Deutsche Bank

Pillar 3 Report as of March 31, 2021

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Regulatory framework

Introduction

This Report provides Pillar 3 disclosures at the consolidated level of Deutsche Bank Group (the Group) as required by the global regulatory framework for capital and liquidity, established by the Basel Committee on Banking Supervision, also known as Basel 3. At the European level these are implemented in the disclosure requirements as provided in Part Eight of the "Regulation (EU) 575/2013 on prudential requirements for credit institutions and investment firms" (Capital Requirements Regulation or "CRR") and the "Directive (EU) 2013/36 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms" (Capital Requirements Directive or "CRD") which have been further amended with subsequent Regulations and Directives. Germany implemented the CRD disclosure requirements into national law in Section 26a of the German Banking Act ("Kreditwesengesetz" or "KWG"). Further disclosure guidance has been provided by the European Banking Authority ("EBA") in its "Final Report on the Guidelines on Disclosure Requirements under Part Eight of Regulation (EU) No 575/2013" ("EBA Guideline", EBA/GL/2016/11, version 2*). The information provided in this Pillar 3 Report is unaudited.

Due to rounding, numbers presented throughout this document may not add up precisely to the totals we provide and percentages may not precisely reflect the absolute figures.

Basel 3 and CRR/CRD

In the European Union, the Basel 3 capital framework is implemented by the amended versions of CRR and CRD. As a single rulebook the CRR is directly applicable to credit institutions and investment firms in the European Union and provides the grounds for the determination of regulatory capital requirements, regulatory own funds, leverage and liquidity as well as other relevant requirements. In addition, the CRD was implemented into German law by means of further amendments to the KWG and the German Solvency Regulation (SolvV) and accompanying regulations. Jointly, these laws and regulations represent the regulatory framework applicable in Germany.

Regarding the regulatory minimum capital requirements the CRR/CRD lays the foundation for the calculation of risk weighted assets (RWA) for credit risk, including counterparty credit risk, credit valuation adjustments, market risk and operational risk.

In January 2019, Regulations (EU) 2017/2401 and 2017/2402 introduced changes to the methodology for determining RWAs for new securitizations originated on or after January 1, 2019. All securitization transactions originated before this date remained subject to the rules introduced by CRR/CRD as applicable until December 31, 2018 and are subject to the new framework from January 1, 2020 onwards.

In May 2019, Regulation (EU) 2019/876 and Directive (EU) 2019/878 introduced amendments to the CRR/CRD with various changes to the credit risk RWA framework becoming applicable in June 2021. These legal acts relate for example to the applicable risk weights for banking book investments in collective investment undertakings or the replacement of the mark-to-market method to determine the exposure value for derivatives that are not in scope of the internal model method by a new standardized approach to determine counterparty credit risk (SA-CCR).

As a reaction to the COVID-19 outbreak, certain legislative changes to the prudential framework have been made and are applicable since the June 30, 2020 reporting. Regulation (EU) 2020/866 increased the diversification benefit applicable to aggregate additional value adjustments from 50 % to 66 % until year end 2020. Regulation (EU) 2020/873 introduced various changes to the determination of risk weighted assets and the leverage exposure. For example the risk weights applicable to certain small or medium sized enterprises (SME) are reduced by applying scaling factors depending on the exposure value. With respect to the leverage exposure, for example cash receivables and cash payables are offset where the related regular-way sales and purchases are both settled on a delivery versus payment basis. In addition certain Euro-based exposures facing Eurosystem central banks may be excluded from the leverage exposure subject to having obtained permission from the European Central Bank. Based on Decision (EU) 2020/1306 of the European Central Bank, the Group was allowed for the first time in the September 30, 2020 reporting to exclude these exposures from the leverage exposure. This exclusion currently applies until June 27, 2021.

A further core element of the CRR/CRD framework is the development and maintenance of a high quality capital base which should primarily consist of Common Equity Tier 1 (CET 1) capital. The CET 1 minimum capital requirement applicable to the Group is 4.5 % of risk-weighted assets. In addition to this minimum capital requirement, various capital buffer requirements

were phased in starting 2016 and are fully effective from 2019 onwards. Since June 30, 2020, the Group applies the transitional arrangements in relation to IFRS 9 as provided in the current CRR/CRD for all CET1 measures.

