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2018

Regulatory Disclosure Report H1 2018 of Aareal Bank Group

Aareal Bank Group

Regulatory Disclosure Report – H1 2018

Preface

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).

The European Banking Authority (EBA) published the final draft guidelines on disclosure requirements under part 8 of Regulation (EU) 575/2013 (the Capital Requirements Regulation – "CRR") (EBA/GL/2016/11) on 14 December 2016. These substantiate the existing disclosure requirements of the CRR.

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 disclosure report comprises all information that has to be disclosed on a half-yearly basis, the scope of which is oriented upon the guidelines EBA/GL/2016/11, in conjunction with the revised guidelines on materiality, proprietary activity and confidentiality, and on disclosure frequency (EBA/GL/2014/14). For this reason, this report does not contain any references to other publications of Aareal Bank.

Aareal Bank complies with the requirements of parts 2, 3 and 7 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. Aareal Bank AG, whose registered office is in Wiesbaden, Germany, is the parent institution of the Group.

The details we have published in this condensed disclosure report are based on both the Credit Risk Standard Approach (CRSA) and the Advanced IRB Approach (Advanced Internal Ratings-Based Approach – AIRBA).

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

Aareal Bank does not apply the transitional provisions, pursuant to Article 473a of the CRR, to mitigate the impact of the introduction of IFRS 9 on regulatory capital requirements. Accordingly, the obligation to provide additional disclosures (as specified in detail in EBA guidelines EBA/GL/2018/01) is waived.

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 half-yearly financial report for 2018 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 and adjustments to the Group's regulatory capital on the other hand.

The disclosures in this report are based on the binding provisions for the implementation of disclosure requirements set out in 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 published on our website is limited to a description of the issued capital instruments. Shares as well as reserves attributable to Common Equity Tier I capital are not considered since they are covered in position I of the table under section „Disclosure of own funds".

In addition to the overview of the issued capital instruments' main features, 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 1 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 30 June 2018	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 section 26 (3)
2	Retained earnings	1,501	26 (1) (c)
3	Accumulated other comprehensive income (and other reserves designated to account for unrealised gains and losses according to applicable accounting standards)	-79	26 (1)
3a	Funds for general banking risks	–	26 (1) (f)
4	Amount of qualifying items referred to in Art. 484 (3) and the related share premium accounts subject to phase out from CET1	–	486 (2)

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€ mn		Amount as at 30 June 2018	Regulation (EU) No 575/2013 – reference to Article(s)
5	Minority interests (amount allowed in consolidated CET1)	–	84
5a	Independently reviewed interim profits net of any foreseeable charge or dividend	–	26 (2)
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	**2,323**	
	Common Equity Tier 1 (CET1) capital: regulatory adjustments		
7	Additional value adjustments (negative amount)	-9	34, 105
8	Intangible assets (net of related tax liability) (negative amount)	-21	36 (1) (b), 37
9	Empty set in the EU	–	
10	Deferred tax assets dependant on future profitability, except for items arising from temporary differences (net of related tax liability where the conditions of Article 38 (3) are met) (negative amount)	-5	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	-7	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) bis (3), 79
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 bis 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 arising 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	Amount of items required to be deducted from Additional Tier 1 items exceeding the Additional Tier 1 capital of the institution (negative amount)	–	36 (1) (j)

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€ mn		Amount as at 30 June 2018	Regulation (EU) No 575/2013 – reference to Article(s)
	Deductions pursuant to Art. 3 of the CRR	-95	
	Components of, or deductions with respect to, Common Equity Tier 1 capital	-71	
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1) capital**	**-208**	
29	**Common Equity Tier 1 (CET1) capital**	**2,115**	
	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 Art. 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
41	Empty set in the EU	–	
42	Amount of items required to be deducted from Tier 2 items 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)**	**2,415**	
	Tier 2 (T2) capital: instruments and reserves		
46	Capital instruments and related share premium accounts	854	62, 63
47	Amount of qualifying items referred to in Art. 484 (5) and the related share premium accounts subject to phase out from T2	8	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	46	62 (c) and (d)
51	**Tier 2 (T2) capital before regulatory adjustments**	**908**	

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€ mn		Amount as at 30 June 2018	Regulation (EU) No 575/2013 – reference to Article(s)
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 asignificant 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	-5	
57	**Total regulatory adjustments to Tier 2 (T2) capital**	**-5**	
58	**Tier 2 (T2) capital**	**903**	
59	**Own funds (TC = T1 + T2)**	**3,318**	
60	**Total risk-weighted assets**	**10,615**	
Capital ratios and buffers			
61	Common Equity Tier 1 capital (as a percentage of total risk exposure amount)	19.93%	92 (2) (a)
62	Tier 1 capital (as a percentage of total risk exposure amount)	22.75%	92 (2) (b)
63	Total capital (as a percentage of total risk exposure amount)	31.26%	92 (2) (c)
64	Institution-specific buffer requirement (minimum CET1 ratio in accordance with Article 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer within the buffer for systemically important institutions (G-SII or O-SII), expressed as a percentage of total risk exposure amount)	6.434%	CRD 128, 129, 130, 131, 133
65	of which: capital conservation buffer requirement	1.875%	
66	of which: countercyclical capital buffer requirement	0.059%	
67	of which: systemic risk buffer requirement	–	
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)	15.43%	CRD 128

