for residential use and the integrated processing of payment flows, amongst other products and services. 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, Aareon, via its 39 locations in Europe, offers its customers consulting, software and services solutions to optimise IT-supported business processes and to expand business models in the digital age.

Please refer to the Annual Report for further information concerning our business model.[2)]

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.

1) The name of the former Consulting/Services Bank segment was changed to Banking & Digital Solutions at the turn of the year, as part of the strategic review.

2) "Aareal Bank Group 2020 Annual Report": chapter "Fundamental Information about the Group" in the Group Management Report, page 68 et seqq.

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 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) entering into force as at 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 have been allocated to the "at equity" measurement category since 28 December 2020, 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

Name of the entity	a	b	c	d	e	f
	Method of accounting consolidation	Method of regulatory consolidation				Description of the entity
		Full consolidation	Proportional consolidation	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

[1] The fund reported under the AIRBA is treated using the simple risk weight method pursuant to Article 155 (2) of the CRR.

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Name of the entity	a Method of accounting consolidation	b Method of regulatory consolidation Full consolidation	c Proportional consolidation	d Neither consolidated nor deducted	e Deducted	f Description of the entity
DHB Verwaltungs AG, Wiesbaden	Full consolidation			X		Miscellaneous
GEV Besitzgesellschaft mbH, Wiesbaden	Full consolidation			X		Miscellaneous
IV Beteiligungsgesellschaft für Immobilien-investitionen mbH, Wiesbaden	Full consolidation			X		Miscellaneous
Izalco Spain S.L., Madrid	Full consolidation	X				Ancillary services undertaking
Jomo S.p.r.l., Brussels	Full consolidation	X				Ancillary services undertaking
La Sessola Holding GmbH, Wiesbaden	Full consolidation	X				Financial institution
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
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
Consulting/Services Bank segment						
Aareal First Financial Solutions AG, Mainz	Full consolidation	X				Ancillary services undertaking
Deutsche Bau- und Grundstücks-Aktiengesellschaft, Berlin	Full consolidation			X		Miscellaneous
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 RELion GmbH, Augsburg	Full consolidation			[2)]		Miscellaneous
Aareon Sverige AB, Mölndal	Full consolidation			[2)]		Miscellaneous
Aareon UK Ltd., Coventry	Full consolidation			[2)]		Miscellaneous
BauSecura Versicherungsmakler GmbH, Hamburg	Full consolidation			[2)]		Miscellaneous
CalCon Deutschland GmbH, Munich	Full consolidation			[2)]		Miscellaneous

[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 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 statements 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 securi-tisation framework	Subject to the market risk frame-work	Not subject to capital require-ments or deduc-tions from regu-latory capital
Assets							
Financial assets (ac)	**37,999**	**37,910**	**37,910**	**–**	**–**	**14,611**	**–**
Cash funds (ac)	4,744	4,744	4,744	–	–	–	–
Loan receivables (ac)	27,277	27,277	27,277	–	–	14,334	–
Money market and capital market receivables (ac)	5,884	5,833	5,833	–	–	272	–
Receivables from other transactions (ac)	94	56	56	–	–	5	–
Loss allowance (ac)	-592	-590	-590	–	–	-300	–
Financial assets (fvoci)	**3,672**	**3,653**	**3,653**	**–**	**–**	**–**	**–**
Money market and capital market receivables (fvoci)	3,667	3,651	3,651	–	–	–	–
Equity instruments (fvoci)	5	2	2	–	–	–	–
Financial assets (fvpl)	**3,167**	**3,262**	**1,044**	**2,218**	**–**	**479**	**–**
Loan receivables (fvpl)	856	852	852	–	–	399	–
Money market and capital market receivables (fvpl)	93	192	192	–	–	–	–
Positive market value of designated hedging derivatives (fvpl)	1,431	1,431	–	1,431	–	32	–
Positive market value of other derivatives (fvpl)	787	787	–	787	–	48	–
Investments accounted for using the equity method	13	190	185	–	–	1	5
Intangible assets	207	24	–	–	–	–	24
Property and equipment	289	215	215	–	–	9	–
Income tax assets	116	110	110	–	–	17	–
Deferred tax assets	176	172	165	–	–	0	7
Other assets	431	405	405	–	–	184	–
Total assets	**45,478**	**45,353**	**43,097**	**2,218**	**–**	**15,003**	**36**

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€ mn	a Carrying values as reported in published financial statements	b Carrying values under scope of regulatory consolidation	c Carrying values of items Subject to the credit risk framework	d Subject to the CCR framework	e Subject to the securitisation framework	f Subject to the market risk framework	g Not subject to capital requirements or deductions from regulatory capital
Equity and liabilities							
Financial liabilities (ac)	**39,823**	**39,927**	**–**	**–**	**–**	**923**	**39,005**
Money market and capital market liabilities (ac)	28,206	28,261	–	–	–	900	27,362
Deposits from the housing industry (ac)	10,592	10,668	–	–	–	–	10,668
Liabilities from other transactions (ac)	86	60	–	–	–	23	37
Subordinated liabilities (ac)	939	938	–	–	–	–	938
Financial liabilities (fvpl)	**1,906**	**1,906**	**–**	**1,906**	**–**	**253**	**–**
Negative market value of designated hedging derivatives (fvpl)	1,298	1,298	–	1,298	–	196	–
Negative market value of other derivatives (fvpl)	608	608	–	608	–	57	–
Provisions	583	519	–	–	–	13	506
Income tax liabilities	20	18	–	–	–	–	18
Deferred tax liabilities	36	26	–	–	–	15	11
Other liabilities	143	48	–	–	–	1	47
Equity	**2,967**	**2,908**	**–**	**–**	**–**	**–**	**2,908**
Subscribed capital	180	180	–	–	–	–	180
Capital reserves	721	721	–	–	–	–	721
Retained earnings	1,902	1,888	–	–	–	–	1,888
AT1 bond	300	300	–	–	–	–	300
Other reserves	-197	-181	–	–	–	–	-181
Non-controlling interests	61	0	–	–	–	–	–
Total liabilities	**45,478**	**45,353**	**–**	**1,906**	**–**	**1,205**	**42,495**

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 IFRS 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 regulatory scope of 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.

In contrast to table EU LI1, table EU LI2 only incorporates those line items which require regulatory capital backing. Line items which are deducted when determining regulatory capital requirements, or which are generally exempt from regulatory capital requirements, are not taken into account here.

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

€ mn	a	b	c	d	e
		Items subject to			
	Total	Credit risk framework	CCR framework	Securitisation framework	Market risk framework
1 Assets carrying value under the regulatory scope of consolidation (as per table EU LI1)	**45,353**	**43,097**	**2,218**	**–**	**15,003**
2 Liabilities carrying value under the regulatory scope of consolidation (as per table EU LI1)	45,353	–	1,906	–	1,205
3 Total net amount under the regulatory scope of consolidation	–	–	–	–	–
4 Off-balance sheet amounts	1,243	1,243	–	–	–
5 Differences in valuations	-891	-379	-512	–	–
6 Differences due to different netting rules, other than those already included in row 2	-1,058	–	-1,058	–	–
7 Differences due to consideration of impairments and provisions under the IRBA	574	574	–	–	–
8 Differences due to prudential filters	–	–	–	–	–
9 Differences resulting from the calculation of the net foreign currency exposure under the market risk standard approach	–	–	–	–	-14,909
10 Not subject to capital requirements or subject to deduction from capital	-36	–	–	–	–
11 Exposure amounts considered for regulatory purposes	**45,189**	**44,541**	**648**	**–**	**94**

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

The following material causes and drivers are important for Aareal Bank AG regarding differences between carrying values and regulatory EaD figures:

- 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 after application of credit conversion factors (CCFs) and including the application of credit risk mitigation techniques.

- Line 5 shows 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 in the Advanced IRB Approach (AIRBA) for credit exposures, as well as to adjustments due to add-ons for potential future replacement values of derivative transactions (regulatory add-on) for counterparty credit risk exposures.

- Line 6 shows differences due to the application of framework netting agreements for counterparty credit risk exposures, which are eligible for regulatory purposes and which Aareal Bank uses for mitigating credit risk.

- Line 7 reflects credit risk adjustments used for the regulatory comparison of Expected Loss (EL) to credit risk adjustments of exposures under the AIRBA, since 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 shows no adjustments, since existing prudential filters (such as cash flow reserves and adjustments due to the prudent measurement of financial instruments at fair value) are recognised directly in regulatory capital, and hence have no impact upon determination of regulatory exposures.

- Line 9 reflects the difference attributable to the determination of the exchange position, for the purpose of regulatory capital requirements for market risk.

- Line 10 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).

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 pursuant to the German Commercial Code (Handelsgesetzbuch – "HGB") or IFRSs.

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.

Upon the Regulation (EU) 2019/876 (Capital Requirements Regulation II, CRR II) coming into effect on 27 June 2019, the IFRS carrying amount (instead of the nominal amount) on the first day of the final five-year period has to be used in the calculation of the eligible amount for the amortisation of Tier 2 instruments in the last five years of their contractual maturity, in accordance with Article 64 (2) CRR II. 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 disclosures in this report are based on the binding provisions for the implementation of disclosure requirements set out in the Commission Implementing Regulation 1423/2013/EU, in the interests of comparability and increased transparency pursuant to Article 437 of the CRR.

Main features of capital instruments

The overview of the main features of capital instruments published on our website includes a description of the issued capital instruments of Common Equity Tier I, Additional Tier I and Tier 2 capital. In addition, Aareal Bank is required, pursuant to Article 437 (1) lit. c) of the CRR, to disclose the full terms and conditions of all Common Equity Tier I, Additional Tier I and Tier 2 instruments. Such terms and conditions of issue have been published in full on Aareal Bank's website under the "Investors" item.

Disclosure of own funds

€ mn		Amount as at 31 Dec 2020	Regulation (EU) No 575/2013 – reference to Article(s)
Common Equity Tier 1 (CET1) capital: instruments and reserves			
1	Capital instruments and the related share premium accounts	901	26 (1), 27, 28, 29
	of which: ordinary shares	180	EBA index pursuant to Article 26 (3)
2	Retained earnings	1,777	26 (1) (c)
3	Accumulated other comprehensive income (and other reserves designated to account for unrealised gains and losses according to applicable accounting standards)	-181	26 (1)
3a	Funds for general banking risk	–	26 (1) (f)
4	Amount of qualifying items referred to in Article 484 (3) and the related share premium accounts subject to phase-out from CET1	–	486 (2)
5	Minority interests (amount allowed in consolidated CET1)	–	84
5a	Independently reviewed interim profits net of any foreseeable charge or dividend	5	26 (2)
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	**2,502**	
Common Equity Tier 1 (CET1) capital: regulatory adjustments			
7	Additional value adjustments (negative amount)	-3	34, 105
8	Intangible assets (net of related tax liability) (negative amount)	-29	36 (1) (b), 37
9	Empty set in the EU	–	
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) are met) (negative amount)	-7	36 (1) (c), 38
11	Fair value reserves related to gains or losses on cash flow hedges of financial instruments	–	33 (a)
12	Negative amounts resulting from the calculation of expected loss amounts	-4	36 (1) (d), 40, 159
13	Increase in equity resulting from securitised assets (negative amount)	–	32 (1)
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	–	33 (b)
15	Defined-benefit pension fund assets (negative amount)	–	36 (1) (e), 41
16	Direct and indirect holdings of own Common Equity Tier 1 instruments (negative amount)	–	36 (1) (f), 42
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)	–	36 (1) (g), 44
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)	–	36 (1) (h), 43, 45, 46, 49 (2) (3), 79
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)	–	36 (1) (i), 43, 45, 47, 48 (1) (b), 49 (1) to (3), 79

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€ mn		Amount as at 31 Dec 2020	Regulation (EU) No 575/2013 – reference to Article(s)
20	Empty set in the 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	–	36 (1) (k)
20b	of which: qualifying holdings outside the financial sector (negative amount)	–	36 (1) (k) (i), 89 to 91
20c	of which: securitisation positions (negative amount)	–	36 (1) (k) (ii), 243 (1) (b), 244 (1) (b), 258
20d	of which: free deliveries (negative amount)	–	36 (1) (k) (iii), 379 (3)
21	Deferred tax assets that rely on future profitability arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions of Article 38 (3) are met) (negative amount)	–	36 (1) (c), 38, 48 (1) (a)
22	Amount exceeding the 15% threshold (negative amount)	–	48 (1)
23	of which: direct and indirect holdings of Common Equity Tier 1 instruments of financial sector entities in which the institution has a significant investment	–	36 (1) (i), 48 (1) (b)
24	Empty set in the EU	–	
25	of which: deferred tax assets that rely on future profitability and arise from temporary differences	–	36 (1) (c), 38, 48 (1) (a)
25a	Losses for the current financial year (negative amount)	–	36 (1) (a)
25b	Foreseeable tax charges relating to Common Equity Tier 1 items (negative amount)	–	36 (1) (l)
27	Qualifying Additional Tier 1 deductions exceeding the Additional Tier 1 capital of the institution (negative amount)	–	36 (1) (j)
	Deductions pursuant to Art. 3 of the CRR	-143	
	Components of, or deductions with respect to, Common Equity Tier 1 capital	-30	
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1) capital**	**-216**	
29	**Common Equity Tier 1 (CET1) capital**	**2,286**	
Additional Tier 1 (AT1) capital: instruments			
30	Capital instruments and related share premium accounts	300	51, 52
31	of which: classified as equity according to applicable accounting standards	300	
32	of which: classified as liabilities according to applicable accounting standards	–	
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase-out from AT1	–	486 (3)
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	–	85, 86
35	of which: instruments issued by subsidiaries, subject to phase-out	–	486 (3)
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**	**300**	
Additional Tier 1 (AT1) capital: regulatory adjustments			
37	Direct and indirect holdings of own Additional Tier 1 instruments (negative amount)	–	52 (1) (b), 56 (a), 57
38	Direct, indirect and synthetic holdings of 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)	–	56 (b), 58
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)	–	56 (c), 59, 60, 79
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)	–	56 (d), 59, 79

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€ mn		Amount as at 31 Dec 2020	Regulation (EU) No 575/2013 – reference to Article(s)
41	Empty set in the EU	–	
42	Qualifying Tier 2 deductions exceeding the Tier 2 capital of the institution (negative amount)	–	56 (e)
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**	**–**	
44	**Additional Tier 1 (AT1) capital**	**300**	
45	**Tier 1 capital (T1 = CET1 + AT1)**	**2,586**	
Tier 2 (T2) capital: instruments and reserves			
46	Capital instruments and related share premium accounts	752	62, 63
47	Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase-out from T2	–	486 (4)
48	Qualifying own funds instruments included in consolidated Tier 2 capital (including minority interests and AT1 instruments not included in row 5 or 34) issued by subsidiaries and held by third parties	–	87, 88
49	of which: instruments issued by subsidiaries, subject to phase-out	–	486 (4)
50	Credit risk adjustments	57	62 (c) and (d)
51	**Tier 2 (T2) capital before regulatory adjustments**	**810**	
Tier 2 (T2) capital: regulatory adjustments			
52	Direct and indirect holdings by an institution of own Tier 2 instruments and subordinated loans (negative amount)	–	63 (b) (i), 66 (a)
53	Holdings of 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)	–	66 (b), 68
54	Direct and indirect holdings of Tier 2 instruments and subordinated loans 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)	–	66 (c), 69, 70, 79
55	Direct and indirect holdings by the institution of Tier 2 instruments and subordinated loans of financial sector entities in which the institution has a significant investment (net of eligible short positions) (negative amount)	–	66 (d), 69, 79
56	Empty set in the EU	–	
	Adjustments due to grandfathering rights regarding Additional Tier 1 instruments or subordinated loans	–	
57	**Total regulatory adjustments to Tier 2 (T2) capital**	**–**	
58	**Tier 2 (T2) capital**	**810**	
59	**Own funds (TC = T1 + T2)**	**3,395**	
60	**Total risk-weighted assets**	**12,138**	
Capital ratios and buffers			
61	Common Equity Tier 1 capital (as a percentage of total risk exposure amount)	18.8 %	92 (2) (a)
62	Tier 1 capital (as a percentage of total risk exposure amount)	21.3 %	92 (2) (b)
63	Total capital (as a percentage of total risk exposure amount)	28.0 %	92 (2) (c)
64	Institution-specific buffer requirement (CET1 requirement in accordance with Article 92 (1) (a) plus capital conservation and countercyclical capital buffer requirements, plus systemic risk buffer, plus systemically important institution (G-SII or O-SII) buffer expressed as a percentage of total risk exposure amount)	7.0 %	CRD 128, 129, 130, 131, 133
65	of which: capital conservation buffer requirement	2.5 %	
66	of which: countercyclical capital buffer requirement	0.0 %	

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€ mn		Amount as at 31 Dec 2020	Regulation (EU) No 575/2013 – reference to Article(s)
67	of which: systemic risk buffer	–	
67a	of which: buffer for Global Systemically Important Institution (G-SII) or Other Systemically Important Institutions (O-SII)	–	CRD 131
68	Common Equity Tier 1 capital available to meet buffers (as a percentage of total risk exposure amount)	14.3 %	CRD 128
Amounts below thresholds for deductions (before risk weighting)			
72	Direct and indirect holdings of the capital of financial sector entities in which the institution does not have a significant investment (amount below 10% threshold and net of eligible short positions)	–	36 (1) (h), 45, 46, 56 (c), 59, 60, 66 (c), 69, 70
73	Direct and indirect holdings of Common Equity Tier 1 instruments of financial sector entities in which the institution has a significant investment (amount below 10 % threshold and net of eligible short positions)	–	36 (1) (i), 45, 48
74	Empty set in the EU	–	
75	Deferred tax assets that rely on future profitability arising from temporary differences (amount below 10 % threshold and net of related tax liability where the conditions of Article 38 (3) are met)	165	(36) (1) (c), 38, 48
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)	–	62
77	Cap on inclusion of credit risk adjustments in Tier 2 under standardised approach	13	62
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)	57	62
79	Cap on inclusion of credit risk adjustments in Tier 2 under internal ratings-based approach	57	62
Capital instruments subject to phase-out arrangements (only applicable between 1 January 2013 and 1 January 2022)			
80	Current cap on CET1 instruments subject to phase-out arrangements	–	484 (3), 486 (2) and (5)
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	–	484 (3), 486 (2) and (5)
82	Current cap on AT1 instruments subject to phase-out arrangements	–	484 (4), 486 (3) and (5)
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	–	484 (4), 486 (3) and (5)
84	Current cap on T2 instruments subject to phase-out arrangements	–	484 (5), 486 (4) and (5)
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	–	484 (5), 486 (4) and (5)

Compared to the previous disclosure date (30 September 2020), the capital ratios (CET1, T1 and TC ratio) declined, due to an RWA increase (€ 818 million) and a lower-than-proportionate increase in regulatory capital (€ 36 million).