Formerly, intangible assets had to be deducted from CET1 items. “Regulation (EU) 2019/876” and “Regulation (EU) 2020/873” state that certain software assets do not have to be deducted from CET1 items from the entry into force of the related regulatory technical standards. The related regulatory technical standard, the “Regulation (EU) 241/2014” was amended accordingly and entered into force on December 23, 2020. This amended regulatory technical standard was applied for the first time in our December 31, 2020 reporting. For such software assets the concept of a prudential amortization is introduced. The regulatory prudent value of these software assets is derived based on their initial IFRS carrying value and then amortized on a straight line basis down to zero. The maximum regulatory amortization period is three years, but if the IFRS amortization period is less (e.g. two years), then the regulatory amortization period will be the same. If the IFRS amortization period is longer than the prudential period, therefore resulting in the IFRS carrying value exceeding the regulatory prudent value, then the difference in value must be deducted from CET1 items. The regulatory prudent value no longer has to be deducted from CET1 items, it instead is subject to a 100% risk weight. The prudential amortization starts on the same date as when the IFRS amortization starts (i.e. when the software is ready for use). Whilst the software is in the development phase, the intangible asset capitalized under IFRS must be fully deducted from CET1 items. Once the software is ready for use, the value of the intangible asset that was fully deducted from CET 1 items is reinstated and amortized as described above.

We present in this report certain figures based on the CRR definition of own fund instruments on a “fully loaded” basis. We calculate such “fully loaded” figures excluding the transitional arrangements for own fund instruments as provided in the currently applicable CRR/CRD. For CET 1 instruments we do not make use of transitional provisions.

Transitional arrangements are applicable for Additional Tier 1 (AT1) and Tier 2 (T2) instruments. Capital instruments issued on or prior to December 31, 2011, that no longer qualify as AT1 or T2 instruments under the fully loaded CRR/CRD as currently applicable are subject to grandfathering rules during the transitional period and are being phased out from 2013 to 2022 with their recognition capped at 30 % in 2019, 20 % in 2020 and 10 % in 2021 (in relation to the portfolio eligible for grandfathering which was still in issue on December 31, 2012). The current CRR as applicable since June 27, 2019, provides further grandfathering rules for AT1 and T2 instruments issued prior to June 27, 2019. Thereunder, AT1 and T2 instruments issued through special purpose entities are grandfathered until December 31, 2021, and AT1 and T2 instruments that do not meet certain new requirements that apply since June 27, 2019 are grandfathered until June 26, 2025. Instruments issued under UK law which do not fulfill all CRR requirements after the UK has left the European Union are also excluded from our fully loaded definition. Our CET 1 and RWA figures show no difference between CRR/CRD as currently applicable and fully loaded CRR/CRD based on our definition of “fully loaded”.

The CRR/CRD requires banks to calculate and disclose a regulatory leverage ratio that is generally based on the accounting value as the relevant exposure measure for assets. Specific regulatory exposure measures apply to derivatives and securities financing transactions as well as off balance sheet exposures and must be added to determine the total leverage exposure. With effect from June 2021 the leverage exposure measure will be modified, e.g. the exposure measure for derivatives is determined based on a new standardized approach for counterparty credit risk and a minimum leverage ratio requirement of 3 % is introduced. From January 1, 2023 an additional leverage ratio buffer requirement of 50 % of the applicable G-SIB buffer rate will apply. It is currently expected that this additional requirement will equal 0.75 %.

The CRR/CRD framework further defines liquidity standards. The Liquidity Coverage Ratio (LCR) aims to measure a bank’s short-term resilience to a severe liquidity stress scenario during a stress period of 30 calendar days. Detailed rules for the calculation of the LCR are set out in the Commission Delegated Regulation 2015/61. The binding minimum liquidity coverage ratio is set to 100 % since 2018.

The Net Stable Funding Ratio (NSFR) requires banks to maintain a stable funding profile in relation to their on and off balance sheet exposures. The CRR/CRD requires banks to calculate and disclose certain items requiring and providing stable funding. With effect from June 2021 a minimum Net Stable Funding Ratio of 100 % will be introduced.

There are continuous improvements and additional regulatory guidance is provided with regard to the interpretations of the CRR/CRD rules and related binding Technical Standards are still in preparation or not yet available in their final version. Thus, we will continue to refine our assumptions and models in line with evolution of our as well as the industry’s understanding and interpretation of the rules. Against this background, current CRR/CRD measures may not be comparable to previous expectations. Also, our CRR/CRD measures may not be comparable with similarly labeled measures used by our competitors as our competitors’ assumptions and estimates regarding such implementation may differ from ours.