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€ mn		Amount as at 30 June 2018	Regulation (EU) No 575/2013 – reference to Article(s)
Amounts below thresholds for deductions (before risk weighting)			
72	Direct and indirect holdings of capital instruments of financial sector entities in which the institution does not have a significant investment (amount below 10% threshold and net of eligible short positions)	22	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 where the institution has a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	0	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 Art. 38 (3) are met)	103	(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	–	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)	80	62
79	Cap on inclusion of credit risk adjustments in Tier 2 under internal ratings-based approach	51	62
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2013 and 1 Jan 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	3	484 (5), 486 (4) and (5)
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	5	484 (5), 486 (4) and (5)

The capital ratios (CET1, T1 and TC ratio) increased compared to the previous disclosure date of 31 March 2018. Specifically, the €103 million decline in regulatory capital was more than offset by the simultaneous decline in risk-weighted assets (RWAs), by €849 million.

Besides quality improvements in the credit portfolio, the RWA decline was mainly due to the scheduled reduction of the non-strategic credit portfolio, for which the Bank applies the Credit Risk Standard Approach.

The decline in regulatory capital was largely due to a €85 million reduction of CET1 capital, which was in turn mainly attributable to higher deductions from loss allowance recognised during the course of the year, and to an increase in a regulatory capital buffer, which was recognised as a precautionary measure covering for any economic downturns potentially affecting our credit exposure to Southern Europe.

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	**1,657**	**1,520**	**1,501**
AT1 bond [1)]	**300**	**300**	**–**
Other reserves	**-61**	**-51**	**-79**
Reserve from remeasurements of defined benefit plans	-93	-84	-84
Reserve from the measurement of debt instruments (fvoci)	49	49	24
Reserve from changes in the value of foreign currency basis spreads	-11	-11	-11
Currency translation reserve	-6	-5	-8
Non-controlling interests	**1**	**–**	**–**
Common Equity Tier 1 (CET1) capital before regulatory adjustments	**2,798**	**2,669**	**2,323**
Regulatory adjustments	**–**	**–**	**-208**
Amounts to be deducted	**-77**	**-20**	**-32**
Intangible assets	-153	-20	-20
Goodwill	-85	-6	-6
Other intangible assets	-68	-14	-14
Deferred tax assets that rely on future profitability not resulting from temp. differences	–	–	-5
IRB deficit (non-defaulted exposures)	–	–	-7
Qualified investment outside the financial sector (alternative risk weighting 1,250%)	–	–	–
Deductible deferred tax assets that rely on future profitability and resulting from temp. differences	–	–	–
Prudential filters	**–**	**–**	**-9**
Hedging reserve	–	–	–
Prudent valuation allowances	–	–	-9
Deductions pursuant to Art. 3 of the CRR	**–**	**–**	**-95**
Components of, or deductions with respect to, Common Equity Tier 1 capital	**–**	**–**	**-71**
Common Equity Tier 1 (CET1) capital	**–**	**–**	**2,115**
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)	–	–	–

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
Additional Tier 1 (AT1) capital	**–**	**–**	**300**
Tier 1 capital (T1)	**–**	**–**	**2,415**
Capital instruments and subordinated loans eligible as Tier 2 capital	**984**	**1,036**	**854**
Subordinated liabilities	984	1,036	854
Non-controlling interests	-	–	–
Contributions by silent partners	-	–	–
T2 capital instruments with grandfathering rights	**64**	**64**	**3**
Subordinated liabilities	52	52	3
Profit-participation certificates	12	12	0
Amounts to be deducted	**–**	**–**	**–**
IRB deficit (non-defaulted exposures)	–	–	–
IRB surplus (defaulted exposures)	**–**	**–**	**46**
Tier 2 capital (T2)	**–**	**–**	**903**
Total capital (TC)	**–**	**–**	**3,318**

Regulatory capital requirements

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 (EaD)

and, under the AIRBA, additionally depends on

3. the probability of default,
4. the loss given default, and
5. the credit conversion factor.

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 30 June 2018, no risks associated with outstanding delivery as part of counterparty risks had to be taken into account when determining counterparty usage limits.

Aareal Bank complied with minimum regulatory capital requirements, pursuant to the Basel I floor under the CRSA, as at 30 June 2018. Hence, there were no resulting adjustments to that floor (and the associated inclusion of additional risk-weighted positions (RWAs)).