The RWA increase resulted mainly from the increase in the commercial property finance portfolio, as well as quality changes in the existing credit portfolio due to changed borrower probabilities of default (PD), and changes in loss given default (LGD).

The increase in regulatory capital resulted mainly from increases in Common Equity Tier I (CET1) capital (€ 43 million) and decreases in Tier 2 (T2) capital (€ -7 million); The change in CET1 capital was due, amongst other things, to the omission of deductions of impairments recognised during the course of the year (contributing € 60 million) and to changes in OCI (€ -23 million).

Reconciliation from equity, as disclosed in the Statement of Financial Position, to regulatory capital

€ mn	Equity according to reporting scope of consolidation	Equity according to regulatory scope of consolidation	Regulatory capital according to regulatory scope of consolidation
Subscribed capital	**180**	**180**	**180**
Capital reserves	**721**	**721**	**721**
Retained earnings	**1,902**	**1,887**	**1,782**
AT1 bond[1)]	**300**	**300**	**–**
Other reserves	**-197**	**-181**	**-181**
Reserve from remeasurements of defined benefit plans	-166	-154	-154
Reserve from the measurement of debt instruments (fvoci)	12	12	12
Reserve from the measurement of equity instruments (fvoci)	-4	-4	-4
Reserve from changes in the value of foreign currency basis spreads	-26	-26	-26
Currency translation reserve	-13	-9	-9
Non-controlling interests	**61**	**0**	**–**
Common Equity Tier 1 (CET1) capital before regulatory adjustments	**2,967**	**2,907**	**2,502**
Regulatory adjustments	**–**	**–**	**-216**
Amounts to be deducted	**-206**	**-24**	**-40**
Intangible assets	-206	-24	-29
Goodwill	-102	-	-5
Other intangible assets	-104	-24	-24
Deferred tax assets dependant on future profitability not resulting from temp. differences	–	–	-7
IRB deficit (non-defaulted exposures)	–	–	-4
Qualified investment outside the financial sector (alternative risk weighting 1,250 %)	–	–	–
Deductible deferred tax assets dependant on future profitability and resulting from temp. differences	–	–	–
Prudential filters	**–**	**–**	**-3**
Prudent valuation allowances	–	–	-3
Deductions pursuant to Art. 3 of the CRR	**–**	**–**	**-143**
Components of, or deductions with respect to, Common Equity Tier 1 capital	**–**	**–**	**-30**
Common Equity Tier 1 (CET1) capital	**–**	**–**	**2,286**
AT1 bond	**–**	**–**	**300**
AT1 capital instruments with grandfathering rights	**–**	**–**	**–**
Non-controlling interests	–	–	–
Contributions by silent partners	–	–	–
Amounts to be deducted	**–**	**–**	**–**
Other intangible assets	–	–	–
IRB deficit (non-defaulted exposures)	–	–	–
Additional Tier 1 (AT1) capital	**–**	**–**	**300**
Tier 1 (T1) capital	**–**	**–**	**2,586**

[1)] Consideration within Additional Tier 1 (AT1) capital.

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€ mn	Equity according to reporting scope of consolidation	Equity according to regulatory scope of consolidation	Regulatory capital according to regulatory scope of consolidation
Capital instruments and subordinated loans eligible as Tier 2 capital	**938**	**938**	**752**
Subordinated liabilities	938	938	752
T2 capital instruments with grandfathering rights	**–**	**–**	**–**
Subordinated liabilities	–	–	–
Amounts to be deducted	**–**	**–**	**–**
IRB deficit (non-defaulted exposures)	–	–	–
IRB surplus (defaulted exposures)	**–**	**–**	**57**
Tier 2 capital	**–**	**–**	**810**
Total capital (TC)	**–**	**–**	**3,395**

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". Information on this is included in our Annual Report.[1)]

The 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 2020, no risks associated with outstanding delivery as part of counterparty risks had to be taken into account when determining counterparty usage limits.

1) Aareal Bank Group 2020 Annual Report: chapter "Riskbearing capacity and risk limits" in the Risk Report of the Group Management Report, page 94 et seqq. as well as chapter "Other Notes", Note (78) in the Notes to the consolidated financial statements, page 252 et seqq.

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)

		RWAs		Regulatory capital requirements
€ mn		31 Dec 2020	30 Sep 2020	31 Dec 2020
1	**Credit risk (excluding CCR)**	**9,886**	**9,118**	**791**
2	of which: Credit Risk Standard Approach (CRSA)	416	462	33
3	of which: Foundation IRB Approach (FIRB)	–	–	–
4	of which: Advanced IRB Approach (AIRBA)	8,795	7,797	704
5	of which: equity IRB under the simple risk-weighted approach or the IMA	675	858	54
6	**CCR**	**517**	**516**	**41**
7	of which: mark to market	288	302	23
8	of which: original exposure	–	–	–
9	of which: standardised approach	–	–	–
10	of which: internal model method (IMM)	–	–	–
11	of which: risk exposure amount from contributions to the default fund of a CCP	5	1	0
12	of which: CVA	224	212	18
	of which: securities financing transactions (SFTs)	–	1	–
13	**Settlement risk**	**–**	**–**	**–**
14	**Securitisation exposures in the banking book (after the cap)**	**–**	**–**	**–**
15	of which: IRB approach	–	–	–
16	of which: IRB supervisory formula approach	–	–	–
17	of which: internal assessment approach (IAA)	–	–	–
18	of which: standardised approach	–	–	–
19	**Market risk**	**87**	**32**	**7**
20	of which: standardised approach	87	32	7
21	of which: IMA	–	–	–
22	**Large exposures**	**–**	**–**	**–**
23	**Operational risk**	**1,236**	**1,236**	**99**
24	of which: basic indicator approach	29	29	2
25	of which: standardised approach	1,207	1,207	97
26	of which: advanced measurement approach	–	–	–
27	**Amounts below the thresholds for deduction (subject to 250 % risk weight)**	**412**	**418**	**33**
28	**Floor adjustment**	**–**	**–**	**–**
29	Total	12,138	11,320	971

Regarding the causes of RWA changes during the fourth quarter of 2020, reference is made to the explanations in the chapter “Disclosure of own funds”.

The simple risk weight method is exclusively used to determine the capital requirements of the equity investments reported under the AIRBA.

In the following table, the equity investments reported under the AIRBA and previously disclosed on a consolidated level – for which the simple risk weight method 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, they are not disclosed in table EU CR10.

EU CR10: IRB (specialised lending and equities)

Regulatory categories	Remaining maturity	Specialised lending					
		On-balance sheet amount	Off-balance sheet amount	Risk weight	Exposure at Default	RWAs	Expected losses
€ mn							
Category 1	Less than 2.5 years	–	–	50 %	–	–	–
	Equal to or more than 2.5 years	–	–	70 %	–	–	–
Category 2	Less than 2.5 years	–	–	70 %	–	–	–
	Equal to or more than 2.5 years	–	–	90 %	–	–	–
Category 3	Less than 2.5 years	–	–	115 %	–	–	–
	Equal to or more than 2.5 years	–	–	115 %	–	–	–
Category 4	Less than 2.5 years	–	–	250 %	–	–	–
	Equal to or more than 2.5 years	–	–	250 %	–	–	–
Category 5	Less than 2.5 years	–	–	–	–	–	–
	Equal to or more than 2.5 years	–	–	–	–	–	–
Total	**Less than 2.5 years**	**–**	**–**		**–**	**–**	**–**
	Equal to or more than 2.5 years	**–**	**–**		**–**	**–**	**–**

Regulatory categories	Equities under the simple risk-weighted approach					
	On-balance sheet amount	Off-balance sheet amount	Risk weight	Exposure at Default	RWAs	Regulatory capital requirements
€ mn						
Private equity exposures	–	–	190 %	–	–	–
Listed investments	0	–	290 %	0	0	0
Other equity investments	182	–	370 %	182	675	54
Total	**182**	**–**		**182**	**675**	**54**

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.

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 1 capital. Significant credit risk exposures are defined in section 36 of the German Solvency Regulation (Solvabilitätsverordnung – "SolvV") and comprise exposures to corporate and private customers.

The countercyclical capital buffer requirements have been applicable since 1 January 2016, when the ramp-up phase was launched. The regulatory requirements have been fully complied with since 1 January 2019.

The two following disclosure tables are based on the requirements set out in the Commission Delegated Regulation (EU) 2015/1555 of 28 May 2015.

Amount of institution-specific countercyclical capital buffer

	€ mn	31 Dec 2020
010	Aggregate risk exposure	12,138
020	Institution-specific countercyclical capital buffer ratio	0.0 %
030	Institution-specific countercyclical capital buffer requirement	1

Geographical distribution of significant credit risks

		General credit risk exposures		Trading book exposures		Securitisation exposure		Regulatory capital requirements				Weightings of regulatory capital requirements	Counter cyclical capital buffer ratio
		CRSA exposure value	IRBA exposure value	Sum of long and short positions in the trading book	Risk exposure in the trading book (internal models	CRSA exposure value	IRBA exposure value	of which: general credit risk exposures	of which: trading book exposures	of which: securitisation exposure	Total		
		€ mn	€ mn	€ mn	€ mn	€ mn	€ mn	€ mn	€ mn	€ mn	€ mn	%	%
010	Germany	600	4,253	–	–	–	–	209	–	–	209	0.26	0.00
	Belgium	–	446	–	–	–	–	5	–	–	5	0.01	0.00
	Austria	–	330	–	–	–	–	3	–	–	3	0.00	0.00
	Switzerland	0	315	–	–	–	–	4	–	–	4	0.01	0.00
	France	0	2,864	–	–	–	–	30	–	–	30	0.04	0.00
	United Kingdom	62	4,476	–	–	–	–	66	–	–	66	0.08	0.00
	Ireland	–	58	–	–	–	–	1	–	–	1	0.00	0.00
	Luxembourg	0	162	–	–	–	–	4	–	–	4	0.01	0.25
	Netherlands	24	1,263	–	–	–	–	18	–	–	18	0.02	0.00
	Denmark	1	59	–	–	–	–	1	–	–	1	0.00	0.00
	Sweden	–	930	–	–	–	–	12	–	–	12	0.02	0.00
	Finland	16	520	–	–	–	–	9	–	–	9	0.01	0.00
	Hungary	–	10	–	–	–	–	0	–	–	0	0.00	0.00
	Italy	1	1,635	–	–	–	–	86	–	–	86	0.11	0.00
	Spain	–	1,390	–	–	–	–	26	–	–	26	0.03	0.00
	Turkey	–	75	–	–	–	–	10	–	–	10	0.01	0.00

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		General credit risk exposures		Trading book exposures		Securitisation exposure		Regulatory capital requirements				Weightings of regulatory capital requirements	Countercyclical capital buffer ratio
		CRSA exposure value	IRBA exposure value	Sum of long and short positions in the trading book	Risk exposure in the trading book (internal models	CRSA exposure value	IRBA exposure value	of which: general credit risk exposures	of which: trading book exposures	of which: securitisation exposure	Total		
		€ mn	€ mn	€ mn	€ mn	€ mn	€ mn	€ mn	€ mn	€ mn	€ mn	%	%
	Czech Republic	0	153	–	–	–	–	5	–	–	5	0.01	0.50
	Poland	–	955	–	–	–	–	37	–	–	37	0.05	0.00
	Estonia	–	51	–	–	–	–	0	–	–	0	0.00	0.00
	Russia	0	221	–	–	–	–	12	–	–	12	0.02	0.00
	USA	50	7,461	–	–	–	–	168	–	–	168	0.21	0.00
	Cayman Islands	–	2	–	–	–	–	0	–	–	0	0.00	0.00
	Canada	–	1,372	–	–	–	–	60	–	–	60	0.08	0.00
	China	–	144	–	–	–	–	7	–	–	7	0.01	0.00
	Maldives	–	306	–	–	–	–	15	–	–	15	0.02	0.00
	Australia	–	377	–	–	–	–	3	–	–	3	0.00	0.00
020	**Total**	**755**	**29,825**	**–**	**–**	**–**	**–**	**791**	**–**	**–**	**791**	**1.00**	

Credit Risks and General Information on Credit Risk Mitigation

Aareal Bank defines credit risk – or counterparty credit risk – as the risk of losses being incurred due to (i) a business partner defaulting on contractual obligations; (ii) collateral being impaired; or (iii) a risk arising upon realisation of collateral. Both credit business and trading activities may be subject to counterparty credit risk. Counterparty credit risks 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.

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. The Bank also includes sustainability risks, to the extent that they are relevant for the assessment. 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 (financial markets crisis). Given the changed economic conditions due to the Covid-19 pandemic, we have thus completed an event-driven review and update, which included stricter requirements for new business involving those types of property particularly affected by the Covid-19 pandemic.

The property financing portfolio is actively managed throughout Aareal Bank Group, with the aim of optimising its risk diversification (by region and type of property) and profitability. Dependencies, as well as risk concentrations, are reduced through diversification.

The organisational structure and workflows in the lending business and trading operations, as well as the implemented procedures used for measuring, managing and monitoring risk exposure are described in detail in the Annual Report[1]. The Annual Report also includes descriptions of processes used to monitor the current effectiveness of the measures taken for risk protection and risk mitigation.

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

The regulatory disclosure follows 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

[1] Aareal Bank Group 2020 Annual Report, chapter "Loan loss risks" in the Risk Report of the Group Management Report, pages 100 et seqq.

stages at both initial recognition and subsequent measurement. The related loss allowances are recognised in the amount of the twelvemonth or the lifetime expected credit loss. Additional information regarding the recognition of loss allowance and the allocation to stages, as well as regarding specific aspects related to Covid-19, can be found in the Annual Report[1].

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 that are not allocated to the above-mentioned measurement categories, the default of a borrower does not lead to the recognition of loss allowance in Stage 3, but to a credit-induced fair value adjustment

Uncollectable (residual) receivables are written off against loss allowance recognised previously.

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, leading to an allocation to stage 2 in accordance with IFRSs, and to the corresponding recognition of lifetime ECL. Based on the extended and further tightened global lockdown measures, the Bank has generally classified all loans for which liquidity support measures (payment deferrals and liquidity facilities) were granted as stage 2 as at 31 December 2020 and recognised loss allowance in the amount of expected losses for the entire remaining term. The assumption that no significant decrease in credit quality within the meaning of IFRS 9 has occurred is only made in exceptional cases when this is justified based on supportable information.

[1] Aareal Bank Group 2020 Annual Report: chapter "Accounting policies", Note (9) in the Notes to the consolidated financial statements, pages 184 et seqq.

General quantitative information on credit risks

The information to be disclosed in this chapter pursuant to Article 442 lit. c) to f) of the CRR is based on the solvency data reported to the banking regulators, on the basis of the regulatory scope of consolidation.

The valuation of off-balance sheet items as well as assets carried on the balance sheet included in regulatory reporting is generally made in accordance with the International Financial Reporting Standards (IFRSs).

Considering the net exposures to be disclosed in the following tables with regard to exposures reported under the AIRBA, it needs to be noted that the related loss allowance does not reduce the assessment basis, but is considered in the comparison of value adjustments pursuant to Article 159 of the CRR in the determination of regulatory own funds.

Exposures resulting from counterparty credit risk exposures are not taken into account; these are disclosed separately in this report.

Average amount of exposures during the financial year

The table EU CRB-B shows – in accordance with Article 442 lit. c) of the CRR in conjunction with EBA guidelines – the total and average net amount of exposures as per the reporting date, in line with CRSA and IRBA exposure classes.