TLAC and European MREL (SRMR/BRRD)

Global Systemically Important Institutions (G-SIIs) in Europe need to have at least 16 % plus the combined buffer requirement of their Risk Weighted Assets (RWA) or 3 % of their Leverage Ratio Exposure (LRE) as Total Loss Absorbing Capacity (TLAC). The requirement will increase to 18 % plus the combined buffer requirement of RWA or 3.75 % of LRE starting 2022.

Banks in the European Union are also required to meet at all times a minimum requirement for own funds and eligible liabilities ("MREL") which ensures that banks have sufficient loss absorbing capacity in resolution to avoid recourse to taxpayers' money. Relevant laws are the Single Resolution Mechanism Regulation ("SRMR") and the Bank Recovery and Resolution Directive ("BRRD") as implemented through the German Recovery and Resolution Act (Sanierungs- und Abwicklungsgesetz, "SAG").

MREL is determined by the competent resolution authorities for each supervised bank individually on a case-by-case basis, depending on the respective preferred resolution strategy. In the case of Deutsche Bank AG, MREL is determined by the Single Resolution Board ("SRB"). While there is no statutory minimum level of MREL, the SRM Regulation, BRRD and a delegated regulation set out criteria which the resolution authority must consider when determining the relevant required level of MREL. Guidance is provided through an MREL policy published annually by the SRB. Any binding MREL ratio determined by the SRB is communicated to Deutsche Bank via the German Federal Financial Supervisory Authority (BaFin).

As announced by the SRB the next update of Deutsche Bank AG's binding MREL and subordinated MREL requirement is expected in the first half of 2021 and will for the first time reflect the legal changes of the banking reform package via amendments to the Single Resolution Mechanism Regulation and the Bank Recovery and Resolution Directive provided in June 2019 with the publication of Regulation (EU) 2019/877 and Directive (EU) 2019/879. As a result the MREL and subordinated MREL requirement will no longer be expressed as a percentage of TLOF but as a percentage of Risk Weighted Assets (RWA) and Leverage Ratio Exposure (LRE).

Instruments which qualify for TLAC and MREL are own funds (Common Equity Tier 1, Additional Tier 1 and Tier 2) as well as certain eligible liabilities (mainly plain-vanilla unsecured bonds). Instruments qualifying for TLAC need to be fully subordinated to general creditor claims (e.g. senior non-preferred bonds) while this is not required for MREL (e.g. senior preferred bonds). Nevertheless, current and future MREL regulation allows the SRB to also set an additional "subordination" requirement within MREL (but separate from TLAC) against which only subordinated liabilities and own funds can be counted.

ICAAP, ILAAP and SREP

The Internal Capital Adequacy Assessment Process ("ICAAP") as stipulated in Pillar 2 of Basel 3 requires banks to identify and assess risks, maintain sufficient capital to face these risks and apply appropriate risk management techniques to maintain adequate capitalization. Our Internal Liquidity Adequacy Assessment Process ("ILAAP") aims to ensure that sufficient levels of liquidity are maintained on an ongoing basis by identifying the key liquidity and funding risks to which the Group is exposed, by monitoring and measuring these risks, and by maintaining tools and resources to manage and mitigate these risks.

In accordance with Article 97 CRD supervisors regularly review, as part of the Supervisory Review and Evaluation Process ("SREP"), the arrangements, strategies, processes and mechanisms implemented by banks and evaluate: (a) risks to which the institution is or might be exposed; (b) risks the institution poses to the financial system; and (c) risks revealed by stress testing.

Prudential measures for non performing exposure

In April 2019 the EU published final regulations for a prudential backstop reserve for non-performing exposure (NPE), which will result in a Pillar 1 deduction from CET 1 capital when a minimum loss coverage requirement is not met. It is applied to exposures originated and defaulted after 26 April 2019.

In addition, in March 2018 the European Central Bank (ECB) published its "Addendum to the ECB Guidance to banks on non performing loans: supervisory expectations for prudential provisioning of non performing exposures" and in August 2019 its "Communication on supervisory coverage expectations for NPEs".