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 (RWA)

€ mn		RWAs		Minimum capital requirements
		30 Jun 2018	31 Mar 2018	30 Jun 2018
1	**Credit risk (excluding CCR)**	**8,257**	**9,007**	661
2	Credit Risk Standard Approach (CRSA)	950	1,040	76
3	IRB Foundation Approach (FIRB)	–	–	–
4	Advanced IRB Approach (A-IRBA)	6,258	6,915	501
5	Equity IRB under the simple risk-weighted approach or the IMA	1,050	1,052	84
6	**CCR**	**566**	**609**	**45**
7	Mark to market	370	400	30
8	Original exposure	–	–	–
9	Standardised approach	–	–	–
10	Internal model method (IMM)	–	–	–
11	Risk exposure amount for contributions to default fund of a CCP	0	0	0
12	CVA	196	209	16
13	**Settlement risk**	**–**	**–**	**–**
14	**Securitisation exposures in the banking book (after the cap)**	**–**	**–**	**–**
15	IRB approach	–	-	–
16	IRB supervisory formula approach (SFA)	–	–	–
17	Internal assessment approach (IAA)	–	–	–
18	Standardised approach	–	–	–
19	**Market risk**	**124**	**180**	**10**
20	Standardised approach	124	180	10
21	IMA	–	–	–
22	**Large exposures**	**–**	**–**	**–**
23	**Operational risk**	**1,411**	**1,411**	**113**
24	Basic indicator approach	–	–	–
25	Standardised approach	1,411	1,411	113
26	Advanced measurement approach	–	–	–
27	**Amounts below the thresholds for deduction (subject to 250% risk weight)**	**257**	**257**	**21**
28	**Floor adjustment**	**–**	**–**	**–**
29	**Total**	**10,615**	**11,464**	**849**

Regarding the causes of RWA changes during the second quarter of 2018, 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.

Aareal Bank held no specialised lending in its portfolio as at the current disclosure date. Given a more differentiated interpretation applied by the ECB, we are currently reviewing the classification of IRBA exposures classified as "specialised lending" pursuant to Article 147 (8) of the CRR, and will adjust this if necessary.

EU CR10: IRB (specialised lending and equities)

Regulatory categories	Remaining maturity	Specialised lending					
		On-balance-sheet amount	Off-balance-sheet amount	Risk weighting	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 weighting	Exposure at Default	RWAs	Regulatory capital requirements
€ mn						
Private equity exposures	–	–	190 %	–	–	–
Exchange-traded equity exposures	0	–	290 %	0	0	0
Other equity exposures	284	–	370 %	284	1,050	84
Total	**284**	**–**		**284**	**1,050**	**84**

The regulatory capital requirements set out in table EU OV1 for the market risks under the standardised approach are also disclosed in the table EU MR1 for the various 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		
Interest rate risk (general and specific)	–	–
Equity risk (general and specific)	–	–
Foreign exchange risk	124	10
Commodity risk	–	–
Options		
Simplified approach	–	–
Delta-Plus method	–	–
Scenario approach	–	–
Securitisation (specific risk)	–	–
Total	**124**	**10**

Credit risks and quantitative 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.

The following chapters are limited to purely quantitative information on credit risk, with different levels of detail.

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.

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. For details concerning the recognition of loss allowance, based on the Bank's internal staging and expected credit loss model, please refer to the explanations in Aareal Bank Group's half-yearly financial report for 2018.[1]

[1] Chapter „Loss allowance", page 53

Uncollectable (residual) receivables are written off against loss allowance recognised previously. 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 loss allowance 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
€ 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)
2	Institutions	–	1,286	0	–	–	0	**1,285**
3	Corporates	1,564	24,562	518	–	79	20	**25,608**
4	of which: specialised lending	–	–	–	–	–	–	**–**
5	of which: SMEs	1,258	15,479	411	–	65	17	**16,326**
14	Equity	–	284	–	–	–	–	**284**
	Other non-credit obligation assets	–	642	–	–	–	–	**642**
15	**Total IRB approach**	**1,564**	**26,774**	**518**	**–**	**79**	**20**	**27,819**
16	Central governments or central banks	–	4,358	17	–	–	-1	**4,341**
17	Regional governments and similar entities	–	3,741	0	–	–	0	**3,741**
18	Other public sector entities	–	1,899	0	–	–	0	**1,899**
19	Multilateral development banks	–	259	–	–	–	-	**259**
20	International organisations	–	448	0	–	–	0	**448**
21	Institutions	–	–	–	–	–	-	**–**
22	Corporates	2	468	2	–	–	0	**467**
23	of which: SMEs	1	319	2	–	–	0	**318**
24	Retail	4	232	2	–	–	0	**235**
25	of which: SMEs	–	–	–	–	–	–	**–**
26	Secured by mortgages on immovable property	1	1,047	2	–	–	0	**1,045**
27	of which: SMEs	–	329	0	–	–	0	**329**
28	Exposures in default	7	–	1	–	–	–	**6**
29	Items associated with particularly high risk	–	–	–	–	–	–	**–**
30	Covered bonds	–	–	–	–	–	–	**–**
31	Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	**–**
32	Collective investment undertakings	–	–	–	–	–	–	**–**
33	Equity exposures	–	–	–	–	–	–	**–**

>

€ 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)
34	Other exposures	–	–	–	–	–	–	**–**
35	**Total standardised approach**	**7**	**12,452**	**24**	**–**	**–**	**-1**	**12,436**
36	**Total**	**1,571**	**39,226**	**543**	**–**	**79**	**19**	**40,254**
37	of which: Loans	1,481	28,755	522	–	79	19	**29,714**
38	of which: Debt securities	–	8,134	18	–	–	–	**8,116**
39	of which: Off-balance sheet exposures	90	1,403	3	–	–	–	**1,490**

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, published in January 2018, 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.

Aareal Bank monitors the borrower groups by assigning counterparties to four groups in the table EU CR1-B, using the industry codes defined by Deutsche Bundesbank. Besides equity investments, the "Other" borrower group includes all other sectors.