EU CRB-B: Total and average net amount of exposures

		a Net value of exposures at the end of the reporting period	b Average net exposures over the reporting period
€ mn			
2	Institutions	–	–
3	Corporates	27,802	26,781
4	of which: specialised lending	25,140	24,338
5	of which: SMEs	1,139	1,158
14	Equity	182	213
14a	Other non-credit obligation assets	616	637
15	**Total IRB approach**	**28,600**	**27,631**
16	Central governments or central banks	6,755	6,118
17	Regional governments and similar entities	4,278	4,148
18	Other public-sector entities	1,480	1,384
19	Multilateral development banks	330	340
20	International organisations	835	765
21	Institutions	1,147	1,365
22	Corporates	293	307
23	of which: SMEs	95	120
24	Retail	25	26
25	of which: SMEs	–	–

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€ mn		a Net value of exposures at the end of the reporting period	b Average net exposures over the reporting period
26	Secured by mortgages on immovable property	423	484
27	of which: SMEs	117	136
28	Exposures in default	6	4
29	Items associated with particularly high risk	–	–
30	Covered bonds	75	51
31	Claims on institutions and corporates with a short-term credit assessment	–	–
32	Collective investment undertakings (CIU)	46	46
33	Equity exposures	–	–
34	Other exposures	–	–
35	**Total standardised approach**	**15,692**	**15,038**
36	**Total**	**44,292**	**42,668**

Breakdown by major geographical segments

The presented breakdown of the total exposure amount by major geographical markets (Table EU CRB-C, pages 32/33) to be disclosed is based on the focus of our activities, which cover Europe, North America and Asia/Pacific, as explained in our Annual Report. The breakdown criterion used is the country the respective property used as collateral is located in.

Moreover, countries in which the exposure amounts to at least € 300 million (before consideration of loss allowances) are listed separately for each region (Germany excluded). All remaining countries are listed under item “Others”.

Breakdown by industry

We monitor industries (as shown in Table EU CRB-D, pages 34/35) by assigning risk exposures to the industries listed in the guidelines EBA/GL/2016/11, taking into account the industry codes defined by Deutsche Bundesbank. The presentation thus 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.

Breakdown by remaining term to maturity

The remaining term to maturity is determined on the basis of the contractually agreed term of all on-balance sheet and off-balance sheet transactions. The column “On demand” comprises exposures due on demand.

EU CRB-E: Maturity of exposures

		a	b	c	d	e	f
				Net exposure value			
€ mn		On demand	up to 1 year	> 1 years ≤ 5 years	> 5 years	No stated maturity	Total
2	Institutions	–	–	–	–	–	–
3	Corporates	463	2,736	18,524	6,079	–	**27,802**
5	Equity	182	–	–	–	–	**182**
5a	Other non-credit obligation assets	616	–	–	–	1	**616**
6	**Total IRB approach**	**1,261**	**2,736**	**18,524**	**6,079**	**1**	**28,600**
7	Central governments or central banks	4,744	10	344	1,640	17	**6,755**
8	Regional governments and similar entities	165	369	1,274	2,376	94	**4,278**
9	Other public-sector entities	17	275	444	744	–	**1,480**
10	Multilateral development banks	–	144	26	161	–	**330**
11	International organisations	–	144	244	446	–	**835**
12	Institutions	864	56	50	166	12	**1,147**
13	Corporates	64	2	80	146	2	**293**
14	Retail	1	0	1	16	6	**25**
15	Secured by mortgages on immovable property	0	6	123	295	–	**423**
16	Exposures in default	3	0	0	3	–	**6**
17	Exposures associated with particularly high risk	–	–	–	–	–	**–**
18	Covered bonds	–	–	44	32	–	**75**
19	Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–	**–**
20	Collective investment undertakings (CIU)	–	30	–	16	0	**46**
21	Equity exposures	–	–	–	–	–	**–**
22	Other exposures	–	–	–	–	–	**–**
23	**Total standardised approach**	**5,857**	**1,036**	**2,631**	**6,038**	**130**	**15,692**
24	Total	7,118	3,772	21,155	12,117	131	44,292

EU CRB-C: Geographical breakdown of exposures

		a	b			
€ mn		Germany	Western Europe	Austria	Belgium	France
2	Institutions	–	–	–	–	–
3	Corporates	3,362	9,487	322	436	2,796
5	Equity	169	6	–	0	–
5a	Other non-credit obligation assets	616	–	–	–	–
6	**Total IRB approach**	**4,146**	**9,493**	**322**	**436**	**2,796**
7	Central governments or central banks	4,869	772	387	–	–
8	Regional governments and similar entities	4,005	41	41	–	–
9	Other public-sector entities	1,051	320	85	5	230
10	Multilateral development banks	–	–	–	–	–
11	International organisations	–	–	–	–	–
12	Institutions	329	568	17	27	41
13	Corporates	174	52	–	–	0
14	Retail	25	–	–	–	–
15	Secured by mortgages on immovable property	402	20	–	–	–
16	Exposures in default	5	–	–	–	–
17	Items associated with particularly high risk	–	–	–	–	–
18	Covered bonds	32	44	–	–	–
19	Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–
20	Collective investment undertakings	46	–	–	–	–
21	Equity exposures	–	–	–	–	–
22	Other exposures	–	–	–	–	–
23	**Total standardised approach**	**10,937**	**1,818**	**529**	**31**	**271**
24	Total	15,083	11,311	852	467	3,067

				e		
€ mn		Italy	Other	Eastern Europe	Poland	Other
2	Institutions	–	–	–	–	–
3	Corporates	1,379	–	1,430	933	497
5	Equity	8	–	–	–	–
5a	Other non-credit obligation assets	–	–	–	–	–
6	**Total IRB approach**	**1,387**	**–**	**1,430**	**933**	**497**
7	Central governments or central banks	938	–	33	–	33
8	Regional governments and similar entities	–	–	–	–	–
9	Other public-sector entities	–	34	–	–	–
10	Multilateral development banks	–	–	–	–	–
11	International organisations	–	–	–	–	–
12	Institutions	6	–	2	2	0
13	Corporates	1	–	0	–	0
14	Retail	0	–	–	–	–
15	Secured by mortgages on immovable property	–	–	–	–	–
16	Exposures in default	0	–	–	–	–
17	Items associated with particularly high risk	–	–	–	–	–
18	Covered bonds	–	–	–	–	–
19	Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–
20	Collective investment undertakings	–	–	–	–	–
21	Equity exposures	–	–	–	–	–
22	Other exposures	–	–	–	–	–
23	**Total standardised approach**	**945**	**34**	**36**	**2**	**33**
24	Total	2,332	34	1,466	936	530

	Net asset value		c				d	
United Kingdom	Netherlands	Other	Northern Europe	Finland	Sweden	Other	Southern Europe	Spain
–	–	–	**–**	–	–	–	**–**	–
4,187	1,232	514	**1,471**	505	908	58	**2,715**	1,335
6	–	–	**0**	–	–	0	**8**	–
–	–	–	**–**	–	–	–	**–**	–
4,193	**1,232**	**514**	**1,471**	**505**	**908**	**58**	**2,722**	**1,335**
160	–	226	**37**	37	–	–	**1,043**	106
0	–	–	**–**	–	–	–	**181**	181
–	–	–	**49**	49	–	–	**60**	26
–	–	–	**–**	–	–	–	**–**	–
–	–	–	**–**	–	–	–	**–**	–
430	54	0	**5**	–	5	–	**6**	–
48	4	0	**17**	16	–	0	**1**	–
–	–	–	**–**	–	–	–	**0**	–
–	20	–	**1**	–	–	1	**–**	–
–	–	–	**–**	–	–	–	**0**	–
–	–	–	**–**	–	–	–	**–**	–
44	–	–	**–**	–	–	–	**–**	–
–	–	–	**–**	–	–	–	**–**	–
–	–	–	**–**	–	–	–	**–**	–
–	–	–	**–**	–	–	–	**–**	–
–	–	–	**–**	–	–	–	**–**	–
682	**78**	**226**	**109**	**102**	**5**	**1**	**1,292**	**313**
4,875	1,310	740	1,580	608	913	59	4,014	1,648

f	Net asset value			g				h	f
North America	Canada	USA	Other	Asia/Pacific	Australia	Maldives	Other	Other	Total
–	–	–	–	**–**	–	–	–	**–**	**–**
8,528	1,334	7,193	–	**807**	370	298	140	**2**	**27,802**
–	–	–	–	**–**	–	–	–	**–**	**182**
1	–	1	–	**–**	–	–	–	**–**	**616**
8,528	**1,334**	**7,194**	**–**	**807**	**370**	**298**	**140**	**2**	**28,600**
–	–	–	–	**–**	–	–	–	**–**	**6,755**
17	–	17	–	**35**	–	–	35	**–**	**4,278**
–	–	–	–	**–**	–	–	–	**–**	**1,480**
–	–	–	–	**–**	–	–	–	**330**	**330**
–	–	–	–	**–**	–	–	–	**835**	**835**
168	2	166	–	**68**	–	–	68	**–**	**1,147**
49	–	49	–	**–**	–	–	–	**–**	**293**
–	–	–	–	**–**	–	–	–	**–**	**25**
–	–	–	–	**–**	–	–	–	**–**	**423**
–	–	–	–	**–**	–	–	–	**–**	**6**
–	–	–	–	**–**	–	–	–	**–**	**–**
–	–	–	–	**–**	–	–	–	**–**	**75**
–	–	–	–	**–**	–	–	–	**–**	**–**
–	–	–	–	**–**	–	–	–	**–**	**46**
–	–	–	–	**–**	–	–	–	**–**	**–**
–	–	–	–	**–**	–	–	–	**–**	**–**
234	**2**	**232**	**–**	**103**	**–**	**–**	**103**	**1,165**	**15,692**
8,762	1,336	7,426	–	910	370	298	243	1,166	44,292

EU CRB-D: Concentration of exposures by industry

		a	b	c	d	e	f	g	h
€ mn		Agriculture, forestry and fishing	Mining and quarrying	Manu-facturing	Electricity, gas, steam and air conditioning supply	Water supply	Con-struction	Wholesale and retail trade	Transport and storage
2	Institutions	–	–	–	–	–	–	–	–
3	Corporates	–	–	–	–	–	176	99	–
3a	of which: SMEs	–	–	–	–	–	1	–	–
5	Equity	–	–	–	–	–	8	–	1
5a	Other non-credit obligation assets	–	–	–	–	–	–	–	–
6	**Total IRB approach**	**–**	**–**	**–**	**–**	**–**	**183**	**99**	**1**
7	Central governments or central banks	–	–	–	–	–	–	–	–
8	Regional governments and similar entities	–	–	–	–	–	–	–	–
9	Other public-sector entities	–	–	–	–	–	–	–	–
10	Multilateral development banks	–	–	–	–	–	–	–	–
11	International organisations	–	–	–	–	–	–	–	–
12	Institutions	–	–	–	–	–	–	–	–
13	Corporates	–	–	–	31	3	2	10	1
13a	of which: SMEs	–	–	–	–	–	1	–	–
14	Retail	0	–	0	–	–	1	0	–
14a	of which: SMEs	–	–	–	–	–	–	–	–
15	Secured by mortgages on immovable property	1	0	2	0	0	7	7	1
15a	of which: SMEs	–	–	–	–	–	–	–	–
16	Exposures in default	–	–	0	2	0	0	–	0
17	Exposures associated with particularly high risk	–	–	–	–	–	–	–	–
18	Covered bonds	–	–	–	–	–	–	–	–
19	Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	–	–
20	Collective investment undertakings	–	–	–	–	–	–	–	–
21	Equity exposures	–	–	–	–	–	–	–	–
22	Other exposures	–	–	–	–	–	–	–	–
23	**Total standardised approach**	**1**	**0**	**3**	**33**	**3**	**9**	**17**	**2**
24	**Total**	**1**	**0**	**3**	**33**	**3**	**193**	**116**	**3**

i	j	k	l	m	n	o	p	q	r	s	u
Net asset value											
Accom-modation and food service activities	Information and com-munication	Financial and insurance activities	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public ad-ministration and defence, compulsory social security	Education	Human health services and social work activities	Arts, entertain-ment and recreation	Other services	Total
–	–	–	–	–	–	–	–	–	–	–	**–**
1,627	–	1,006	24,693	97	3	–	–	–	–	101	**27,802**
75	–	169	817	72	3	–	–	–	–	2	**1,139**
–	0	1	20	147	5	–	–	–	–	0	**182**
–	–	–	616	–	–	–	–	–	1	–	**616**
1,627	**0**	**1,007**	**25,329**	**245**	**8**	**–**	**–**	**–**	**1**	**101**	**28,600**
–	–	4,748	–	–	–	2,007	–	–	–	–	**6,755**
–	–	–	–	–	–	4,278	–	–	–	–	**4,278**
–	–	249	–	–	–	1,230	–	–	–	1	**1,480**
–	–	330	–	–	–	–	–	–	–	–	**330**
–	–	–	–	–	–	835	–	–	–	–	**835**
–	–	1,147	0	–	–	–	–	–	–	–	**1,147**
–	0	75	154	15	1	–	–	1	0	2	**293**
–	0	27	66	2	0	–	–	–	–	–	**95**
1	0	0	0	1	0	–	–	1	0	21	**25**
–	–	–	–	–	–	–	–	–	–	–	**–**
2	1	64	59	10	4	–	1	5	18	241	**423**
–	–	60	56	1	–	–	–	–	–	–	**117**
–	–	1	0	0	0	–	–	0	0	2	**6**
–	–	–	–	–	–	–	–	–	–	–	**–**
–	–	75	–	–	–	–	–	–	–	–	**75**
–	–	–	–	–	–	–	–	–	–	–	**–**
–	–	37	–	–	–	8	–	–	–	–	**46**
–	–	–	–	–	–	–	–	–	–	–	**–**
–	–	–	–	–	–	–	–	–	–	–	**–**
2	**1**	**6,725**	**214**	**26**	**5**	**8,358**	**1**	**6**	**18**	**267**	**15,692**
1,630	2	7,732	25,543	271	12	8,358	1	6	18	368	44,292

Quantitative information on the credit quality of exposures

In the following tables, the breakdown of past due and impaired exposures and the related allowances required by Article 442 lit. g) and h) of the CRR, as submitted to banking supervisors as part of Solvency reporting, are disclosed with different levels of detail. As part of the implementation of the EBA guidelines, the exposures in tables EU CR1-A to EU CR1-C must be classified as to whether a default under the terms of Article 178 of the CRR exists or not.

The implementation of the guidelines on disclosure of non-performing and forborne exposures (EBA/GL/2018/10) replaces the disclosure tables EU CR1-D and EU CR1-E set out in the guidelines EBA/GL/2016/11.

Pursuant to Article 1 of the Commission Delegated Regulation (EU) No. 183/2014, general and specific credit risk adjustments require the inclusion of all amounts "… by which an institution's Common Equity Tier 1 capital has been reduced in order to reflect losses exclusively related to credit risk according to the applicable accounting framework and recognised as such in the profit or loss account, irrespective of whether they result from impairments, value adjustments or provisions for off-balance sheet items."

Aareal Bank's specific credit risk adjustments at the reporting date comprise existing loss allowance carried (see chapter "Loss allowance"). Such utilisations are shown in the "Accumulated write-offs" column of the following tables, for information only.

Credit risk adjustment charges disclosed in column f of tables EU CR1-A to EU CR1-C comprise allowance for credit losses recognised and reversed during the reporting period.

EU CR1-A: Credit quality of exposures by exposure class and instrument

		a	b	c	d	e	f	g
		Gross carrying values of						Net values
		Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	(a+b-c-d)
€ mn								
2	Institutions	–	–	–	–	–	–	**–**
3	Corporates	1,657	26,719	574	–	80	108	**27,802**
4	of which: specialised lending	1,519	24,175	555	–	46	130	**25,140**
5	of which: SMEs	138	1,020	19	–	34	-21	**1,139**
14	Equity	–	182	–	–	–	–	**182**
	Other non-credit obligation assets	–	616	–	–	–	–	**616**
15	**Total IRB approach**	**1,657**	**27,517**	**574**	**–**	**80**	**108**	**28,600**
16	Central governments or central banks	–	6,760	5	–	–	3	**6,755**
17	Regional governments and similar entities	–	4,278	0	–	–	0	**4,278**
18	Other public-sector entities	–	1,480	0	–	–	0	**1,480**
19	Multilateral development banks	–	330	–	–	–	–	**330**
20	International organisations	–	835	0	–	–	0	**835**

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€ mn		a	b	c	d	e	f	g
		Gross carrying values of						Net values
		Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	(a+b-c-d)
21	Institutions	–	1,148	1	–	–	0	**1,147**
22	Corporates	7	296	7	–	–	-4	**296**
23	of which: SMEs	7	95	5	–	–	-2	**98**
24	Retail	5	25	2	–	0	1	**28**
25	of which: SMEs	–	–	–	–	–	–	**–**
26	Secured by mortgages on immovable property	–	427	4	–	–	-1	**423**
27	of which: SMEs	–	117	0	–	–	0	**117**
28	Exposures in default	12	–	7	–	0	-1	**6**
29	Exposures associated with particularly high risk	–	–	–	–	–	–	**–**
30	Covered bonds	–	75	–	–	–	–	**75**
31	Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	**–**
32	Collective investment undertakings (CIU)	–	46	–	–	–	–	**46**
33	Equity exposures	–	–	–	–	–	–	**–**
34	Other exposures	–	–	–	–	–	–	**–**
35	**Total standardised approach**	**12**	**15,699**	**19**	**–**	**–**	**-1**	**15,692**
36	**Total**	**1,669**	**43,217**	**594**	**–**	**80**	**107**	**44,292**
37	of which: loans	1,663	34,293	584	–	80	103	**35,372**
38	of which: debt securities	–	6,828	5	–	–	3	**6,823**
39	of which: off-balance sheet exposures	6	1,297	4	–	–	0	**1,299**

Table EU CR1-A above additionally includes the figures for exposures in default listed in line 28 for the original CRSA exposure classes (Corporates, Retail, and exposures secured by mortgages on immovable property). In this way, Aareal Bank has implemented the EBA recommendations on disclosure of exposures in default within the scope of this table. Accordingly, line 28 is only for information, since it is not included in the calculation of totals across all CRSA exposure classes.