The ECB guidance is applicable to all newly defaulted loans after April 1, 2018 and, similar to the EU rules, it requires banks to take measures in case a minimum impairment coverage requirement is not met. Within the annual SREP discussions ECB may impose Pillar 2 measures on banks in case ECB is not confident with measure taken by the individual bank.

For the first quarter 2021, we determined, the prudential provisioning of non performing exposure as a Pillar 2 measure as requested in the before mentioned ECB's guidance and SREP recommendation, based on the framework introduced at year end 2020.

Measures in context of COVID-19 pandemic

Application of EBA guidance regarding Default, Forbearance and IFRS 9 in light of COVID-19 measures

EBA's "Statement on the application of the prudential framework regarding Default, Forbearance and IFRS 9 in light of COVID-19 measures" published on March 25, 2020 states that institutions are expected to use a degree of judgment and distinguish between borrowers whose credit standing would not be significantly affected by the current situation in the long term, and those who would be unlikely to restore their creditworthiness. The Bank performed portfolio reviews and applied this regulatory guidance to a number of clients mainly in the Investment Bank and Corporate Bank.

EBA is further of the view that the public and private moratoria, as a response to COVID-19 pandemic, do not have to be automatically classified as forbearance if the moratoria are not borrower specific, based on the applicable national law or on an industry or sector wide private initiative agreed and applied broadly by relevant credit institutions. Deutsche Bank has introduced this guidance into its internal risk management processes.

For further details with regards to Deutsche Bank's determination of Expected Credit Losses following IFRS 9 accounting rules please refer to Deutsche Bank's Annual Report as of December 31, 2020.

Legislative and non legislative moratoria and public guarantee schemes in light of COVID-19 pandemic

After the breakout of the COVID-19 pandemic, a number of governments issued programs offering legislative moratoria and guarantee schemes. Non legislative moratoria programs have been developed to support our clients as well as individual measures have been agreed with our clients.

On April 2, 2020 and June 25, 2020 EBA published its guidelines on legislative and non legislative moratoria on loan repayments applied in light of the COVID-19 pandemic. These guidelines provide clarity on the treatment of legislative and non legislative moratoria applied before September 30, 2020 and supplement the EBA guidelines on the application of the definition of default in regards to the treatment of a distressed restructuring. On September 21, 2020, EBA announced that it "will phase out its guidelines on legislative and non legislative payment moratoria in accordance with its end of September deadline. The regulatory treatment set out in the Guidelines will continue to apply to all payment holidays granted under eligible payment moratoria prior to September 30, 2020".

On December 2, 2020 after closely monitoring the developments of the COVID-19 pandemic and, in particular, the impact of the second COVID-19 wave and the related government restrictions taken in many EU countries, the EBA has decided to reactivate its guidelines on legislative and non legislative moratoria.

Own funds

Disclosures under Article 473a CRR - Transitional arrangements for mitigating the impact of the introduction of IFRS 9 on own funds

For all of our CET 1 measures we applied for the first time for June 30, 2020, the transitional arrangements in relation to IFRS 9 as provided in the current CRR/CRD, Article 473a CRR. The CRR allowed for a phase-in of the corresponding CET 1 reduction due to the increase of IFRS 9 credit loss allowance over a five year period until year end 2022. The transitional provisions were structured such that there is a static component relating to increases of credit loss allowance observed as of January 2018 and a dynamic component relating to credit loss allowance increases observed between January 2018 and the current reporting date.

As per the CRR amendment published on June 26, 2020 the transitional provisions have been modified such that the dynamic component is reset, i.e. it separately covers the periods from January 1, 2018 to January 1, 2020 and the period from January 1, 2020 to the current reporting date, the phase-in period is extended until 2024, and the phase-in percentages are modified.

In addition, the CRR amendment simplifies the implementation of the transitional provisions as the requirement to recalculate the exposure at default (EaD) for each individual credit risk standardized approach (CRSA) exposure taking into account the amounts added back to CET 1 no longer applies. Instead, an additional credit risk RWA amount equal to 100 % times the credit loss allowance for the CRSA portfolio that has not reduced CET 1 due to the application of the transitional provisions is determined. The same amount is included in the leverage exposure. We do make use of this simplification in our application of transitional provisions.