EU CR1-B: Credit quality of exposures by industry or counterparty types

€ 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)
1	Institutions	–	4,174	0	–	–	0	**4,174**
2	Public sector entities	–	7,881	18	–	–	-1	**7,863**
3	Corporates	1,567	26,503	522	–	79	20	**27,548**
4	Other	4	668	3	–	–	–	**669**
5	**Total**	**1,571**	**39,226**	**543**	**–**	**79**	**19**	**40,254**

The presented breakdown of the credit quality by major geographical markets in the table EU CR1-C is based on our three-continent strategy, which covers Europe, North America and Asia, as explained in our Annual Report 2017. The breakdown criterion used is the country the respective property used as collateral is located in. Furthermore, the "Others" item contains all exposures not assigned to a specific country.

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

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**	**28**	**12,559**	**13**	**–**	**0**	**0**	**12,574**
2	**Western Europe**	**102**	**10,720**	**24**	**–**	**15**	**-3**	**10,797**
	Austria	–	1,292	0	–	–	0	**1,292**
	Belgium	–	365	0	–	4	0	**365**
	Switzerland	–	315	0	–	–	0	**315**
	France	99	2,647	18	–	1	-1	**2,728**
	United Kingdom	–	4,974	3	–	–	1	**4,971**
	Netherlands	3	1,021	3	–	10	-3	**1,021**
	Other	–	106	0	–	–	0	**106**
3	**Northern Europe**	**324**	**1,103**	**67**	**–**	**2**	**2**	**1,360**
	Denmark	311	203	60	–	2	1	**454**
	Finland	13	412	7	–	0	1	**418**
	Sweden	–	483	0	–	–	0	**483**
	Other	–	5	0	–	–	–	**5**
4	**Southern Europe**	**1,049**	**4,692**	**399**	**–**	**59**	**25**	**5,342**
	Spain	62	1,009	38	–	0	0	**1,033**
	Italy	987	3,566	361	–	58	-25	**4,192**
	Other	–	117	0	–	–	–	**116**
5	**Eastern Europe**	**68**	**1,367**	**30**	**–**	**3**	**-2**	**1,405**
	Poland	–	756	1	–	–	0	**755**
	Russia	11	459	3	–	–	1	**466**
	Other	57	152	25	–	3	-3	**184**
6	**North America**	**–**	**7,675**	**9**	**–**	**–**	**1**	**7,666**
	Canada	–	746	1	–	–	0	**745**
	US	–	6,929	8	–	–	1	**6,921**
	Other	–	–	–	–	–	–	**–**
7	**Asia**	**–**	**404**	**1**	**–**	**–**	**0**	**403**
8	**Other**	**–**	**707**	**0**	**–**	**–**	**-3**	**707**
9	**Total**	**1,571**	**39,226**	**543**	**–**	**79**	**19**	**40,254**

Past-due exposures shown in table EU CR1-D are broken down across specified past-due maturity bands. In this context, the figures shown in column a) only relate to loans which are past due by more than nine days.

EU CR1-D: Ageing of past-due exposures

		a	b	c	d	e	f
		Gross carrying values					
		≤ 30 days	> 30 days ≤ 60 days	> 60 days ≤ 90 days	> 90 days ≤ 180 days	> 180 days ≤ 1 year	> 1 year
€ mn							
1	Loans	81	0	30	1	1	593
2	Debt securities	–	–	–	–	–	–
3	**Total**	**81**	**0**	**30**	**1**	**1**	**593**

In the table EU CR1-E below, details on defaulted and past-due exposures shown in the preceding tables are supplemented by information on non-performing and forborne exposures, broken down by asset type.

Besides information on specific credit risk adjustments, columns h) to k) of table EU CR1-E also require disclosure of negative fair value adjustments due to credit risk. The limitation to negative changes in counterparty 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. In its disclosure, the Bank is guided by the specifications for Financial Reporting (FINREP).

EU CR1-E: Non-performing and forborne exposures

		a	b	c	d	e	f	g	h	i	j	k	l	m
		Gross carrying values of performing and non-performing exposures							Accumulated impairment and provisions and negative fair value adjustments due to credit risk				Collateral and financial guarantees received	
			of which performing but past due > 30 days and <= 90 days	of which performing, forborne	of which non-performing				On performing exposures		On non-performing exposures		On non-performing exposures	of which forborne
						of which defaulted	of which impaired	of which forborne		of which forborne		of which forborne		
€ mn														
010	Debt securities	8.133	–	–	–	–	–	–	18	–	–	–	–	–
020	Loans and advances	30.236	30	265	1,481	1,481	1,431	850	62	23	435	280	1,239	726
030	Off-balance-sheet exposures	1.493	–	1	90	90	90	34	2	0	1	1	–	–

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

With effect from 1 January 2018, accounting standard IFRS 9 Financial Instruments replaced the previous standard IAS 39 Financial Instruments: Recognition and Measurement. As a consequence, the opening balance in table EU CR2-A is not identical to the closing balance reported as at 31 December 2017.

Aareal Bank Group's half-yearly financial report 2018 contains a reconciliation of allowance for credit losses in accordance with IAS 39 to loss allowance in accordance with IFRS 9[1].