The following tables EU CR1-B and EU CR1-C are based on the same allocation criteria as the tables EU CRB-D and EU CRB-C above, both in terms of industries and regional presentation.

EU CR1-B: Credit quality of exposures by industry

		a	b	c	d	e	f	g
		Gross carrying values of						Net values
€ mn		Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	(a+b-c-d)
1	Agriculture, forestry and fishing	–	1	0	–	–	0	**1**
2	Mining and quarrying	–	0	0	–	–	0	**0**
3	Manufacturing	0	3	0	–	–	0	**3**
4	Electricity, gas, steam and air conditioning supply	6	31	5	–	–	-2	**33**
5	Water supply	0	3	0	–	–	0	**3**
6	Construction	216	34	57	–	6	15	**193**
7	Wholesale and retail trade	28	88	0	–	–	0	**116**
8	Transport and storage	0	3	0	–	–	0	**3**
9	Accommodation and food service activities	65	1,577	13	–	3	-6	**1,630**
10	Information and communication	–	2	0	–	–	0	**2**
	Financial and insurance activities	110	7,694	73	–	12	-10	**7,732**
11	Real estate activities	1,166	24,797	420	–	58	187	**25,543**
12	Professional, scientific and technical activities	0	273	3	–	–	1	**271**
13	Administrative and support service activities	0	12	0	–	–	0	**12**
14	Public administration and defence, compulsory social security	–	8,363	5	–	–	3	**8,358**
15	Education	–	1	0	–	–	0	**1**
16	Health and social services	0	6	0	–	–	0	**6**
17	Arts, entertainment and recreation	0	18	0	–	–	0	**18**
18	Other service activities	76	308	17	–	0	-82	**368**
19	**Total**	**1,669**	**43,217**	**594**	**–**	**80**	**107**	**44,292**

EU CR1-C: Credit quality of exposures by geography

		a	b	c	d	e	f	g
		Gross carrying values of						Net values
€ mn		Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	(a+b-c-d)
1	**Germany**	**18**	**15,088**	**23**	**–**	**11**	**-12**	**15,083**
2	**Western Europe**	**527**	**10,965**	**180**	**–**	**12**	**115**	**11,311**
	Austria	–	852	0	–	–	0	**852**
	Belgium	–	468	0	–	–	0	**467**
	France	112	2,962	7	–	6	-2	**3,067**
	United Kingdom	415	4,629	169	–	1	115	**4,875**
	Netherlands	–	1,313	3	–	4	1	**1,310**
	Others	–	741	1	–	–	1	**740**
3	**Northern Europe**	**106**	**1,479**	**6**	**–**	**–**	**-4**	**1,580**
	Finland	106	507	5	–	–	-4	**608**
	Sweden	–	913	0	–	–	0	**913**
	Others	–	59	0	–	–	0	**59**
4	**Southern Europe**	**665**	**3,601**	**251**	**–**	**58**	**-55**	**4,014**
	Spain	157	1,516	25	–	2	7	**1,648**
	Italy	508	2,051	227	–	55	-62	**2,332**
	Others	–	34	0	–	–	0	**34**
5	**Eastern Europe**	**63**	**1,408**	**6**	**–**	**–**	**-1**	**1,466**
	Poland	57	881	1	–	–	-1	**936**
	Others	7	528	4	–	–	0	**530**
6	**North America**	**291**	**8,595**	**123**	**–**	**0**	**62**	**8,762**
	Canada	–	1,350	13	–	–	11	**1,336**
	USA	291	7,245	110	–	0	51	**7,426**
	Others	–	–	–	–	–	–	**–**
7	**Asia/Pacific**	**–**	**914**	**4**	**–**	**–**	**2**	**910**
	Australia	–	370	0	–	–	0	**370**
	Maldives	–	301	4	–	–	4	**298**
	Others	–	243	0	–	–	-2	**243**
8	**Other countries**	**–**	**1,166**	**0**	**–**	**–**	**0**	**1,166**
9	**Total**	1,669	43,217	594	–	80	107	44,292

Pursuant to Article 442 lit. i) of the CRR, the Bank must disclose relevant specific credit risk adjustments during the 2020 reporting year. Details are shown in table EU CR2-A (page 40).

EU CR2-A: Changes in the stock of general and specific credit risk adjustments

€ mn		a Accumulated specific credit risk adjustments	b Accumulated general credit risk adjustments
1	**Opening balance (1 January)**	**388**	**–**
2	Increases due to amounts set aside for estimated loan losses during the period (additions)	377	–
3	Decreases due to amounts reversed for estimated loan losses during the period (reversals)	-30	–
4	Decreases due to amounts taken against accumulated credit risk adjustments (utilisations)	-130	–
5	Transfers between credit risk adjustments	–	–
6	Impact of exchange rate differences	-3	–
7	Business combinations, including acquisitions and disposals of subsidiaries	–	–
8	Other adjustments	-8	–
9	**Closing balance (31 December)**	**594**	**–**
10	Recoveries on credit risk adjustments recorded directly to the statement of profit or loss (payments on loans and advances previously written off)	4	–
11	Specific credit risk adjustments directly recorded to the statement of profit or loss (direct write-offs)	–	–

The following table EU CR2-B provides an overview of the changes in the stock of defaulted and impaired loans and debt securities within the second half of 2020.

EU CR2-B: Changes in the stock of defaulted and impaired loans and debt securities

€ mn		a Gross carrying value of defaulted exposures
1	**Opening balance (1 July)**	**1,289**
2	Loans and debt securities that have defaulted since the last reporting period	615
3	Returned to non-defaulted status	0
4	Amounts written off	-130
5	Other changes	-104
6	**Closing balance (31 December)**	**1,669**

Whilst lines 2 and 3 disclose exposures which have newly defaulted or which returned to non-defaulted status during the period under review, respectively, line 4 sets out utilisations of loss allowance recognised in previous periods against uncollectable exposures.

The change shown in line 5 essentially reflects the accelerated de-risking during the second half of the year.

Non-performing and forborne exposures

The following information is based on the EBA Guidelines on disclosure of non-performing and forborne exposures (EBA/GL/2018/10).

Table 1 provides information on the gross carrying amount of forborne exposures (i.e. exposures with forbearance measures), and on the coverage of existing risks through impairments as well as collateral received. In this context, the measurement of collateral received differs from the current market value of such collateral, due – on the one hand – 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 – on the other hand – reflecting a cap on any collateral at the carrying amount.

Table 1: 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	Non-performing forborne			On performing forborne exposures	On non-performing forborne exposures		of which: collateral and financial guarantees received on non-performing exposures with forbearance measures
€ mn				of which: defaulted	of which: impaired				
1	**Loans and advances**	**6,183**	**1,345**	**1,345**	**1,109**	**-63**	**-453**	**6,747**	**755**
2	Central banks	–	–	–	–	–	–	–	–
3	General governments	–	–	–	–	–	–	–	–
4	Credit institutions	–	–	–	–	–	–	–	–
5	Other financial corporations	83	101	101	101	0	-65	101	18
6	Non-financial corporations	6,100	1,245	1,245	1,008	-63	-388	6,646	738
7	Households	–	–	–	–	–	–	–	–
8	**Debt securities**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
9	**Loan commitments given**	**133**	**6**	**6**	**6**	**2**	**–**	**130**	**2**
10	Total	6,316	1,352	1,352	1,115	-61	-453	6,878	758

At present, Aareal Bank's portfolio includes eight exposures to borrowers which were forborne more than twice, due to financial difficulties. On the reporting date, the Bank's portfolio contained no borrowers which fail to comply with exit criteria for being classified as non-performing after a forbearance measure.

Table 2: Forbearance quality

€ mn		a Gross carrying amount of forborne exposures
1	Loans and advances which were forborne more than twice	346
2	Non-performing forborne loans and advances that do not meet the criteria for waiver of non-performing status	–

In the following three tables, the loan commitments and financial guarantees as well as the financial assets of the three measurement categories "measured at amortised costs (ac)", "measured at fair value through other comprehensive income" (fvoci)" and "measured at fair value through profit or loss (fvpl)" are included in the presentation of the credit quality of performing and non-performing exposures. In the case of risk exposures measured at fvpl, only those that do not meet the so-called SPPI criteria are relevant for Aareal Bank.

Past-due exposures shown in Table 3 (whether impaired or not) are broken down across specified past-due maturity bands.

Table 3: Credit quality of performing and non-performing exposures

		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 and not past due or past due ≤ 90 days	Past due > 90 days ≤ 180 days	Past due > 180 days ≤ 1 year	Past due > 1 year ≤ 2 years	Past due > 2 years ≤ 5 years	Past due > 5 years ≤ 7 years	Past due > 7 years	of which: defaulted
1	**Loans and advances**	**27,661**	**27,660**	**1**	**1,718**	**985**	**66**	**57**	**186**	**232**	**35**	**156**	**1,718**
2	Central banks	–	–	–	–	–	–	–	–	–	–	–	–
3	General governments	2,158	2,158	–	–	–	–	–	–	–	–	–	–
4	Credit institutions	48	48	–	–	–	–	–	–	–	–	–	–
5	Other financial corporations	1,091	1,091	–	108	0	–	–	74	29	4	1	108
6	Non-financial corporations	23,985	23,985	–	1,604	984	66	56	111	202	31	155	1,604
7	of which: SMEs	15,081	15,081	–	1,413	833	66	56	111	202	31	114	1,413
8	Households	379	378	1	5	1	1	1	1	1	–	0	5
9	**Debt securities**	**6,793**	**6,793**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
10	Central banks	–	–	–	–	–	–	–	–	–	–	–	–
11	General governments	5,069	5,069	–	–	–	–	–	–	–	–	–	–
12	Credit institutions	855	855	–	–	–	–	–	–	–	–	–	–
13	Other financial corporations	869	869	–	–	–	–	–	–	–	–	–	–
14	Non-financial corporations	–	–	–	–	–	–	–	–	–	–	–	–

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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 and not past due or past due ≤ 90 days	Past due > 90 days ≤ 180 days	Past due > 180 days ≤ 1 year	Past due > 1 year ≤ 2 years	Past due > 2 years ≤ 5 years	Past due > 5 years ≤ 7 years	Past due > 7 years	of which: defaulted
15 Off-balance sheet exposures	**1,305**			**6**								**6**
16 Central banks	–			–								–
17 General governments	–			–								–
18 Credit institutions	–			–								–
19 Other financial corporations	26			–								–
20 Non-financial corporations	1,232			6								6
21 Households	47			–								–
22 Total	**35,759**	**34,453**	**1**	**1,724**	**985**	**66**	**57**	**186**	**232**	**35**	**156**	**1,724**

In line with table 3, table 4 (page 44) does not take into account financial assets held for trading. In addition to the disclosures on non-performing exposures, Table 4 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 the 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[1)], and which are eligible for regulatory inclusion. However, the respective values are capped at the carrying amount of the respective exposure.

[1)] Additional information on collateral is provided in the chapter "General information on credit risk mitigation" (page 52) in this Regulatory Disclosure Report.

Table 4: Impairment, provisions and negative changes in the fair value of non-performing exposures

		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-offs	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
			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			
€ mn																
1	**Loans and advances**	**27,661**	**21,241**	**6,421**	**1,718**	**21**	**1,697**	**-92**	**-20**	**-72**	**-548**	**-4**	**-545**	**-73**	**24,770**	**986**
2	Central banks	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
3	General governments	2,158	2,157	1	–	–	–	0	0	0	–	–	–	–	–	–
4	Credit institutions	48	48	–	–	–	–	0	0	–	–	–	–	–	–	–
5	Other financial corporations	1,091	991	100	108	–	108	-4	-3	-1	-68	–	-68	-5	999	22
6	Non-financial corporations	23,985	18,003	5,981	1,604	20	1,584	-84	-17	-67	-479	-4	-475	-68	23,474	963
7	of which: SMEs	15,081	11,091	3,990	1,413	20	1,393	-56	-8	-48	-417	-4	-413	-66	14,750	836
8	Households	379	41	339	5	0	5	-4	0	-4	-2	0	-2	0	297	2
9	**Debt securities**	**6,793**	**6,237**	**556**	**–**	**–**	**–**	**-6**	**0**	**-5**	**–**	**–**	**–**	**–**	**–**	**–**
10	Central banks	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
11	General governments	5,069	4,513	556	–	–	–	-5	0	-5	–	–	–	–	–	–
12	Credit institutions	855	855	-	–	–	–	0	0	–	–	–	–	–	–	–
13	Other financial corporations	869	869	–	–	–	–	0	0	–	–	–	–	–	–	–
14	Non-financial corporations	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
15	**Off-balance sheet exposures**	**1,305**	**1,163**	**142**	**6**	**–**	**6**	**4**	**1**	**2**	**–**	**–**	**–**		**700**	**2**
16	Central banks	–	–	–	–	–	–	–	–	–	–	–	–		–	–
17	General governments	–	–	–	–	–	–	–	–	–	–	–	–		–	–
18	Credit institutions	–	–	–	–	–	–	–	–	–	–	–	–		–	–
19	Other financial corporations	26	26	–	–	–	–	0	0	–	–	–	–		26	–
20	Non-financial corporations	1,232	1,090	142	6	–	6	3	1	2	–	–	–		645	2
21	Households	47	47	0	–	–	–	0	0	0	–	–	–		29	–
22	**Total**	**35,759**	**28,640**	**7,119**	**1,724**	**21**	**1,703**	**-94**	**-19**	**-75**	**-548**	**-4**	**-545**	**-73**	**25,470**	**989**

Table 5 provides a breakdown of the figures disclosed in table 4 by material regional markets, as well as by individual countries within each region, which account for a minimum exposure of € 300 million. In line with table EU CRBC, the country where the property is located serves as a criterion for allocation.

Table 5: Credit quality of non-performing exposures by geography

€ mn	a	b	c	d	e	f	g
	Gross carrying amount/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: financial assets subject to impairment			
			of which: defaulted				
1 On-balance sheet exposures	**44,883**	**1,718**	**1,718**	**41,564**	**-590**		**-56**
Germany	**15,304**	**16**	**16**	**13,659**	**-22**		**–**
Western Europe	**11,663**	**552**	**552**	**10,586**	**-179**		**-31**
Belgium	287	–	–	287	0		–
France	3,464	112	112	2,767	-6		–
Netherlands	1,287	–	–	1,246	-3		–
Austria	792	–	–	792	0		–
United Kingdom	5,088	440	440	4,762	-168		-31
Other countries	745	–	–	731	-1		–
Northern Europe	**1,536**	**106**	**106**	**1,462**	**-6**		**–**
Finland	645	106	106	604	-5		–
Sweden	800	–	–	798	0		–
Other countries	92	–	–	59	0		–
Southern Europe	**4,116**	**668**	**668**	**4,091**	**-251**		**-4**
Italy	2,484	511	511	2,460	-226		-4
Spain	1,598	157	157	1,597	-25		–
Other countries	34	–	–	34	0		–
Eastern Europe	**1,412**	**85**	**85**	**1,326**	**-6**		**-22**
Poland	867	66	66	801	-1		-9
Other countries	545	20	20	525	-4		-13
North America	**8,777**	**289**	**289**	**8,366**	**-122**		**–**
Canada	1,424	–	–	1,340	-13		–
USA	7,353	289	289	7,026	-109		–
Other countries	–	–	–	–	–		–
Asia/Pacific	**908**	**–**	**–**	**908**	**-4**		**–**
Australia	370	–	–	370	0		–
Maldives	301	–	–	301	-4		–
Other countries	237	–	–	237	0		–
Other countries	**1,166**	**–**	**–**	**1,166**	**0**		**–**

>

€ mn	a	b	c	d	e	f	g
	Gross carrying amount/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: financial assets subject to impairment			
			of which: defaulted				
2 Off-balance sheet exposures	**1,311**	**6**	**6**			**4**	
Germany	**587**	**–**	**–**			**1**	
Western Europe	**228**	**5**	**5**			**1**	
Belgium	16	–	–			0	
France	129	–	–			1	
Netherlands	13	–	–			0	
Austria	–	–	–			–	
United Kingdom	67	5	5			0	
Other countries	3	–	–			0	
Northern Europe	**124**	**–**	**–**			**0**	
Finland	9	–	–			0	
Sweden	115	–	–			0	
Other countries	–	–	–			–	
Southern Europe	**106**	**–**	**–**			**0**	
Italy	73	–	–			0	
Spain	33	–	–			0	
Other countries	–	–	–			–	
Eastern Europe	**53**	**–**	**–**			**0**	
Poland	50	–	–			0	
Other countries	3	–	–			0	
North America	**208**	**1**	**1**			**1**	
Canada	10	–	–			0	
USA	198	1	1			1	
Other countries	–	–	–			–	
Asia/Pacific	**6**	**–**	**–**			**0**	
Australia	–	–	–			–	
Maldives	–	–	–			–	
Other countries	6	–	–			0	
Other countries	**–**	**–**	**–**			**–**	
3 Total	**46,194**	**1,724**	**1,724**	**41,564**	**-590**	**4**	**-56**

In accordance with EBA Guidelines, table 6 only shows exposures to non-financial institutions.