The capital add back in total € 29.1 million as of March 31,2021 includes € 29.1 million from the static component solely stemming from the CRSA portfolio due to the increase in credit loss allowances for the CRSA portfolio at transition from IAS 39 to IFRS 9 at the end of 2017 and beginning of 2018. There was no contribution from the IRBA portfolios, given the regulatory expected loss exceeded IFRS 9 Credit Loss Allowances for the relevant reporting dates.

There is no contribution from the dynamic component for both CRSA and IRBA portfolios which compares credit loss allowance levels between January, 1 2018 and the reporting date. This is due to a reduction in credit loss allowance levels in aforementioned period for the CRSA portfolio and the regulatory expected loss exceeding the credit loss allowance levels for the IRBA portfolio.

The impact of the € 29.1 million capital add back as of March 31,2021 on our CET 1, Tier 1 and Total Capital as well as risk weighted assets and leverage exposure did not lead to a material change of the related ratios.

Capital requirements

Article 438 (c-f) CRR - Overview of capital requirements

The table below shows RWA and regulatory capital requirements broken down by risk types and model approaches compared to the previous quarter end.

EU OV1 – Overview of RWA

			Mar 31, 2021		Dec 31, 2020	
			a1	b1	a2	b2
		in € m.	RWA	Minimum capital requirements	RWA	Minimum capital requirements
	1	Credit risk (excluding CCR)	182,092	14,567	173,012	13,841
		of which:				
Art 438(c)(d)	2	The standardized approach (SA)	16,418	1,313	17,149	1,372
Art 438(c)(d)	3	The foundation IRB (FIRB) approach	3,049	244	3,106	248
Art 438(c)(d)	4	The advanced IRB (AIRB) approach	154,236	12,339	145,053	11,604
Art 438(d)	5	Equity IRB under the simple risk-weighted approach or the IMA	8,389	671	7,704	616
Art 107 Art 438(c)(d)	6	Counterparty credit risk (CCR)	33,050	2,644	32,312	2,585
		of which:				
Art 438(c)(d)	7	Mark to market	4,612	369	3,088	247
Art 438(c)(d)	8	Original exposure	0	0	0	0
	9	The standardized approach	0	0	0	0
	9a	Financial collateral comprehensive method (for SFTs)	1,884	151	1,627	130
	10	Internal model method (IMM)	18,383	1,471	19,021	1,522
Art 438(c)(d)	11	Risk exposure amount for contributions to the default fund of a CCP	204	16	184	15
Art 438(c)(d)	12	Credit Valuation Adjustment (CVA)	7,967	637	8,392	671
Art 438(e)	13	Settlement risk	14	1	56	4
Art 449(o)(i)	14	Securitization exposures in the banking book (after the cap)	11,397	912	12,051	964
		of which:				
	15	IRB approach	7,047	564	7,337	587
		of which:				
	16	IRB supervisory formula approach (SFA)	0	0	0	0
	17	Internal assessment approach (IAA)	0	0	0	0
	18	Standardized approach	4,351	348	4,713	377
	19	Market risk	23,102	1,848	28,897	2,312
		of which:				
	20	Standardized approach	2,817	225	2,799	224
	21	IMA	20,285	1,623	26,098	2,088
Art 438(e)	22	Large exposures	0	0	0	0
Art 438(f)	23	Operational risk	66,059	5,285	68,899	5,512
		of which:				
	24	Basic indicator approach	0	0	0	0
	25	Standardized approach	0	0	0	0
	26	Advanced measurement approach	66,059	5,285	68,899	5,512
Art 437(2), 48,60	27	Amounts below the thresholds for deduction (subject to 250 % risk weight)	14,105	1,128	13,725	1,098
Art 500	28	Floor adjustment	0	0	0	0
	29	Total	**329,819**	**26,386**	328,951	26,316

Our RWA was € 329.8 billion as of March 31, 2021, compared to € 329.0 billion at the end of 2020. The increase of € 0.9 billion was primarily driven by credit risk RWA, which was partially offset by market risk RWA and operational risk RWA. The increase in credit risk RWA by € 10.0 billion was primarily driven by the targeted review of our internal models which led to several model refinements across all businesses as well as business growth within our Corporate, Investment and Private Bank. Additionally our credit risk RWA increased by € 3.4 billion due to foreign-exchange movements. This was partially offset by decreases within our Capital Release Unit and Corporate & Other. Market risk RWA decreased by € 5.8 billion and was primarily driven by the VaR and SVaR components which comprised 62 % of market risk RWA (€ 14.2 billion out of a total of € 23.1 billion) the remainder coming from the incremental risk charge and the market risk standardized approach (covering securitizations, longevity and certain collective investment undertakings (CIUs)). The operational risk RWA reduction of € 2.8 billion was mainly driven by a more favorable development of our internal loss profile feeding into our capital model, partially offset by updates of external losses and scenarios.