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

€ mn		a Accumulated specific credit risk adjustment	b Accumulated general credit risk adjustment
1	**Opening balance (1 January)**	**593**	**–**
2	Increases due to amounts set aside for estimated loan losses during the period (additions)	55	–
3	Decreases due to amounts reversed for estimated loan losses during the period (reversals)	36	–
4	Decreases due to amounts taken against accumulated credit risk adjustments (utilisations)	73	–
5	Transfers between credit risk adjustments	–	–
6	Impact of exchange rate differences	-1	–
7	Business combinations, including acquisitions and disposals of subsidiaries	–	–
8	Other adjustments	3	–
9	**Closing balance (30 June)**	**543**	**–**
10	Recoveries on credit risk adjustments recorded directly to the statement of profit or loss (payments on loans and advances previously written off)	2	–
11	Specific credit risk adjustments directly recorded to the statement of profit or loss (direct write-offs)	–	–

With the following table, Aareal Bank has disclosed changes in the stock of defaulted and impaired loans and debt securities for the first time as at the reporting date at hand, in line with the requirements set out in the EBA Guidelines.

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.

Changes reported in line 5 largely result from the remeasurement of exposures in default.

[1] Chapter „First-time application of IFRS 9 Financial Instruments", page 48

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

€ mn		a Gross carrying amount defaulted exposures
1	**Opening balance (1 January)**	**1,742**
2	Loans and debt securities that have defaulted since the last reporting period	9
3	Returned to non-defaulted status	1
4	Amounts written off	73
5	Other changes	-106
6	**Closing balance (30 June)**	**1,571**

Credit risk mitigation

Collateral in the amount of €26,263 million was applied within the scope of credit risk mitigation. This figure comprises no financial collateral included for derivatives transactions.

The following table (p. 20) shows collateral for each exposure class considered under AIRBA and CRSA. The real property liens relevant for Aareal Bank as an international property specialist (96.7%) are disclosed in column c) along with the financial collateral – which, at Aareal Bank, mainly comprises pledged credit balances within the Bank – whereas warranties (sureties and guarantees) are disclosed in 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 – carrying amount	b Exposures secured – carrying amount	c Exposures secured by collateral	d Exposures secured by financial guarentees	e Exposures secured by credit derivatives
	Total IRB approach	**2,187**	**25,632**	**24,686**	**202**	–
	Institutions	562	723	–	175	–
	Corporates	699	24,909	24,686	27	–
	of which: SMEs	444	15,882	15,883	21	–
	Equity exposures	284	–	–	–	–
	Other non-credit related assets	642	–	–	–	–
	Total standardised approach	**10,955**	**1,480**	**1,047**	**328**	–
	Central governments or central banks	4,341	–	–	–	–
	Regional governments and similar entities	3,741	–	–	–	–
	Other public-sector entities	1,667	232	–	232	–
	Multilateral development banks	259	–	–	–	–
	International organisations	448	–	–	–	–
	Institutions	–	–	–	–	–
	Covered bonds	–	–	–	–	–
	Corporates	280	186	2	95	–
	of which: SMEs	184	133	–	78	–
	Retail	214	17	0	0	–
	of which: SMEs	–	–	–	–	–
	Secured by mortgages on immovable property	–	1,045	1,045	–	–
	of which: SMEs	–	329	329	–	–
	Collective investment undertakings (CIU)	–	–	–	–	–
	Equity exposures	–	–	–	–	–
	Other exposures	–	–	–	–	–
	Exposures in default	5	2	–	1	–
1	Total loans	3,907	25,807	23,954	115	–
2	Total debt securities	7,709	407	–	407	–
3	**Total**	**13,142**	**27,112**	**25,733**	**530**	–
4	of which: defaulted	49	1,376	1,236	3	–

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 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: Standardised 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	4,341	–	4,750	–	19	0.41
2	Regional governments and similar entities	3,741	0	3,816	–	269	7.06
3	Other public-sector entities	1,897	2	1,665	0	8	0.49
4	Multilateral development banks	259	–	259	–	–	–
5	International organisations	448	–	448	–	–	–
6	Institutions	–	–	19	–	10	49.70
7	Corporates	381	84	284	9	291	99.48
8	Retail	226	6	225	0	169	75.00
9	Secured by mortgages on immovable property	1,040	5	1,040	4	433	41.45
10	Exposures in default	6	0	5	0	7	137.72
11	Items associated with particularly high risk	–	–	–	–	–	–
12	Covered bonds	–	–	–	–	–	–
13	Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–	–
14	Collective investment undertakings (CIU)	–	–	–	–	–	–
15	Equity exposures	–	–	–	–	–	–
16	Other exposures	–	–	–	–	–	–
17	**Total**	**12,339**	**97**	**12,512**	**14**	**1,207**	**9.63**

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: Standardised approach (after credit risk mitigation)