Table 6: Credit quality of exposures by industries

		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							
1	Agriculture, forestry and fishing	–	–	–	–	–	–
2	Mining and quarrying	–	–	–	–	–	–
3	Manufacturing	–	–	–	–	–	–
4	Electricity, gas, steam and air conditioning supply	7	6	6	7	-5	–
5	Water supply	3	0	0	3	0	–
6	Construction	237	220	220	217	-57	-4
7	Trading	138	57	57	80	0	-29
8	Transport and storage	1	–	–	1	0	–
9	Accommodation and food service activities	1,623	65	65	1,623	-13	–
10	Information and communication	0	–	–	0	0	–
11	Financial and insurance activities	–	–	–	–	–	–
12	Real estate activities	23,392	1,183	1,183	23,301	-417	-23
13	Professional, scientific and technical activities	79	–	–	79	-3	–
14	Administrative and support service activities	3	–	–	3	0	–
15	Public administration and defence; compulsory social security	–	–	–	–	–	–
16	Education	–	–	–	–	–	–
17	Health and social services	0	–	–	0	0	–
18	Arts, entertainment and recreation	1	–	–	1	0	–
19	Other service activities	105	73	73	105	-12	–
20	**Total**	**25,589**	**1,604**	**1,604**	**25,421**	**-506**	**-56**

As outlined in chapter “General information on credit risk mitigation” (pages 52 et seqq.), as an international property lender, Aareal Bank focuses on property in terms of collateralisation. This is also reflected in table 7, which provides an overview of the quality of collateral received. As the table shows, exposures are almost completely collateralised by property. Our property financing portfolio has an average loan-to-value (LtV) ratio of 60 %. Please refer to our Annual Report for a breakdown of average LtV ratios by region and by property type.[1)]

Table 7: Valuation of credit collateral

	a	b	c	d	e	f	g	h	i	j	k	l
	Loans and advances											
		Performing		Non-performing								
					Unlikely to pay and not past due or 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
1 Gross carrying amount	29,379	27,661	1	1,718	985	732	66	57	186	232	35	156
2 of which: secured	26,765	25,194	0	1,571	945	626	66	4	163	223	29	141
3 of which: secured with immovable property	26,591	25,032	0	1,560	945	614	66	4	163	222	29	130
4 of which: instruments with LTV higher than 60 % and lower or equal to 80 %	9,790	9,644		146	44	102						
5 of which: instruments with LTV higher than 80 % and lower or equal to 100 %	1,291	1,115		176	173	4						
6 of which: instruments with LTV higher than 100 %	1,364	150		1,214	710	504						
7 Accumulated impairment for secured assets	494	88	0	406	184	222	9	1	121	76	9	5
8 Collateral												
9 of which: value capped at the value of exposure	25,728	24,743	0	985	628	357	50	3	24	146	18	117
10 of which: immovable property	25,535	24,576	0	959	602	357	50	3	24	146	18	117
11 of which: value above the cap	1,684	1,049	0	636	332	304	10	0	165	72	12	46
12 of which: immovable property	1,345	934	0	411	208	204	10	0	106	72	12	5
13 Financial guarantees received	28	27	–	1	–	1	–	–	–	0	–	1
14 Accumulated partial write-offs	-73	-4	–	-69	-19	-49	–	0	-11	-1	0	-37

1) Aareal Bank Group 2020 Annual Report: chapter “Financial position”, pages 84 et seqq., in the Group Management Report

Table 8 outlines the changes within the portfolio of non-performing exposures during the 2020 financial year. Besides new defaulted loans (shown in line 2), the amounts of exposures removed from the non-performing portfolio (as shown in line 3) are broken down further: in addition to recoveries (line 4), the outflows from the non-performing portfolio are due to partial or full repayments (line 5), 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; line 6), as well as proceeds from individual sales of loans and advances (line 8). Any losses realised due to the factors shown in lines 6 to 9 are not disclosed again in line 10.

Table 8: Changes in the non-performing portfolio

€ mn		a Gross carrying amount	b Related net accumulated recoveries
1	**Initial stock of non-performing loans and advances**	**1,315**	
2	Inflow to non-performing portfolios	668	
3	Outflow from non-performing portfolios	265	
4	Outflow to performing portfolio	1	
5	Outflow due to loan repayment, partial or total	–	
6	Outflow due to collateral liquidations	37	19
7	Outflow due to taking possession of collateral	–	–
8	Outflow due to sale of instruments	136	42
9	Outflow due to risk transfers	–	–
10	Outflow due to write-offs	10	
11	Outflow due to other situations	82	
12	Outflow due to reclassification as held for sale	–	
13	**Final stock of non-performing loans and advances**	**1,717**	

In accordance with EBA Guidelines, in table 9, 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 10, with the same level of granularity, we do not assign any additional informational value to the disclosures in table 9.

Given that Aareal Bank generally pursues the strategy of preventing any further losses from a loan exposure, some of the properties disclosed in table 10 (on page 50) 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 table below does not provide any such information. Accumulated impairment and accumulated negative changes in fair value, as shown in line 1, fully refer to recognised write-downs on the property. Properties shown in line 4 are assigned to current assets. The classification criteria set out in IFRS 5 were not met by any properties held as fixed assets; therefore, no separate values are disclosed in columns k) and l).

Table 10: Collateral obtained by taking possession of property, by type of recognition and time of 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
1 Collateral obtained by taking possession classified as PP&E	59	–	89	–								
2 Collateral obtained by taking possession other than that classified as PP&E	374	-89	307	-8	137	0	162	-8	7	–	–	–
3 Residential immovable property	13	-4	10	–	8	–	0	–	1	–	–	–
4 Commercial immovable property	361	-85	297	-8	129	0	162	-8	6	–	–	–
5 Movable property (auto, shipping, etc.)	–	–	–	–	–	–	–	–	–	–	–	–
6 Equity and debt instruments	–	–	–	–	–	–	–	–	–	–	–	–
7 Other	–	–	–	–	–	–	–	–	–	–	–	–
8 Total	**433**	**-89**	**396**	**-8**	**137**	**0**	**162**	**-8**	**7**	**–**	**–**	**–**

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 the year. These include the following disclosure requirements. They are based on the requirements introduced by the EBA that were specified as part of the guidelines on reporting and disclosure of exposures subject to measures applied in response to the Covid-19 crisis[1] (EBA/GL/2020/07).

In the following two tables, 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.

[1] Regarding specific measures related to Covid-19, we refer to our Group Annual Report (Risk Report; chapter "Risk measurement and monitoring" in the chapter "Credit risk", page 100 et seqq.)

Table 1 shows information on the gross carrying amount of performing and non-performing loans and advances that are subject to an EBA-compliant payment moratorium, and on the amount of the coverage of existing risks through existing loss allowances.

Table 1: Loans and advances subject to legislative and non-legislative moratoria

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
	Gross carrying amount							Accumulated impairment, accumulated negative changes in fair value due to credit risk							Gross carrying amount
		Performing exposures			Non-performing exposures				Performing exposures			Non-performing exposures			
€ mn			of which: forborne	of which: Stage 2		of which: forborne	of which: unlikely to pay and not past due or past due ≤ 90 days			of which: forborne	of which: Stage 2		of which: forborne	of which: unlikely to pay and not past due or past due ≤ 90 days	Inflow to non-performing exposures
1 Loans and advances subject to moratorium	**45**	**45**	**–**	**45**	**–**	**–**	**–**	**0**	**0**	**–**	**0**	**–**	**–**	**–**	**–**
2 of which: households	–	–	–	–	–	–	–	–		–	–	–	–	–	–
3 of which: collateralised by residential immovable property	–	–	–	–	–	–	–	–		–	–	–	–	–	–
4 of which: non-financial corporations	45	45	–	45	–	–	–	0	0	–	0	–	–	–	–
5 of which: SMEs	45	45	–	45	–	–	–	0	0	–	0	–	–	–	–
6 of which: collateralised by commercial immovable properties	41	41	–	41	–	–	–	0	0	–	0	–	–	–	–

In the second half of the year, Aareal Bank did not hold any exposures subject to a payment moratorium that are classified as non-performing or were classified as such in the context of the Covid-19 crisis. All of the risk exposures presented are loans and advances subject to legislative moratoria. In the context of these legislative moratoria (here: Italy and Germany), there was only a temporary suspension of payments with a corresponding extension of the contractual overall term.

In addition to the exposures disclosed in Table 1, Table 2 (page 52) also shows the exposures for which the moratorium was offered, and their number. Moreover, columns g) to k) show the gross carrying amount of all exposures subject to a payment moratorium, presented by residual maturity of the moratorium.

Overall, 47 borrowers were granted legislative moratoria on the basis of requests by the customers. A portion of these moratoria refers to consumer credit agreements within the discontinued business in Germany where the moratorium rules no longer apply since 30 June 2020. The total volume subject to continuing forbearance arrangements is reported in column d). In addition, loans in a volume of € 45 million to Italian borrowers are subject to legislative moratoria applicable until 31 January 2021 due to a corresponding extension of payment dates by up to ten months. In accordance with legal requirements, the original term of the loan is prolonged by the forbearance period. The residual maturity shown above is the result of the legislative moratorium applicable until 31 January 2021. Any forbearance within this portfolio was granted only until 31 January 2021.

Table 2: Loans and advances by residual maturity of moratoria

€ mn	a	b	c	d	e	f	g	h	i
		Gross carrying amount							
					Residual maturity of moratoria				
	Number of obligors		of which: legislative moratoria	of which: expired	≤ 3 month	> 3 months ≤ 6 months	> 6 months ≤ 9 months	> 9 months ≤ 12 months	> 1 year
1 Loans and advances for which a moratorium was offered	**47**	**50**							
2 Loans and advances for which a moratorium was granted	**47**	**50**	**50**	**4**	**36**	**–**	**–**	**9**	**–**
3 of which: households		4	4	4	–	–	–	–	–
4 of which: collateralised by residential immovable property		4	4	4	–	–	–	–	–
5 of which: non-financial corporations		45	45	–	36	–	–	9	–
6 of which: SMEs		45	45	–	36	–	–	9	–
7 of which: collateralised by commercial immovable properties		41	41	–	32	–	–	9	–

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 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 value is subjected to a defined 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 customers 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 included for credit risk mitigation purposes, adjusted for 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.

Collateral eligible for inclusion

Collateral in the amount of € 29,097 million was applied within the scope of credit risk mitigation. This figure comprises no financial collateral included for derivatives transactions.

The following table shows collateral for each exposure class considered under AIRBA and CRSA. The real property liens (95.3 %) 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 use credit derivatives as collateralisation.

In addition to credit risk mitigating 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 Exposures unsecured – net amount	b Exposures secured – net amount	c Exposures secured by collateral	d Exposures secured by financial guarantees	e Exposures secured by credit derivatives
	Total IRB approach	**1,218**	**27,382**	**27,529**	**24**	**–**
	Institutions	–	–	–	–	–
	Corporates	420	27,382	27,529	24	–
	of which: specialised lending	106	25,035	25,334	7	–
	of which: SMEs	67	1,072	1,018	17	–
	Equity exposures	182	–	–	–	–
	Other non-credit related assets	616	–	–	–	–
	Total standardised approach	**14,101**	**1,591**	**1,253**	**291**	**–**
	Central governments or central banks	6,755	–	–	–	–
	Regional governments and similar entities	4,278	–	–	–	–
	Other public-sector entities	1,344	137	17	119	–
	Multilateral development banks	330	–	–	–	–
	International organisations	835	–	–	–	–
	Institutions	199	948	783	147	–
	Covered bonds	75	–	–	–	–
	Corporates	221	73	30	16	–
	of which: SMEs	58	37	11	2	–
	Retail	24	1	–	–	–
	of which: SMEs	–	–	–	–	–
	Secured by mortgages on immovable property	–	423	423	–	–
	of which: SMEs	–	117	117	–	–
	Collective investment undertakings (CIU)	37	8	–	8	–
	Equity exposures	–	–	–	–	–
	Other exposures	–	–	–	–	–
	Exposures in default	4	1	–	1	–
	Exposures associated with particularly high risk	–	–	–	–	–
1	Total loans	7,575	27,797	28,085	49	–
2	Total debt securities	6,557	266	–	266	–
3	**Total**	**15,319**	**28,973**	**28,782**	**315**	**–**
4	of which: defaulted	6	1,595	1,425	2	–

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 Annual Report[1].

Netting framework agreements

Please refer to the Annual Report for details on netting framework agreements.[2]

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.

[1] Aareal Bank Group 2020 Annual Report: chapter “Loan loss risks” (here: “Risk measurement and monitoring”) in the Risk Report of the Group Management Report, page 100 et seqq.
[2] Aareal Bank Group 2020 Annual Report: chapter “Loan loss risks” (here: “Credit risk mitigation for trading activities”) in the Risk Report of the Group Management Report, page 105 et seqq.

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" items 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.

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 rather than 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 (page 58) 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 and CRM		Exposures post CCF and CRM		RWAs and RWA density	
		On-balance-sheet amount (EAD)	Off-balance-sheet amount (EAD)	On-balance-sheet amount (EAD)	Off-balance-sheet amount (EAD)	RWAs	RWA density
		€ mn	€ mn	€ mn	€ mn	€ mn	%
1	Central governments or central banks	6,755	–	7,029	–	14	0.19
2	Regional governments and similar entities	4,278	–	4,284	–	423	9.86
3	Other public-sector entities	1,479	1	1,342	–	2	0.15
4	Multilateral development banks	330	–	330	–	–	–
5	International organisations	835	–	835	–	–	–
6	Institutions	1,147	–	228	–	64	28.16
7	Corporates	194	99	148	15	140	85.97
8	Retail	25	0	25	0	19	75.00
9	Secured by mortgages on immovable property	423	–	423	–	148	34.93
10	Exposures in default	6	–	5	–	5	109.24
11	Exposures associated with particularly high risk	–	–	–	–	–	–
12	Covered bonds	75	–	75	–	8	10.00
13	Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–	–
14	Collective investment undertakings (CIU)	46	–	37	–	7	18.65
15	Equity exposures	–	–	–	–	–	–
16	Other exposures	–	–	–	–	–	–
17	**Total**	**15,591**	**101**	**14,761**	**15**	**829**	**5.61**

The table EU CR5 shows the exposure amount after mitigating credit risk of all exposures to which 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 the column “of which: unrated” are exposures for which no external rating is used to derive the risk weight.

EU CR5: Credit Risk Standard Approach

Exposure classes	Risk weight																	
	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Other	Deducted	Total	of which: unrated
€ mn																		
1 Central governments or central banks	6,961	–	–	–	68	–	–	–	–	–	–	–	–	–	–	–	**7,029**	6,870
2 Regional governments and similar entities	4,067	–	–	–	52	–	–	–	–	–	–	165	–	–	–	–	**4,284**	4,233
3 Other public-sector entities	1,332	–	–	–	10	–	–	–	–	–	–	–	–	–	–	–	**1,342**	1,332
4 Multilateral development banks	330	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**330**	330
5 International organisations	835	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**835**	835
6 Institutions	–	–	–	–	166	–	62	–	–	–	–	–	–	–	–	–	**228**	4
7 Corporates	–	–	–	–	16	–	0	–	–	146	–	–	–	–	–	–	**163**	146
8 Retail	–	–	–	–	–	–	–	–	25	–	–	–	–	–	–	–	**25**	25
9 Secured by mortgages on immovable property	–	–	–	–	–	361	62	–	–	–	–	–	–	–	–	–	**423**	423
10 Exposures in default	–	–	–	–	–	–	–	–	–	4	1	–	–	–	–	–	**5**	5
11 Exposures associated with particularly high risk	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
12 Covered bonds	–	–	–	75	–	–	–	–	–	–	–	–	–	–	–	–	**75**	–
13 Institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
14 Collective investment undertakings (CIU)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	37	–	**37**	37
15 Equity	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
16 Other items	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
17 Total	**13,525**	**–**	**–**	**75**	**313**	**361**	**124**	**–**	**25**	**150**	**1**	**165**	**–**	**–**	**37**	**–**	**14,776**	**14,239**

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 property finance - our main business segment – 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 in the large-sized commercial property financing business is approved by the supervisory authorities and determines a borrower's PD, LGD, and the CCF.

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 customer.

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 client's probability of default 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 pursuant to 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 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 a pool of data used across the Bank, whilst recovery rates for international properties are derived using an internal approach. An internal projection model based on macroeconomic 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. As at 31 December 2020, Aareal Bank Group's coverage ratio for IRBA exposures in accordance with the German Solvency Regulation (Solvabilitätsverordnung - "SolvV") amounted to 95.3 %, and to 98.8 % in terms of RWAs.

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 Treasury processing chain, 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. 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.

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 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.

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

IRBA exposure class	PD scale	a	b	c	d	e
		Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF	EaD post CRM and post-CCF	Average PD
	%	€ mn	€ mn	%	€ mn	%
Corporates – SMEs	0.00 to < 0.15	47	–	–	48	0.10
	0,15 to < 0,25	90	6	100.00	100	0.23
	0.25 to < 0.50	247	33	100.00	287	0.41
	0.50 to < 0.75	236	13	100.00	255	0.70
	0.75 to < 2.50	148	19	100.00	170	1.43
	2.50 to < 10.00	179	1	100.00	183	5.45
	10.00 to < 100.00	–	–	–	–	–
	100.00 (Default)	138	–	–	138	100.00
	Subtotal	**1,086**	**72**	**100.00**	**1,182**	**13.01**

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 the EU CR6 table, which considers clearly-defined PD classes. Expected loss (EL) is also reported per PD class, thus also ensuring a statement concerning the collateral quality.