The movements of RWA for the specific risk types are discussed further down in this report for credit risk in section "Article 438 (d) CRR - Development of credit risk RWA" on page 9, for counterparty credit risk in section "Article 438 (d) CRR -

Development of CCR RWA" on page 10 and for market risk in section "Article 455 (e) CRR - Regulatory capital requirements for market risk" on page 11.

Credit risk exposure and credit risk mitigation in the internal-rating-based approach

Quantitative information on the use of the IRB approach

Article 438 (d) CRR - Development of credit risk RWA

The following table provides an analysis of key drivers for RWA movements observed for credit risk, excluding counterparty credit risk, to the extent covered in IRB approaches in the current and previous reporting period. It also shows the corresponding movements in capital requirements, derived from RWA with an 8 % capital ratio.

EU CR8 – RWA flow statement of credit risk exposures under the IRB approach

		Three months ended Mar 31, 2021		Three months ended Dec 31, 2020	
		a	b	a	b
	in € m.	RWA	Capital requirements	RWA	Capital requirements
1	Credit risk RWA opening balance	**148,159**	**11,853**	152,032	12,163
2	Book size	3,889	311	(2,786)	(223)
3	Book quality	344	27	(638)	(51)
4	Model updates	0	0	(1,281)	(102)
5	Methodology and policy	2,609	209	2,691	215
6	Acquisitions and disposals	(119)	(10)	(327)	(26)
7	Foreign exchange movements	2,404	192	(1,532)	(123)
8	Other	0	0	0	0
9	Credit risk RWA closing balance	**157,285**	**12,583**	148,159	11,853

Organic changes in our portfolio size and composition are considered in the category "book size". The category "book quality" mainly represents the effects from portfolio rating migrations, loss given default, model parameter recalibrations as well as collateral coverage and netting activities. "Model updates" include model refinements and advanced model roll out. RWA movements resulting from externally, regulatory-driven changes, e.g. applying new regulations, are considered in the "methodology and policy" section. "Acquisition and disposals" show significant exposure movements which can be clearly assigned to new businesses or disposal related activities. Changes that cannot be attributed to the above categories are reflected in the category "other".

The increase in RWA for credit risk exposures under the IRB approach of 6.2 % or € 9.1 billion since December 31, 2020 is primarily observed across all categories including an increase stemming from FX related credit risk RWA movements. The category "book size" reflects an increased client demand within the core businesses versus the prior quarter. The rise in "methodology and policy" primarily includes impacts resulting from regular ECB reviews for the large corporate portfolio. Furthermore, the category "book quality" reflects a RWA increase stemming from parameter recalibrations. This was partly offset by the decrease in the category "acquisition and disposals" observed within the Private Bank business.

Counterparty credit risk (CCR)

Article 438 (d) CRR - Development of CCR RWA

The following table provides an analysis of key drivers for RWA movements observed for counterparty credit risk (CCR) exposures calculated under the internal model method (IMM) in the current and previous reporting period. It also shows the corresponding movements in capital requirements, derived from RWA with an 8 % capital ratio.

EU CCR7 – RWA flow statement of counterparty credit risk exposures under the internal model method

		Three months ended Mar 31, 2021		Three months ended Dec 31, 2020	
		a	b	a	b
	in € m.	RWA	Capital requirements	RWA	Capital requirements
1	Counterparty credit risk RWA under the IMM opening balance	**19,021**	**1,522**	17,664	1,413
2	Book size	(2,477)	(198)	1,267	101
3	Book quality	38	3	69	6
4	Model updates	0	0	285	23
5	Methodology and policy	1,346	108	0	0
6	Acquisitions and disposals	0	0	0	0
7	Foreign exchange movements	455	36	(263)	(21)
8	Other	0	0	0	0
9	Counterparty credit risk RWA under the IMM closing balance	**18,383**	**1,471**	19,021	1,522

Organic changes in our portfolio size and composition are considered in the category “book size”. The category “book quality” mainly represents the effects from portfolio rating migrations, loss given default, model parameter recalibrations as well as collateral coverage and netting activities. “Model updates” include model refinements and model roll out. RWA movements resulting from externally, regulatory-driven changes, e.g. applying new regulations, are considered in the “methodology and policy” section. “Acquisition and disposals” shows significant exposure movements which can be clearly assigned to new businesses or disposal related activities. Changes that cannot be attributed to the above categories are reflected in the category “other”.