Exposure classes	Risk weight																	
€ mn	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Others	Deducted	Total	of which unrated
1 Central governments or central banks	4,542	–	139	–	70	–	–	–	–	–	–	–	–	–	–	–	**4,750**	4,525
2 Regional governments and similar entities	3,649	–	–	–	65	–	–	–	–	–	–	103	–	–	–	–	**3,816**	3,768
3 Other public-sector entities	1,625	–	–	–	41	–	–	–	–	–	–	–	–	–	–	–	**1,666**	1,625
4 Multilateral development banks	259	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**259**	259
5 International organisations	448	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**448**	448
6 Institutions	–	–	–	–	0	–	19	–	–	–	–	–	–	–	–	–	**19**	–
7 Corporates	–	–	–	–	–	–	–	–	–	292	–	–	–	–	–	–	**292**	292
8 Retail	–	–	–	–	–	–	–	–	225	–	–	–	–	–	–	–	**225**	225
9 Secured by mortgages on immovable property	–	–	–	–	–	583	461	–	–	–	–	–	–	–	–	–	**1,044**	1,044
10 Exposures in default	–	–	–	–	–	–	–	–	–	1	4	–	–	–	–	–	**5**	5
11 Exposures associated with particularly high risk	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
12 Covered bonds	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
13 Institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
14 Collective investment undertakings (CIU)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
15 Equity	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
16 Other items	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**	–
17 Total	**10,522**	**–**	**139**	**–**	**175**	**583**	**480**	**–**	**225**	**293**	**4**	**103**	**–**	**–**	**–**	**–**	**12,525**	**12,209**

To facilitate comparison with the disclosure record date of 31 December 2017, the following table provides an additional disclosure of exposure values under the CRSA, before credit risk mitigation in accordance with Article 444 lit. e) of the CRR. The Bank does not provide additional disclosure of unrated risk exposures since the Article referred to above does not require such disclosure.

EU CR5: Standardised approach (before credit risk mitigation)

Exposure classes	Risk weight															
	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Other	Total
€ mn																
1 Central governments or central banks	4,203	–	139	–	–	–	–	–	–	–	–	–	–	–	–	**4,341**
2 Regional governments and similar entities	3,574	–	–	–	65	–	–	–	–	–	–	103	–	–	–	**3,741**
3 Other public-sector entities	1,625	–	–	–	239	–	35	–	–	–	–	–	–	–	–	**1,899**
4 Multilateral development banks	259	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**259**
5 International organisations	448	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**448**
6 Institutions	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**
7 Corporates	–	–	–	–	–	–	2	–	–	461	–	–	–	–	2	**466**
8 Retail	–	–	–	–	–	–	–	–	231	–	–	–	–	–	–	**231**
9 Secured by mortgages on immovable property	–	–	–	–	–	583	461	–	–	–	–	–	–	–	–	**1,044**
10 Exposures in default	–	–	–	–	–	–	–	–	–	1	5	–	–	–	–	**6**
11 Exposures associated with particularly high risk	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**
12 Covered bonds	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**
13 Institutions and corporates with short-term credit assessment	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**
14 Collective investment undertakings (CIU)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**
15 Equity	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**
16 Other items	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**–**
17 Total	**10,108**	**–**	**139**	**–**	**304**	**583**	**498**	**–**	**231**	**463**	**5**	**103**	**–**	**–**	**2**	**12,436**

Advanced IRB Approach (AIRBA)

The property lending portfolio and portfolio of exposures to banks (treated under the AIRBA) shall be disclosed in the EU CR6 table to be disclosed on a half-yearly basis, which considers clearly-defined PD classes. Expected loss (EL) is also reported per PD class, thus also ensuring a statement about the quality of the collateral.

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 following statements.

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

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 – SMEs	0.00 to < 0.15	254	–	–	254	0.09
	0.15 to < 0.25	1,385	24	82.92	1,405	0.21
	0.25 to < 0.50	2,487	132	84.95	2,599	0.42
	0.50 to < 0.75	2,525	65	81.90	2,579	0.70
	0.75 to < 2.50	5,710	163	91.99	5,860	1.32
	2.50 to < 10.00	2,482	72	87.54	2,545	4.11
	10.00 to < 100.00	179	–	–	179	15.88
	100.00 (Default)	1,179	79	–	1,179	100.00
	Subtotal	**16,202**	**535**	**74.43**	**16,600**	**8.57**
Corporates - Others	0.00 to < 0.15	19	–	–	19	0.10
	0.15 to < 0.25	878	244	63.23	1,032	0.19
	0.25 to < 0.50	1,186	82	13.38	1,197	0.44
	0.50 to < 0.75	2,044	93	34.95	2,076	0.70
	0.75 to < 2.50	3,112	319	82.44	3,375	1.24
	2.50 to < 10.00	995	113	87.94	1,094	2.81
	10.00 to < 100.00	–	–	–	–	–
	100.00 (Default)	295	11	–	295	100.00
	Subtotal	**8,528**	**861**	**65.03**	**9,088**	**4.28**
Institutions	0.00 to < 0.15	174	–	–	104	0.06
	0.15 to < 0.25	1,050	0	–	944	0.20
	0.25 to < 0.50	62	–	–	62	0.42
	0.50 to < 0.75	–	–	–	–	–
	0.75 to < 2.50	–	–	–	–	–
	2.50 to < 10.00	–	–	–	–	–
	10.00 to < 100.00	0	–	–	0	30.00
	100.00 (Default)	–	–	–	–	–
	Subtotal	**1,286**	**0**	–	**1,110**	**0.20**
	Total	**26,016**	**1,396**	**68.64**	**26,799**	**6.77**

The table EU CR8 (p. 26) provides an overview of the RWA changes and the associated causes to be analysed since 31 March 2018.