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".

f	g	h	i	j	k	l
Number of obligors	Average LGD	Average maturity	Risk-weighted assets (RWAs)	RWA density	Expected Loss (EL)	Value adjustments and provisions
	%		€ mn	%	€ mn	€ mn
4	4.34	1,099	1	2.29	0	
23	9.41	900	7	7.15	0	
63	22.92	900	74	25.79	0	
23	13.51	900	46	18.00	0	
29	15.48	929	46	26.92	0	
14	35.46	685	177	96.54	4	
–	–	–	–	–	–	
11	45.01	900	22	16.28	60	
167	**22.44**	**879**	**373**	**31.58**	**66**	**-19**

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IRBA exposure class	PD scale	a Original on-balance sheet gross exposure	b Off-balance sheet exposures pre-CCF	c Average CCF	d EaD post CRM and post-CCF	e Average PD
	%	€ mn	€ mn	%	€ mn	%
Corporates – Specialised lending	0.00 to < 0.15	185	–	–	189	0.09
	0,15 to < 0,25	866	6	100.00	892	0.22
	0.25 to < 0.50	3,498	66	100.00	3,646	0.42
	0.50 to < 0.75	4,326	125	100.00	4,551	0.70
	0.75 to < 2.50	6,830	216	100.00	7,204	1.32
	2.50 to < 10.00	7,761	297	100.00	8,226	3.29
	10.00 to < 100.00	–	–	–	–	–
	100.00 (Default)	1,513	6	100.00	1,516	100.00
	Subtotal	**24,979**	**716**	**100.00**	**26,224**	**7.36**
Corporates – Others	0.00 to < 0.15	–	–	–	–	–
	0,15 to < 0,25	246	107	100.00	361	0.23
	0.25 to < 0.50	144	100	100.00	251	0.38
	0.50 to < 0.75	328	118	100.00	458	0.70
	0.75 to < 2.50	392	65	100.00	467	1.26
	2.50 to < 10.00	0	23	100.00	25	2.62
	10.00 to < 100.00	–	–	–	–	–
	100.00 (Default)	–	–	–	–	–
	Subtotal	**1,110**	**414**	**100.00**	**1,561**	**0.74**
	Total	**27,174**	**1,202**	**100.00**	**28,967**	**7.24**

Expected loss increased by € 17 million to € 388 million compared to 30 June 2020. The EL increase resulted predominantly from the increase of the commercial property finance portfolio to which the AIRBA is applied, as well as quality changes in the existing portfolio due to changed borrower probabilities of default (PD), and changes in expected loss given default (LGD).

In addition to the distribution of IRBA exposure amounts onto individual PD classes, the average PD and LGD values for each relevant geographical location of credit exposures are disclosed. The disclosure is based on the focus of our activities, which cover Europe, North America and Asia/Pacific, and features a breakdown of the average values by major geographical markets, as explained in our Annual Report. The average values are allocated based on the location of the property used as collateral. The information provided includes property finance in default according to the CRR.

f	g	h	i	j	k	l
Number of obligors	Average LGD	Average maturity	Risk-weighted assets (RWAs)	RWA density	Expected Loss (EL)	Value adjustments and provisions
	%		€ mn	%	€ mn	€ mn
6	4.06	1,030	4	2.19	0	
24	5.77	1,087	44	4.89	0	
76	6.19	1,107	315	8.63	1	
106	6.19	1,174	534	11.74	2	
141	9.72	1,042	1,411	19.58	9	
127	16.07	1,066	3,464	42.11	47	
–	–	–	–	–	–	
33	23.62	946	1,223	80.69	260	
513	**11.24**	**1,077**	**6,995**	**26.67**	**320**	**-555**
–	–	–	–	–	–	
6	25.20	1,714	139	38.63	0	
22	32.09	1,335	138	54.92	0	
20	21.99	1,564	254	55.54	1	
40	19.91	1,474	259	55.43	1	
5	28.36	976	21	83.47	0	
–	–	–	–	–	–	
–	–	–	–	–	–	
93	**23.83**	**1,525**	**811**	**51.95**	**3**	**-1**
773	**12.37**	**1,093**	**8,179**	**28.24**	**388**	**-574**

Corporates – SMEs	EaD after credit risk mitigation and credit conversion factor	Average LGD	Average PD
	€ mn	%	%
Germany	447	22.15	1.61
Western Europe	335	23.61	34.89
Northern Europe	–	–	–
Southern Europe	314	13.33	7.43
Eastern Europe	75	59.78	8.02
North America	–	–	–
Asia/Pacific	11	5.12	2.62
Others	–	–	–
Total	**1,182**	**22.44**	**13.01**

Corporates – Specialised lending	EaD after credit risk mitigation and credit conversion factor	Average LGD	Average PD
	€ mn	%	%
Germany	2,246	10.61	1.35
Western Europe	9,154	7.38	5.85
Northern Europe	1,507	8.29	7.63
Southern Europe	2,519	20.34	26.68
Eastern Europe	1,147	19.57	6.81
North America	8,833	11.74	5.50
Asia/Pacific	816	16.28	1.77
Others	2	90.03	0.47
Total	**26,224**	**11.24**	**7.36**

Corporates – Other	EaD after credit risk mitigation and credit conversion factor	Average LGD	Average PD
	€ mn	%	%
Germany	762	33.02	0.66
Western Europe	373	12.50	0.93
Northern Europe	–	–	–
Southern Europe	184	8.10	0.72
Eastern Europe	242	24.32	0.69
North America	–	–	–
Asia/Pacific	–	–	–
Others	–	–	–
Total	**1,561**	**23.83**	**0.74**

The following table EU CR8 provides an overview of the RWA changes and the associated causes to be analysed since 30 September 2020.

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

€ mn		a Risk-weighted assets (RWAs)	b Regulatory capital requirements
1	**Position as at 30 September 2020**	**8,655**	**693**
2	Asset size	617	49
3	Asset quality	419	34
4	Model updates	–	–
5	Methodology and policy	–	–
6	Acquisitions and disposals	-201	-16
7	Foreign exchange movements	-50	-4
	Deconsolidation effects	28	2
8	Others	–	–
9	**Position as at 31 December 2020**	**9,470**	**758**

The starting and end balances represent the sums of figures disclosed in lines 4 and 5 of table EU OV1 for the respective reporting date.

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.

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.

Line 6 discloses the RWA effect of the disposal of a minority stake in Aareon AG, which took place in the fourth quarter.

The line "Deconsolidation effects" discloses the RWA decrease resulting from the regulatory deconsolidation of Mercadea S.r.l.

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

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 annual default rate for the past five years is used for comparison.

In accordance with EBA guidelines, counterparty credit risk exposures are outside the IRBA "Corporates" exposure class (including specialised lending and SMEs).

Aareal Bank uses the internal master scale – comprised of 21 PD classes (20 rating classes for not defaulted borrowers, one default class) – as basis for the PD band. For reporting purposes, Aareal Bank allocates exactly one probability of default parameter to for the purposes of each PD class. This means that the ratings, determined using internal risk classification procedures, are aggregated via the master scale to form a master rating. Thus, the weighted PD average generally corresponds to the arithmetic average of PD as per borrower. thus facilitating internal comparison.

Aareal Bank employs risk classification procedures tailored to the requirements of the commercial property lending portfolio for the initial, regular, or event-driven assessment of counterparty credit risk.

When determining internal credit ratings and default rates, Aareal Bank does not use assessments by external rating agencies. Hence, no external ratings are shown in column c) of the table EU CR9.

In the current year, a total of 14 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 period. There are restrictions to the interpretation of comparing average PD to average annual default rates as shown in the table; on the one hand, this is due to the master scale deployed. On the other hand, the low number of default cases, in only a few rating classes, burdens interpretation of this comparison.

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

EU CR9: IRB Approach – back-testing of the probability of default (PD) per exposure class

a	b	c	d	e	f		g	h	i
					Number of obligors				
Corporates exposure class	PD range	External rating equivalent	Weighted average PD	Arithmetic average PD by obligor	End of previous year	End of the year	Defaulted obligors in the year	of which: new obligors	Average annual default rate
	%		%	%					%
	0 to < 0.00120	–	0.0010	0.0010	–	–	–	–	0.0000
	0.00120 to < 0.00750	–	0.0030	0.0030	–	–	–	–	0.0000
	0.00750 to < 0.01000	–	0.0080	0.0080	–	–	–	–	0.0000
	0.01000 to < 0.02640	–	0.0150	0.0150	–	–	–	–	0.0000
	0.02640 to < 0.03410	–	0.0300	0.0300	–	–	–	–	0.0000
	0.03410 to < 0.05950	–	0.0450	0.0450	1	2	–	–	0.0000
	0.05950 to < 0.07680	–	0.0676	0.0676	1	–	–	–	0.0000
	0.07680 to < 0.13410	–	0.1015	0.1015	7	7	–	–	0.0000
	0.13410 to < 0.17320	–	0.1524	0.1524	8	7	–	–	0.0000
	0.17320 to < 0.30230	–	0.2288	0.2288	74	39	–	–	0.0000
	0.30230 to < 0.39040	–	0.3435	0.3435	34	48	–	–	0.0000
	0.39040 to < 0.56000	–	0.4675	0.4675	73	90	–	–	0.0000
	0.56000 to < 0.88090	–	0.7024	0.7024	178	143	–	–	0.1490
	0.88090 to < 1.53390	–	1.1624	1.1624	144	143	2	–	0.3619
	1.53390 to < 1.98550	–	1.7451	1.7451	68	62	2	1	1.1538
	1.98550 to < 3.45720	–	2.6200	2.6200	50	85	6	–	3.9394
	3.45720 to < 4.98160	–	4.1500	4.1500	9	43	4	–	10.8434
	4.98160 to < 12.92540	–	8.0243	8.0243	6	11	–	–	20.2703
	12.92540 to < 18.62450	–	15.5154	15.5154	–	–	–	–	0.0000
	18.62450 to < 100.00000	–	30.0000	30.0000	1	–	–	–	0.0000
	100.00000	–	100.0000	100.0000	38	42	–	–	0.0000

a Corporates exposure class of which: SMEs	b PD range	c External rating equivalent	d Weighted average PD	e Arithmetic average PD by obligor	f Number of obligors End of previous year	 End of the year	g Defaulted obligors in the year	h of which: new obligors	i Average annual default rate
	%		%	%					%
	0 to < 0.00120	–	0.0010	0.0010	–	–	–	–	0.0000
	0.00120 to < 0.00750	–	0.0030	0.0030	–	–	–	–	0.0000
	0.00750 to < 0.01000	–	0.0080	0.0080	–	–	–	–	0.0000
	0.01000 to < 0.02640	–	0.0150	0.0150	–	–	–	–	0.0000
	0.02640 to < 0.03410	–	0.0300	0.0300	–	–	–	–	0.0000
	0.03410 to < 0.05950	–	0.0450	0.0450	–	–	–	–	0.0000
	0.05950 to < 0.07680	–	0.0676	0.0676	1	–	–	–	0.0000
	0.07680 to < 0.13410	–	0.1015	0.1015	5	3	–	–	0.0000
	0.13410 to < 0.17320	–	0.1524	0.1524	4	2	–	–	0.0000
	0.17320 to < 0.30230	–	0.2288	0.2288	31	15	–	–	0.0000
	0.30230 to < 0.39040	–	0.3435	0.3435	15	18	–	–	0.0000
	0.39040 to < 0.56000	–	0.4675	0.4675	42	27	–	–	0.0000
	0.56000 to < 0.88090	–	0.7024	0.7024	67	18	–	–	0.2538
	0.88090 to < 1.53390	–	1.1624	1.1624	50	15	1	–	0.4132
	1.53390 to < 1.98550	–	1.7451	1.7451	8	10	–	–	1.3158
	1.98550 to < 3.45720	–	2.6200	2.6200	17	4	1	–	3.7634
	3.45720 to < 4.98160	–	4.1500	4.1500	3	3	1	–	10.0000
	4.98160 to < 12.92540	–	8.0243	8.0243	3	2	–	–	22.3881
	12.92540 to < 18.62450	–	15.5154	15.5154	–	–	–	–	0.0000
	18.62450 to < 100.00000	–	30.0000	30.0000	–	–	–	–	0.0000
	100.00000	–	100.0000	100.0000	12	9		–	0.0000

a Corporates exposure class of which: specialised lending	b PD range	c External rating equivalent	d Weighted average PD	e Arithmetic average PD by obligor	f Number of obligors End of previous year	 End of the year	g Defaulted obligors in the year	h of which: new obligors	i Average annual default rate
	%		%	%					%
	0 to < 0.00120	–	0.0010	0.0010	–	–	–	–	0.0000
	0.00120 to < 0.00750	–	0.0030	0.0030	–	–	–	–	0.0000
	0.00750 to < 0.01000	–	0.0080	0.0080	–	–	–	–	0.0000
	0.01000 to < 0.02640	–	0.0150	0.0150	–	–	–	–	0.0000
	0.02640 to < 0.03410	–	0.0300	0.0300	–	–	–	–	0.0000
	0.03410 to < 0.05950	–	0.0450	0.0450	1	2	–	–	0.0000
	0.05950 to < 0.07680	–	0.0676	0.0676	1	–	–	–	0.0000
	0.07680 to < 0.13410	–	0.1015	0.1015	2	4	–	–	0.0000
	0.13410 to < 0.17320	–	0.1524	0.1524	4	5	–	–	0.0000
	0.17320 to < 0.30230	–	0.2288	0.2288	19	18	–	–	0.0000
	0.30230 to < 0.39040	–	0.3435	0.3435	10	21	–	–	0.0000
	0.39040 to < 0.56000	–	0.4675	0.4675	15	55	–	–	0.0000

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a	b	c	d	e	f		g	h	i
					Number of obligors				
Corporates exposure class of which: specialised lending	PD range	External rating equivalent	Weighted average PD	Arithmetic average PD by obligor	End of previous year	End of the year	Defaulted obligors in the year	of which: new obligors	Average annual default rate
	%		%	%					%
	0.56000 to < 0.88090	–	0.7024	0.7024	81	106	–	–	0.0000
	0.88090 to < 1.53390	–	1.1624	1.1624	78	95	1	–	1.2500
	1.53390 to < 1.98550	–	1.7451	1.7451	51	46	2	1	1.9608
	1.98550 to < 3.45720	–	2.6200	2.6200	25	77	5	–	21.4286
	3.45720 to < 4.98160	–	4.1500	4.1500	7	41	3	–	42.8571
	4.98160 to < 12.92540	–	8.0243	8.0243	3	9	–	–	0.0000
	12.92540 to < 18.62450	–	15.5154	15.5154	–	–	–	–	0.0000
	18.62450 to < 100.00000	–	30.0000	30.0000	–	–	–	–	0.0000
	100.00000	–	100.0000	100.0000	24	33	–	–	0.0000

Expected loss vs. loss actually incurred

The following table compares the expected loss (EL) for the commercial property finance business, which was treated under the AIRBA as at 31 December 2019 and for which actual losses were incurred in 2020. Aareal Bank defines the loss actually incurred as the sum total of additions and reversals of loss allowance and provisions, less recoveries on loans and advances previously written off.

	Actual loss				Expected loss			
	2020	2019	2018	2017	31 Dec 2019	31 Dec 2018	31 Dec 2017	31 Dec 2016
€ mn								
IRBA exposure class								
Corporates	335	187	115	164	370	447	319	392

The comparability of the juxtaposed indicators warrants a thorough assessment, as the methods differ. Within the framework of determining expected loss, the LGD calculation takes into account all losses incurred until final settlement, while the actually incurred loss, by definition, only includes the amounts recognised in one period.

Counterparty Credit Risk

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.

Qualitative disclosures on counterparty credit risk

Risk management targets and policies

Please refer to the Annual Report for information on the risk management of counterparty credit risk.[1)]

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 in connection with derivative transactions, all trading counterparties are internally rated by the Credit Risk Analysis department on a regular or event-driven basis. The internal rating constitutes a key indicator for determining counterparty-specific limits for the derivatives business.

Collateral and loss allowance

The procedures for accepting collateral are described in the Group Annual Report[2)]. No loss allowance was recognised for hedging derivatives, since these are recognised at fair value through profit or loss pursuant to IFRSs.

1) Aareal Bank Group 2020 Annual Report, chapter "Trading activities", page 99 et seqq. and chapter "Credit risk mitigation for trading activities" (page 105 et seqq.) in the Risk Report.

2) Aareal Bank Group 2020 Annual Report, chapter "Credit risk mitigation for trading activities" (pages 105 et seqq.) in the Risk Report.

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

The equivalent value of derivatives and the related counterparty credit risk are determined using the mark-to-market method (Article 274 of the CRR) for the purpose of regulatory reporting.

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 exposure by approach

		a	b	c	d	e	f	g
€ mn		Notional	Replacement cost/current market value	Potential future replacement value	EEPE	Multiplier	EAD post CRM	RWAs
1	Mark to market		5,351	576			584	286
2	Original exposure	–					–	–
3	Standardised approach		–			–	–	–
4	IMM (for derivatives and SFTs)				–	–	–	–
5	of which: securities financing transactions (SFTs)				–	–	–	–
6	of which: derivatives and long-term settlement transactions				–	–	–	–
7	of which: from contractual cross-product netting				–	–	–	–
8	Financial collateral simple method (for SFTs)						–	–
9	Financial collateral comprehensive method (for SFTs)						–	–
10	VaR for SFTs						–	–
11	**Total**							**286**

The following table, EU CCR2, gives an overview of the credit value 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: CVA capital charge

€ mn		a EAD	b RWAs
1	Total portfolios subject to the advanced method	–	–
2	i) VaR component (including the 3x multiplier)		–
3	ii) VaR component under stress conditions (sVaR, including the 3x multiplier)		–
4	All portfolios subject to the standardised method	527	224
EU4	Based on the original exposure method	–	–
5	**Total subject to the CVA capital charge**	**527**	**224**

Table EU CCR8 discloses the exposure value and risk-weighted assets (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 2020. In accordance with section 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.

EU CCR8: Exposures to CCPs

€ mn		a EAD post CRM	b RWAs
1	**Exposures to QCCPs (total)**		6
2	Exposures from trades at QCCPs (excluding initial margin and default fund contributions); of which	64	1
3	i) OTC derivatives	–	–
4	ii) Exchange-traded derivatives	–	–
5	iii) SFTs	–	–
6	iv) Netting sets where cross-product netting has been approved	–	–
7	Segregated initial margin	35	
8	Non-segregated initial margin	–	–
9	Pre-funded default fund contributions	–	5
10	Alternative calculation of own funds requirements for exposures		–

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€ mn		a EAD post CRM	b RWAs
11	**Exposures to non-QCCPs (total)**		**–**
12	Exposures from 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 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: counterparty credit risk exposure by regulatory portfolio and risk

Exposure classes		Risk weight												
€ mn		0 %	2 %	4 %	10 %	20 %	50 %	70 %	75 %	100 %	150 %	Others	Total	of which: unrated
1	Central governments or central banks	–	–	–	–	–	–	–	–	–	–	–	**–**	–
2	Regional governments and similar entities	–	–	–	–	–	–	–	–	–	–	–	**–**	–
3	Other public-sector entities	1	–	–	–	–	–	–	–	–	–	–	**1**	1
4	Multilateral development banks	–	–	–	–	–	–	–	–	–	–	–	**–**	–
5	International organisations	–	–	–	–	–	–	–	–	–	–	–	**–**	–
6	Institutions	–	64	–	–	204	322	–	–	–	–	–	**590**	103
7	Corporates	–	–	–	–	–	0	–	–	1	–	–	**2**	1
8	Retail	–	–	–	–	–	–	–	–	–	–	–	**–**	–
9	Institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	–	–	–	–	–	**–**	–
10	Other exposures	–	–	–	–	–	–	–	–	–	–	–	**–**	–
11	**Total**	**1**	**64**	**–**	**–**	**204**	**322**	**–**	**–**	**1**	**–**	**–**	**592**	**105**

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.

The derivatives held by Aareal Bank Group, and entered into with internally rated property customers 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 – counterparty credit risk exposure by portfolio and PD scale

Exposure classes	PD scale	a	b	c	d	e	f	g
		EAD post CRM	Average PD	Number of obligors	Average LGD	Average maturity	RWA	RWA density
		€ mn	%		%		€ mn	%
Corporates – SMEs	0.00 to < 0.15	–	–	–	–	–	–	–
	0.15 to < 0.25	2	0.23	4	90.00	900	1	66.55
	0.25 to < 0.50	9	0.46	3	90.00	900	8	95.53
	0.50 to < 0.75	5	0.70	6	90.00	979	6	121.17
	0.75 to < 2.50	5	1.43	13	90.00	935	7	145.89
	2.50 to < 10.00	21	2.62	2	90.00	825	41	196.48
	10.00 to < 100.00	–	–	–	–	–	–	–
	100.00 (Default)	6	100.00	1	100.00	1,269	–	–
	Subtotal	**48**	**14.69**	**29**	**91.32**	**928**	**64**	**134.05**
Corporates – Others	0.00 to < 0.15	–	–	–	–	–	–	–
	0.15 to < 0.25	–	–	–	–	–	–	–
	0.25 to < 0.50	–	–	–	–	–	–	–
	0.50 to < 0.75	–	–	–	–	–	–	–
	0.75 to < 2.50	8	1.16	1	90.00	1,324	19	238.14
	2.50 to < 10.00	–	–	–	–	–	–	–
	10.00 to < 100.00	–	–	–	–	–	–	–
	100.00 (Default)	–	–	–	–	–	–	–
	Subtotal	**8**	**1.16**	**1**	**90.00**	**1,324**	**19**	**238.14**
	Total	**56**	**12.73**	**30**	**91.13**	**986**	**83**	**149.17**

By analogy with the statement of the credit risk exposures, the average PD and LGD values of the counterparty credit risk exposure treated in AIRBA, split according to major geographical markets, are also disclosed.

Corporates – SMEs	EAD post CRM	Average LGD	Average PD
	€ mn	%	%
Germany	8	90.00	0.47
Western Europe	37	91.71	18.91
Northern Europe	2	90.00	0.41
Southern Europe	–	–	–
Eastern Europe	1	90.00	0.34
North America	–	–	–
Asia/Pacific	–	–	–
Total	**48**	**91.32**	**14.69**

Corporates – Others	EAD post CRM	Average LGD	Average PD
	€ mn	%	%
Germany	–	–	–
Western Europe	8	90.00	1.16
Northern Europe	–	–	–
Southern Europe	–	–	–
Eastern Europe	–	–	–
North America	–	–	–
Asia/Pacific	–	–	–
Total	**8**	**90.00**	**1.16**

Pursuant to Article 439 lit. (e) of the CRR, Aareal Bank must disclose the effect of netting and of collateral held on derivatives exposures (including those settled via a CCP), in table EU CCR5-A, broken down by type of contract.

Master agreements with netting clauses provide for the netting of claims and liabilities in the event of insolvency or counterparty default, and thus further reduce counterparty risk.

EU CCR5-A: Impact of netting and collateral held on exposure values

		a	b	c	d	e
		Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
€ mn						
1	Derivatives	2,219	1,058	1,161	1,191	-30
2	SFTs	–	–	–	–	–
3	Cross-product netting	–	–	–	–	–
4	**Total**	**2,219**	**1,058**	**1,161**	**1,191**	**-30**

The aggregate positive replacement value for our derivatives contracts subject to reporting requirements stood at € 2,219 million at year-end 2020. This amount is reduced to € -30 million through netting framework agreements in the amount of € 1,058 million and the deduction of collateral provided in the amount of € 1,191 million.

At present, Aareal Bank does not use credit derivatives to hedge individual contracts, nor does it act as a broker, seller or buyer of credit derivatives.

Table EU CCR5-B supplements the disclosure requirements under Article 439 lit. (e) of the CRR, as well as the disclosures in table EU CCR5-A with additional information on collateral received or posted. 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 (1) of the CRR.

EU CCR5-B: Composition of collateral for exposures subject to counterparty credit risk

	a	b	c	d	e	f
	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
	Segregated	Unsegregated	Segregated	Unsegregated		
€ mn						
Cash collateral	130	1,188	130	762	–	–
Government bonds	–	–	–	100	–	–
Total	**130**	**1,188**	**130**	**861**	**–**	**–**

Liquidity Risks

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 and monitoring processes have been designed to cover refinancing and market liquidity risks in addition to liquidity risk in the narrower sense.

The Treasury division is responsible for managing liquidity risks. Risk Controlling is responsible for ongoing monitoring.

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. Regarding money-market instruments, this includes, in particular, client deposits (from institutional investors and the housing industry), repo transactions on the interbank market and on Eurex, open-market transactions with the ECB. Capital markets instruments used include, in particular, covered bonds (Pfandbriefe), uncovered and subordinated bearer bonds issued within the scope of the Debt Issuance Programme (DIP), uncovered and subordinated registered bonds and promissory note loans.

Liquidity controlling and management

The Treasury division is responsible for intraday as well as short- and medium-term liquidity management. Operative short- and medium-term liquidity management is based on liquidity balance sheets and cash flow analyses, which are constantly being developed. To analyse both the maturity structure and the quality of the individual money market and capital market products, the cash flows from the various refinancing sources and liquidity reserves are divided into different liquidity classes which are incorporated differently into the assessment of the liquidity status. The various properties, such as rollover probability, collateralisation, or ability to liquidate, are thus accounted for, thereby allowing the possible liquidity risks to be selectively quantified. The overall liquidity situation is broken down into several maturity ranges, taking into account possible stress scenarios. 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.

Managing and monitoring risk concentrations in the area of liquidity risks focuses on liquidity providers, the instruments used to raise liquidity, the liquidity inventory, as well as on any concentrations of liquidity needs which may arise over time.

Risks are communicated by means of daily reporting to Treasury and to the members of the Management Board responsible for Treasury and monitoring. As part of monthly reporting, the entire Management Board is also briefed on the situation as regards liquidity risks. In addition, we notify further units if required.

Liquidity Coverage Ratio

The Liquidity Coverage Ratio (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 following table is based on the EBA guidelines on disclosure of the Liquidity Coverage Ratio (EBA/GL/2017/01). Quantitative details are disclosed using the weighted and unweighted average values of the last 12 reporting days of the respective quarter.

Instruments

	Scope of consolidation	**Total unweighted value (average)**				**Total weighted value (average)**			
		Quarter ending on 31 Mar 2020	**Quarter ending on 30 Jun 2020**	**Quarter ending on 30 Sep 2020**	**Quarter ending on 31 Dec 2020**	**Quarter ending on 31 Mar 2020**	**Quarter ending on 30 Jun 2020**	**Quarter ending on 30 Sep 2020**	**Quarter ending on 31 Dec 2020**
	€ mn								
	Number of data points used for calculating averages	12	12	12	12	12	12	12	12
	Highquality liquid assets								
1	Total highquality liquid assets (HQLA)					6,617	6,503	6,765	6,909
	Cash outflows								
2	**Retail deposits and deposits from small business customers, of which:**	**4,516**	**4,603**	**4,793**	**4,997**	**244**	**248**	**256**	**266**
3	Stable deposits	4,161	4,249	4,436	4,636	208	212	222	232
4	Less stable deposits	356	348	341	333	36	35	35	34

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Scope of consolidation		Total unweighted value (average)				Total weighted value (average)			
		Quarter ending on 31 Mar 2020	Quarter ending on 30 Jun 2020	Quarter ending on 30 Sep 2020	Quarter ending on 31 Dec 2020	Quarter ending on 31 Mar 2020	Quarter ending on 30 Jun 2020	Quarter ending on 30 Sep 2020	Quarter ending on 31 Dec 2020
€ mn									
5	**Unsecured wholesale funding**	**6,227**	**6,059**	**6,037**	**5,962**	**2,357**	**2,263**	**2,262**	**2,198**
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	3,674	3,733	3,756	3,793	872	889	896	907
7	Non-operational deposits (all counterparties)	2,528	2,293	2,226	2,117	1,460	1,341	1,311	1,239
8	Unsecured debt	25	33	55	52	25	33	55	52
9	**Secured wholesale funding**					**–**	**–**	**–**	**–**
10	**Additional requirements**	**1,447**	**1,334**	**1,210**	**1,191**	**479**	**449**	**414**	**392**
11	Outflows related to derivative exposures and other collateral requirements	292	287	280	272	282	278	272	265
12	Outflows related to loss of funding on debt products	8	11	10	9	8	11	10	9
13	Credit and liquidity facilities	1,147	1,036	920	910	189	160	132	118
14	**Other contractual funding obligations**	**68**	**84**	**84**	**100**	**46**	**62**	**61**	**77**
15	**Other contingent funding obligations**	**1,042**	**961**	**1,007**	**850**	**100**	**111**	**124**	**119**
16	**Total cash outflows**					**3,226**	**3,133**	**3,117**	**3,052**
Cash inflows									
17	Secured lending (e.g. reverse repos)	2	127	131	129	–	6	6	6
18	Inflows from derecognised items	632	524	438	410	342	352	308	291
19	Other cash inflows	27	61	110	133	27	61	110	133
EU-19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)					–	–	–	–
EU-19b	(Excess inflows from a related specialised credit institution)					–	–	–	–
20	**Total cash inflows**	**661**	**712**	**679**	**672**	**369**	**419**	**424**	**430**
EU-20a	Fully exempt inflows	–	–	–	–	–	–	–	–
EU-20b	Inflows subject to a 90 % cap	–	–	–	–	–	–	–	–
EU-20c	Inflows subject to a 75 % cap	661	712	678	672	369	418	424	429
						Adjusted total value			
21	**Liquidity buffer**					**6,617**	**6,503**	**6,765**	**6,909**
22	**Total net cash outflows**					**2,858**	**2,715**	**2,694**	**2,622**
23	**Liquidity Coverage Ratio (%)**[1]					**233.65**	**240.46**	**252.62**	**264.87**

[1] To date, the Liquidity Coverage Ratio (LCR) was disclosed as the ratio of the input parameters "liquidity buffer" and "total net cash outflows", both determined on the basis of average figures. Since EBA guidelines EBA/GL/2017/01 require that LCR figures be disclosed as the average value of the previous 12 months, we have retrospectively corrected the LCR.

The LCR at Group level exceeded 150 % on the reporting days during the period under review. The main reason is the high volume of High Quality Liquid Assets (HQLA). The HQLA predominantly comprise the asset class "public-sector borrowers" and deposits with central banks.

Please see the Annual Report[1] for further information on the composition of the HQLA. Customer deposits from the housing industry, which represent a strategically important source of funding, are the main component of cash outflow.

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 2020, the largest foreign currency portfolio in USD amounts to 1.52 % 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 2020, the annual average of additional liquidity requirements stood at € 240 million.

Operational Risks

The Bank defines operational risks as the threat of losses caused by inadequate or failed internal procedures, systems and human resources, or through external events. This definition also includes legal risks. To the extent that they are caused by operational risks, other non-financial risks (such as project management and reputational risks) are also taken into consideration within this type of risk. Systemic risks (or their impact on operational risks) are not affected by this.

Ultimately, in contrast to other risk types, operational risks always represent the disruption of the production process. If the components of the production process change, the situation as regards operational risks within the company changes as well.

The Non-Financial Risk division is responsible for the central coordination of all aspects related to controlling operational risks, including the authority to select methods for identifying and monitoring of risks and loss events. Concerning risk reporting, for which the Risk Controlling division is responsible, the two divisions cooperate closely.

[1] Aareal Bank Group 2020 Annual Report: chapter "Treasury portfolio", page 86, in the "Report on the Economic Position" of the Group Management Report

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 scope of monitoring the risks associated with information and communications technology (ICT risks), the increasing exposure to cyber risks is taken into account and results in respective protective measures.

The insights described herein result in a conscious and rigorous risk strategy in connection with the treatment of operational risks. Within the framework of this 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.

Instruments used to control operational risks

Operational risks and the resulting loss events are systematically identified, assessed, monitored and addressed, if necessary, using controlling measures within Aareal Bank under the framework of a regular cycle. Operational risk is managed via the instruments of self-assessment, risk inventories (risk identification and monitoring), maintaining and monitoring a loss database, stress testing as well as via indicators of operational risk.

Within the self-assessment framework, a survey on operational risk is carried out annually, using an anonymised questionnaire. Within the scope of risk inventories, the relevant material risks the various divisions are exposed to are regularly identified and monitored. An inventory of losses incurred is created in the loss database, in accordance with applicable recording rules, and losses are monitored in this way.

Suitable and plausible stress tests are conducted in the context of operational risks. These comprise historical as well as hypothetical scenarios and sensitivity analyses on the risk inventories and/or loss events. The results of the stress tests are reported regularly to the Management Board and serve as an indicator for potential developments within the risk type "Operational risks" that could jeopardise the continued existence of the Group.

In addition, potential operational risks are identified at an early stage as part of the regular risk reporting using defined operational risk indicators (e.g. number of BCP-relevant disruptions, lost working hours due to illness, etc.).

Annual backtesting is performed for the risks as part of risk identification and risk monitoring. This involves determining the relation between loss events expected from individual risks and reported incidents of such loss events. Based on the results from backtesting, adjustments are made to the controlling instruments used to manage operational risks.

Regulatory assessment

As a rule, the capital charge for the Group's operational risks is calculated according to the so-called "Standardised Approach" (STA) 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 "commercial banking" business line accounts for 97.4 % of the relevant indicator.

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).

For details regarding capital requirements attributable to operational risk, please refer to the overview of capital requirements for all types of risk within the Regulatory Capital Requirements chapter (page 23).

Investment Risks

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. Please refer to the Annual Report for information on risk measurement and risk monitoring.[2)]

1) Due to the fact that the CRR does not provide for a separate adequate business line for the Consulting/Services Bank 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).

2) Aareal Bank Group 2020 Annual Report: chapter "Investment risks" (here: "Risk measurement and monitoring") in the Risk Report of the Group Management Report, page 112.

Investment risk strategy

Aareal Bank Group acquires equity investments strictly for the purpose of positioning the Group as a "leading provider of financing solutions and services, with a focus on the property industry". While the standard banking risks mainly exist within Aareal Bank AG and the equity investments in banks, the other subsidiaries are frequently exposed to other risks. Due to their special character, these risks cannot be measured and managed using the same methods and processes. These risks are centralised in a separate risk category called "Investment risks" and included in the centralised risk management system through an investment risk controlling concept.