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.

f Number of obligors	g Average LGD	h Average maturity	i Risk-weighted items (RWAs)	j RWA density	k Expected Loss (EL)	l Value adjustments and provisions
	%		€ mn	%	€ mn	€ mn
11	1.33	900	2	0.76	0	
77	4.22	915	48	3.42	0	
106	3.20	937	107	4.12	0	
76	7.10	1,113	293	11.36	1	
137	9.21	1,036	1,112	19.98	8	
54	16.46	920	1,287	50.58	23	
2	35.16	886	273	152.40	10	
40	30.61	874	932	79.04	288	
503	**10.31**	**989**	**4,055**	**24.43**	**330**	**411**
1	5.32	1,800	2	8.17	0	
44	4.29	1,609	59	5.74	0	
30	3.69	1,507	89	7.45	0	
53	2.77	1,423	130	6.28	0	
55	4.93	1,437	454	13.44	2	
13	15.21	1,207	494	45.16	5	
–	–	–	–	–	–	
8	33.29	1,210	237	80.43	80	
204	**6.36**	**1,428**	**1,465**	**16.12**	**88**	**107**
11	7.67	668	4	3.38	0	
31	8.36	273	78	8.27	0	
8	16.95	215	14	22.31	0	
–	–	–	–	–	–	
–	–	–	–	–	–	
–	–	–	–	–	–	
4	65.00	360	0	392.33	0	
–	–	–	–	–	–	
54	**8.78**	**307**	**96**	**8.62**	**0**	**0**
761	**8.91**	**1,110**	**5,616**	**20.96**	**418**	**518**

EU CR8: RWA flow statement of credit risk exposures under IRB

€ mn		a RWAs	b Regulatory capital requirements
1	**Position as at 31 March 2018**	**7,967**	**637**
2	Asset size	66	5
3	Asset quality	-790	-63
4	Model updates	–	–
5	Methodology and policy	–	–
6	Acquisitions and disposals	-17	-1
7	Foreign exchange movements	82	7
8	Other	–	–
9	**Position as at 30 June 2018**	**7,308**	**585**

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). The change compared to the previous quarter was mainly driven by quality improvements in the credit business.

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 during the period under review.

Line 6 discloses the RWA effect of the disposal of two investments previously included in the regulatory scope of consolidation during the second quarter.

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

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.

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.

Pursuant to Article 439 of the CRR, Aareal Bank is obliged to disclose details on the calculation of 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		903	412			539	370
2	Original exposure	–					–	–
3	Standardised approach		–			–	–	–
4	IMM (for derivatives and SFTs)				–	–	–	–
5	of which: securities financing transactions				–	–	–	–
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**							**370**

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 the 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	454	196
EU4	Based on the original exposure method	–	–
5	**Total subject to the CVA capital charge**	**454**	**196**

Table EU CCR8 discloses the exposure value and RWAs for exposures to a central counterparty. As at the reporting date, Eurex Clearing AG (Clearing Member) and LCH.Clearnet Limited (Client Clearing), 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 30 June 2018.

EU CCR8: Exposures to CCPs

€ mn		a EAD post CRM	b RWAs
1	**Exposures to QCCPs (total)**		1
2	Exposures from trades at QCCPs (excluding initial margin and default fund contributions); of which	36	1
3	i) OTC derivatives	36	1
4	ii) Exchange-traded derivatives	–	–
5	iii) SFTs	–	–
6	iv) Netting sets where cross-product netting has been approved	–	–
7	Segregated initial margin	–	
8	Non-segregated initial margin	–	–
9	Prefunded default fund contributions	–	–
10	Alternative calculation of own funds requirements for exposures		–
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	–	–

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€ mn		a EAD post CRM	b RWAs
16	iv) Netting sets where cross-product netting has been approved	–	–
17	Segregated initial margin	–	
18	Non-segregated initial margin	–	–
19	Prefunded default fund contributions	–	–
20	Unfunded default fund contributions	–	–

The purpose of table EU CCR3 is the disclosure of 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. Due to its insignificant share in EaD of all CRSA exposures (0.15%), we do not believe that disclosing the table would provide any additional information.

The following table EU CCR4 shows the derivative exposures treated in AIRBA – by analogy with the table EU CR6 within clearly-defined PD classes.

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 on the derivatives.

EU CCR4: IRB approach – counterparty credit risk exposure by portfolio and PD scale

Exposure class	PD scale	a EAD post CRM	b Average PD	c Number of obligors	d Average LGD	e Average maturity	f RWA	g RWA density
		€ mn	%		%		€ mn	%
Corporates – SMEs	0.00 to < 0.15	–	–	–	–	–	–	–
	0.15 to < 0.25	3	0.23	5	90.00	900	3	81.64
	0.25 to < 0.50	18	0.40	11	90.00	915	20	110.40
	0.50 to < 0.75	13	0.70	15	90.00	1,353	22	169.50
	0.75 to < 2.50	17	1.16	9	90.00	869	32	184.86
	2.50 to < 10.00	4	2.62	4	90.00	1,042	8	219.86
	10.00 to < 100.00	–	–	–	–	–	–	–
	100.0 (Default)	–	–	–	–	–	–	–
	Subtotal	**55**	**0.85**	**44**	**90.00**	**1,012**	**84**	**153.58**