In general, all types of investments contribute to investment risk. The main focus of investment risk controlling, however, is on operating non-bank shareholdings, since these companies have business models different from that of Aareal Bank AG. The statistical methods and procedures applied in the banking business – such as VaR models – are generally not suitable to assess the risks of these companies. For this reason, we pursue a qualitative approach for investment risk control which attempts to estimate the risk content on the basis of the balance sheet and income statement analyses conducted within the scope of investment risk controlling. The investments covered are classified into different risk classes. Each risk class has specific risk weightings, which are used to translate the carrying amount of the investment into a risk equivalent value. Based on this risk equivalent value, Risk Controlling monitors compliance with the limits for investment risks.

Based on the type, scope, complexity and risk level of an investment, processes should be set up for the early identification of risk potential and for controlling and monitoring these risks in accordance with the Minimum Requirements for Risk Management (MaRisk) and the CRR within the lending business.

This requirement is complied with through a risk-adequate investment controlling system within the framework of implementing the investment strategy (for which the Finance & Controlling division is responsible), where the different autonomy requirements of investments are accounted for.

The controlling philosophy of Aareal Bank Group defines to which extent the business activities of the investments are influenced, and who exercises this influence. The controlling philosophy also determines the structure for controlling equity investments. A distinction has to be made between a direct and indirect influence on the investments.

In case of a direct influence, information is requested proactively, and the Group's head office is involved in material business decisions. In case of an indirect influence, the investments have more discretion (autonomy) as regards business decisions.

Various mixtures are possible between these two extremes. The higher the significance of an investment, the higher the importance which is attached to regular reporting. In this context, it is – first and foremost – Investment Controlling that fulfils an information and control function. In addition, specific support provided for individual investments may be one of the tasks within the management framework of the equity investments.

Moreover, risk management and monitoring are subject to various reviews. Pursuant to the MaRisk and the CRR, risks from investments have to be included as part of Aareal Bank AG's overall risk reporting. For this purpose, the investment risks are determined and assessed by the Finance & Controlling division.

The Risk Controlling (RCO) division reports to the Management Board as regards investment risks within the scope of the ICAAP, as part of regular risk reporting, also on a quarterly basis.

In our business model, we make a distinction between the segments Structured Property Financing, Consulting/Services Bank[1], and Aareon. Our equity investments reflect the medium- to long-term strategic objectives of our business model.

Structured Property Financing

- We enter into strategic investments to support our property financing activities, particularly abroad.
- Special-purpose entities within the scope of foreclosed assets are used to secure real property liens.

Consulting/Services Bank

- Strategic investments allow us to offer the housing and commercial property industries plus the German utilities and waste disposal industries, services and products for managing residential property portfolios and processing payment flows.
- Investments in companies that provide the Group and third parties with other property or IT services.

Aareon

- Strategic investments in Europe strengthen the position of Aareon as a leading consultancy and IT systems house for the European property industry.
- Investments in enterprises supporting the digital transformation process, and providing ERP software and digital solutions for the European property sector and its partners in Europe.

Regulatory assessment

The statements below exclusively refer to investments that are not part of the regulatory scope of consolidation and are therefore included as risk-weighted assets in the report pursuant to sections 10, 10a of the KWG.

From a regulatory perspective, all investments of Aareal Bank AG are covered by the Advanced IRB Approach. The Simple Risk Weight Approach, pursuant to Article 155 of the CRR, is used for the determination of the risk-weighted exposure amounts.

Measurement and accounting policies

Aareal Bank AG includes the majority of the companies covered in its IFRS consolidated financial statements (full consolidation), if the Bank directly or indirectly controls a company.

Companies over which Aareal Bank AG may exercise a significant influence ("associates") as well as companies under joint control (joint ventures) are measured using the equity method, and are reported in the balance sheet item "Investments accounted for using the equity method".

[1] The name of the former Consulting/Services Bank segment was changed to Banking & Digital Solutions at the turn of the year, as part of the strategic review.

Investments not consolidated in accordance with IFRSs in which the Bank does not acquire a controlling influence are allocated to the measurement category “Fair value through other comprehensive income (fvoci)” or “Fair value through profit or loss (fvpl)”, and reported in the respective balance sheet item “Equity instruments fvoci” or “Equity instruments fvpl”. Further investments which are outside the regulatory scope of consolidation have been allocated to the “at equity” measurement category since 28 December 2020, and are reported in the “Investments accounted for using the equity method” line item.

Further information on measurement and accounting principles applied to investments is provided in our Annual Report.[1)]

Valuations for disclosure

The following table shows aggregate investments in relation to their strategic objective, excluding investments consolidated for regulatory purposes.

The overview compares the carrying amounts with fair values.

€ mn	Carrying amount	Fair value
Structured Property Financing	**40**	**40**
of which: listed investments	0	0
of which: other equity investments	40	40
Consulting/Services Bank	**1**	**1**
of which: listed investments	–	–
of which: other equity investments	1	1
Aareon	**141**	**141**
of which: listed investments	–	–
of which: other equity investments	141	141

Table EU CR10 in the Regulatory Capital Requirements chapter provides an overview of the breakdown of investments across risk weights, using the simple risk weight method, pursuant to Article 155 (2) of the CRR, as well as of the respective IRBA risk exposure value and RWA.

Effects from remeasurements of investments

The effects from fvoci investments included as at the disclosure date within the scope of the RWA calculation, amounting to € -4 million, are reported in the reserve from the measurement of equity instruments (fvoci) and included in Common Equity Tier 1 (CET1) capital. Furthermore, the effects from investments at fvpl (€ 16 million) and of investments accounted for using the equity method (€ 8 million) are also included in CET1 via the allocation of income.

[1)] Aareal Bank Group 2020 Annual Report: chapter ”Accounting policies“, Notes (3) and (17) in the Notes to the consolidated financial statements, pages 176 et seqq. and pages 188 et seqq.

Results from the disposal of investments

A 30 % minority stake in Aareon AG was sold to financial investor Advent International in the second half of the year. The profit after taxes of € 183 million generated through the disposal was included in CET1 capital as part of determining regulatory capital.

Market Risks

Market price risk is broadly defined as the threat of losses due to changes in market parameters. Aareal Bank's market risk exposure predominantly comprises interest rate risks. Currency risks are largely eliminated through hedges. Hence, the primary market price risk exposures are related to the risk parameters for interest rates, equity prices, and exchange rates.

Risk Controlling uses appropriate methods and tools for the measurement and analysis of market risks. Up-to-date reporting to management on the Group's risk profile provides decisive input for all short-, medium- and long-term investment decisions. Value-at-risk (VaR) has established itself as the method for measuring general market price risk. This concept, as well as stress testing and sensitivity analysis used as further methods to measure market risks, are described in detail in the Annual Report[1)].

Risk management, especially with regard to market risks (comprising interest rate risk in the banking book, credit spread risks, exchange rate risks, trading book risks, as well as other market risks) 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 (CRO), as well as the heads of Risk Controlling, Finance & Controlling and Regulatory Affairs as voting members.

Further information on the aforementioned market risks can be found in the Annual Report.

Market risk strategy

Our exposure to the capital market is based on a responsible and sustained 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.

[1)] Aareal Bank Group 2020 Annual Report, chapter "Market risks" in the Risk Report of the Group Management Report, pages 109 et seqq.

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, other commodities and 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 as well as investments in foreign currencies.

Regulatory capital requirements for market risk in the standardised approach

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 following overview shows the regulatory capital requirements for the different market risk positions in accordance with Article 92 (3) lit. c) of the CRR:

EU MR1: Market risk under the standardised approach

€ mn		a RWAs	b Regulatory capital requirements
	Outright products		
1	Interest rate risk (general and specific)	–	–
2	Equity risk (general and specific)	–	–
3	Foreign exchange risk	87	7
4	Commodity risk	–	–
	Options		
5	Simplified approach	–	–
6	Delta-Plus method	–	–
7	Scenario approach	–	–
8	**Securitisation (specific risk)**	–	–
9	**Total**	**87**	**7**

Interest rate risk in the banking book

Whilst the net interest position is calculated to determine regulatory capital requirements for market risk, the calculation of interest rate risks in the banking book does not impact on the capital representation for regulatory purposes.

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.

Qualitative and quantitative information pursuant to Article 448 of the CRR as regards the exposure to interest rate risk on positions in the banking book are fully disclosed in the Risk Report.[1]

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 information provided below is based on the requirements in accordance with Article 443 of the CRR in connection with Delegated Regulation (EU) 2017/2295 of 4 September 2017 and the corresponding reporting forms. Quantitative details are disclosed using median values of data reported to supervisory authorities in the year under review, on a quarterly basis.

Assets

€ mn		Carrying amount of encumbered assets		Fair value of encumbered assets	
			of which: assets eligible for classification as EHQLA or HQLA on an unencumbered basis		of which: assets eligible for classification as EHQLA or HQLA on an unencumbered basis
		010	030	040	050
010	**Assets of the reporting institution**	**20,666**	**3,873**		
030	Equity instruments	–	–	–	–
040	Debt securities	3,969	3,873	3,895	3,799
050	of which: covered bonds	44	44	44	44
060	of which: securitisations	–	–	–	–
070	of which: issued by sovereign governments	2,964	2,964	2,887	2,887
080	of which: issued by financial institutions	1,005	909	1,008	912
090	of which: issued by non-financial institutions	–	–	–	–
120	Other assets	16,595	–		

[1] Aareal Bank Group 2020 Annual Report: chapter "Interest rate risk in the banking book" in the Risk Report of the Group Management Report, pages 107 et seqq.

€ mn		Carrying amount of unencumbered assets		Fair value of unencumbered assets	
			of which: EHQLA and HGLA		of which: EHQLA and HGLA
		060	080	090	100
010	**Assets of the reporting institution**	**23,756**	**7,363**		
030	Equity instruments	53	–	221	–
040	Debt securities	2,861	2,802	2,961	2,800
050	of which: covered bonds	–	–	–	–
060	of which: securitisations	–	–	–	–
070	of which: issued by sovereign governments	2,182	2,182	2,180	2,180
080	of which: issued by financial institutions	679	615	682	614
090	of which: issued by non-financial institutions	2	–	2	–
120	Other assets	21,243	4,387		

Collateral received

€ 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: assets eligible for classification as EHQLA or HQLA on an unencumbered basis		of which: EHQLA and HQLA
		010	030	040	060
130	**Collateral received by the reporting institution**	**–**	**–**	**25**	**25**
140	Loans on demand	–	–	–	–
150	Equity instruments	–	–	–	–
160	Debt securities	–	–	25	25
170	of which: covered bonds	–	–	–	–
180	of which: securitisations	–	–	–	–
190	of which: issued by sovereign governments	–	–	–	–
200	of which: issued by financial institutions	–	–	25	25
210	of which: issued by non-financial institutions	–	–	–	–
220	Loans and advances other than loans on demand	–	–	–	–
230	Other collateral received		–	–	–
231	of which: …	–	–	–	–
240	**Own debt securities issued other than own covered bonds or asset-backed securities**	**–**	**–**	**–**	**–**
241	**Own covered bonds and asset-backed securities issued and not yet pledged**			**192**	**–**
250	**Total assets, collateral received and own debt securities issued**	**20,666**	**3,873**		

Encumbered assets/collateral received and associated liabilities

€ mn		Matching liabilities, contingent liabilities or securities lent	Encumbered assets, collateral received and own debt securities issued other than covered bonds and asset-backed securities
		010	030
010	Carrying amount of selected financial liabilities	19,057	20,535

Information on importance of encumbrance

Aareal Bank determines the encumbrance of assets in accordance with Implementation Regulation (EU) 2015/79. Material sources of encumbrance of assets as at 31 December 2020 included debt securities issued (cover assets pool) as well as the derivatives business (plus, in some cases, securities repo transactions). For the first time, deposit-taking business (open-market transactions) needed to be classified as a material source of encumbrance of assets as at 30 June 2020. Aareal Bank Group issues Pfandbriefe (German covered bonds) which are collateralised with receivables and securities. As at 31 December 2020, the cover assets pools held for issuance of its own bonds accounted for encumbrance of assets in a total amount of € 13.1 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 2020, unencumbered other assets included approximately € 3.3 billion in assets which cannot be encumbered within the scope of current business operations. This included € 2.2 billion in hedging derivatives and financial assets held for trading. The remainder of € 1.1 billion were largely related to other properties accounted for in accordance with IAS 2 (€ 0.33 billion), as well as to tax re-claims and deferred tax assets (€ 0.28 billion).

Remuneration

Both the remuneration policy disclosure requirements pursuant to Article 450 of the CRR and the disclosures regarding the remuneration of the members of the Management Board and the Supervisory Board have been published in the Annual Report[1] for the previous financial year.

The additional quantitative disclosures on the remuneration of all risk takers and employees will be disclosed by the end of June 2021, on Aareal Bank AG's homepage.

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, one month prior to the end of each quarter. In this context, the minimum 3 % Leverage Ratio, as set out in the framework published by the Basel Committee on Banking Supervision in 2014, 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 Delegated Regulation (EU) 2015/62. The following disclosure tables are based on the requirements set out in the Implementation Regulation (EU) 2016/200 dated 15 February 2016.

LRSum: Summary reconciliation of accounting assets and leverage ratio exposures

€ mn		Applicable amount
1	**Total assets as per published financial statements**	**45,478**
2	Adjustment for entities which are consolidated for accounting purposes but are outside the regulatory scope of consolidation	294
3	(Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio total exposure measure in accordance with Article 429 (13) of Regulation (EU) 575/2013)	–
4	Adjustments for derivative financial instruments	-2,168
5	Adjustments for securities financing transactions (SFTs)	–
6	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	496
EU-6a	(Adjustment for intra-group exposures excluded from the leverage ratio total exposure measure in accordance with Article 429 (7) of Regulation (EU) 575/2013)	–
EU-6b	(Adjustment for exposures excluded from the leverage ratio total exposure measure in accordance with Article 429 (14) of Regulation (EU) 575/2013)	–
7	Other adjustments	-523
8	**Leverage ratio total exposure measure**	**43,577**

[1] Aareal Bank Group 2020 Annual Report: "Remuneration Report" within the Group Management Report (pages 125 et seqq.).

LRCom: Leverage Ratio common disclosure

€ mn		CRR leverage ratio exposures
	On-balance sheet exposures (excluding derivatives and SFTs)	
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	43,174
2	(Asset amounts deducted in determining Tier 1 capital)	-41
3	**Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)**	**43,133**
	Derivative exposures	
4	Replacement cost associated with all derivatives transactions (i.e. net of eligible cash variation margin)	0
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	679
EU-5a	Exposure determined under Original Exposure Method	–
6	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	–
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	-730
8	(Exempted CCP leg of client-cleared trade exposures)	–
9	Adjusted effective notional amount of written credit derivatives	–
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	–
11	**Total derivatives exposures (sum of lines 4 to 10)**	**-51**
	SFT exposures	
12	Gross SFT assets (with no recognition of netting), after adjusting for transactions posted as sales	–
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	–
14	Counterparty credit risk exposure for SFT assets	–
EU-14a	Derogation for SFTs: counterparty credit risk exposure in accordance with Articles 429b (4) and 222 of Regulation (EU) 575/2013	–
15	Agent transaction exposures	–
EU-15a	(Exempted CCP leg of client-cleared SFT exposures)	–
16	**Total securities financing transaction exposures (sum of lines 12 to 15a)**	–
	Other off-balance sheet exposures	
17	Off-balance sheet exposures at gross notional amount	1,303
18	(Adjustments for conversion to credit equivalent amounts)	-807
19	**Other off-balance sheet exposures (sum of lines 17 and 18)**	**496**
	Exempted exposures in accordance with Article 429 (7) and (14) of Regulation (EU) 575/2013 (on- and off-balance sheet)	
EU-19a	(Intra-group exposures (solo basis) exempted in accordance with Article 429 (7) of Regulation (EU) 575/2013 (on- and off-balance sheet))	–
EU-19b	Exempted exposures in accordance with Article 429 (7) and (14) of Regulation (EU) 575/2013 (on- and off-balance sheet)	–
	Capital and total exposure measure	
20	**Tier 1 capital**	**2,586**
21	**Leverage ratio total exposure measure (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)**	**43,577**
	Leverage ratio	
22	Leverage ratio	5.93 %
	Choice on transitional arrangements and amount of derecognised fiduciary items	
EU-23	Choice on transitional arrangements for the definition of the capital measure	Fully implemented
EU-24	Amount of derecognised fiduciary items in accordance with Article 429 (11) of Regulation (EU) 575/2013	–

The Leverage Ratio declined to 5.9 %, compared to 6.0 % on the disclosure date of 30 September 2020, reflecting a marked increase in the total exposure measure, resulting from the expansion in the commercial property finance portfolio. This effect was mitigated by an offsetting increase in Tier I capital. Regarding the causes of Tier I capital changes, reference is made to the explanations in the chapter "Disclosure of own funds".

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

LRSpl: Split-up of on-balance sheet exposures

€ mn		CRR leverage ratio exposures
EU-1	**Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:**	**42,444**
EU-2	Trading book exposures	
EU-3	Banking book exposures, of which:	42,444
EU-4	Covered bonds	75
EU-5	Exposures treated as sovereigns	13,609
EU-6	Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	136
EU-7	Institutions	465
EU-8	Secured by mortgages on immovable properties	25,290
EU-9	Retail exposures	25
EU-10	Corporate	838
EU-11	Exposures in default	1,171
EU-12	Other exposures (e.g. equity, securitisations, and other non-credit obligation assets)	835

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