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Exposure class	PD scale	a EAD post CRM	b Average PD	c Number of obligors	d Average LGD	e Average maturity	f RWA	g RWA density
		€ mn	%		%		€ mn	%
Corporates - Others	0.00 to < 0.15	–	–	–	–	–	–	–
	0.15 to < 0.25	1	0.20	7	90.00	392	1	65.21
	0.25 to < 0.50	3	0.47	1	90.00	802	4	136.47
	0.50 to < 0.75	11	0.70	1	90.00	1,800	25	235.93
	0.75 to < 2.50	0	1.16	1	90.00	360	0	165.58
	2.50 to < 10.00	–	–	–	–	–	–	–
	10.00 to < 100.00	–	–	–	–	–	–	–
	100.0 (Default)	–	–	–	–	–	–	–
	Subtotal	**15**	**0.63**	**10**	**90.00**	**1,482**	**30**	**203.12**
Institutions	0.00 to < 0.15	40	0.09	4	17.73	1,180	8	19.00
	0.15 to < 0.25	1,113	0.18	26	12.98	1,358	228	20.50
	0.25 to < 0.50	10	0.47	3	16.45	1,683	5	48.87
	0.50 to < 0.75	–	–	–	–	–	–	–
	0.75 to < 2.50	–	–	–	–	–	–	–
	2.50 to < 10.00	–	–	–	–	–	–	–
	10.00 to < 100.00	–	–	–	–	–	–	–
	100.0 (Default)	–	–	–	–	–	–	–
	Subtotal	**1,164**	**0.18**	**33**	**13.17**	**1,354**	**241**	**20.69**
	Total	**1,234**	**0.21**	**87**	**17.51**	**1,341**	**355**	**28.81**

Pursuant to Article 439 (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
€ mn		Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
1	Derivatives	2,015	1,097	918	797	122
2	SFTs	–	–	–	–	–
3	Cross-product netting	–	–	–	–	–
4	**Total**	**2,015**	**1,097**	**918**	**797**	**122**

The aggregate positive replacement value for our derivatives contracts subject to reporting requirements stood at €2,015 million as at 30 June 2018. This amount is reduced to € 122 million through netting framework agreements in the amount of € 1,097 million and the deduction of collateral provided in the amount of €797 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, collateral received or posted 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
€ mn	Segregated	Unsegregated	Segregated	Unsegregated		
Cash collateral	21	776	9	549	–	–
Government bonds	–	-	54	–	–	–
Total	**21**	**776**	**62**	**549**	**–**	**–**

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. Pursuant to Article 14 (2) of the Implementation Regulation (EU) 2016/428, the Leverage Ratio is calculated using quarter-end data.

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**	**40,162**
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	265
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	(1,989)
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)	568
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	(182)
8	**Leverage ratio total exposure measure**	**38,823**

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)	38,261
2	(Asset amounts deducted in determining Tier 1 capital)	(33)
3	**Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)**	**38,229**
	Derivative exposures	
4	Replacement cost associated with all derivatives transactions (i.e. net of eligible cash variation margin)	121
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	453
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)	(548)
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)**	**26**
	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	**Derogation for SFTs: counterparty credit risk exposure in accordance with Articles 429b (4) and 222 of Regulation (EU) 575/2013**	–
	Other off-balance sheet exposures	
17	Off-balance sheet exposures at gross notional amount	1,463
18	(Adjustments for conversion to credit equivalent amounts)	(895)
19	**Other off-balance sheet exposures (sum of lines 17 and 18)**	**568**
	Exempted exposures in accordance with Article 429 (7) and (14) of Regulation (EU) 575/2013 (on- and off-balance sheet)	
EU-19a	(Intragroup 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**	**2,415**
21	**Leverage ratio total exposure measure (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)**	**38,823**
	Leverage Ratio	
22	Leverage Ratio	6.22%
	Choice on transitional arrangements and amount of derecognised fiduciary items	
EU-23	Choice on transitional arrangements for the definition of the capital measure	Transitional arrangements
EU-24	Amount of derecognised fiduciary items in accordance with Article 429 (11) of Regulation (EU) 575/2013	–

The Leverage Ratio marginally declined to 6.22%, compared to 6.25% on the disclosure date of 31 March 2018, This was attributable, on the one hand, to a reduction in the total exposure measure, reflecting lower balances held with the central bank, combined with a slightly higher offsetting decrease in Tier 1 capital on the other hand.

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 (excluding derivatives, SFTs and exempted exposures)

€ mn		CRR leverage ratio exposures
EU-1	**Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:**	**37,714**
EU-2	Trading book exposures	–
EU-3	Banking book exposures, of which:	37,714
EU-4	Covered bonds	203
EU-5	Exposures treated as sovereigns	10,548
EU-6	Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	349
EU-7	Institutions	392
EU-8	Secured by mortgages on immovable properties	23,052
EU-9	Retail exposures	226
EU-10	Corporate	1,089
EU-11	Exposures in default	990
EU-12	Other exposures (e.g. equity, securitisations, and other non-credit obligation assets)	864

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