The RWA for counterparty credit risk exposures under the IMM decreased by 3.4 % or € 0.6 billion since December 30, 2020. The category “book size” reflects current market volatility. This was partly offset by the increase in category “methodology and policy” including the impacts resulting from regular ECB reviews for the large corporate portfolio as well as FX related contributions.

Market risk

Own funds requirements for market risk under the IMA

Article 455 (e) CRR - Regulatory capital requirements for market risk

The following table EU MR2-B provides an analysis of key drivers for movements observed for market risk RWA covered by internal models (i.e. value-at-risk, stressed value-at-risk, incremental risk charge and comprehensive risk measure) in the current and previous reporting period. It also shows the corresponding movements in capital requirements, derived from RWA with an 8 % capital ratio.

EU MR2-B – RWA flow statements of market risk exposures under the IMA

		Three months ended Mar 31, 2021						
		a	b	c	d	e	f	g
	in € m.	VaR	SVaR	IRC	Compre-hensive risk measure	Other	Total RWA	Total capital requirements
1	Market Risk RWA opening balance[1]	12,109	6,983	7,005	–	0	26,098	2,088
1a	Regulatory adjustment[2]	(9,383)	(4,826)	(1,527)	–	0	(15,736)	(1,259)
1b	RWA at the previous quarter-end (end of the day)[3]	2,726	2,157	5,478	–	0	10,362	829
2	Movement in risk levels	1,872	(3,609)	117	–	0	(1,620)	(130)
3	Model updates/changes	(2,500)	3,558	0	–	0	1,058	85
4	Methodology and policy	0	0	0	–	0	0	0
5	Acquisitions and disposals	0	0	0	–	0	0	0
6	Foreign exchange movements	0	0	0	–	0	0	0
6a	Market data changes and recalibrations	0	0	0	–	0	0	0
7	Other	0	0	0	–	0	0	0
8a	RWA at the end of the reporting period (end of the day)[3]	2,098	2,106	5,595	–	0	9,800	784
8b	Regulatory adjustment[2]	5,956	4,051	478	–	0	10,485	839
8	Market Risk RWA closing balance[1]	8,054	6,157	6,073	–	0	20,285	1,623

[1] Represents RWA at previous and current reporting period quarter end.
[2] Indicates the difference between RWA and RWA (end of day) at the beginning and end of period.
[3] For a given component (e.g. VaR) it refers to the RWA that would be computed if the previous or current quarter end snapshot figure of the component determines the quarter end RWA, as opposed to a 60-day average for regulatory purposes.

		Three months ended Dec 31, 2020						
		a	b	c	d	e	f	g
	in € m.	VaR	SVaR	IRC	Compre-hensive risk measure	Other	Total RWA	Total capital requirements
1	Market Risk RWA opening balance[1]	7,077	12,989	4,913	–	0	24,978	1,998
1a	Regulatory adjustment[2]	(5,351)	(10,022)	0	–	0	(15,373)	(1,230)
1b	RWA at the previous quarter-end (end of the day)[3]	1,726	2,966	4,913	–	0	9,605	768
2	Movement in risk levels	(8,335)	2,180	1,126	–	0	(5,030)	(402)
3	Model updates/changes	855	1,913	(561)	–	0	2,207	177
4	Methodology and policy	8,481	(4,901)	0	–	0	3,580	286
5	Acquisitions and disposals	0	0	0	–	0	0	0
6	Foreign exchange movements	0	0	0	–	0	0	0
6a	Market data changes and recalibrations	0	0	0	–	0	0	0
7	Other	0	0	0	–	0	0	0
8a	RWA at the end of the reporting period (end of the day)[3]	2,726	2,158	5,478	–	0	10,362	829
8b	Regulatory adjustment[2]	9,383	4,826	1,527	–	0	15,736	1,259
8	Market Risk RWA closing balance[1]	12,109	6,983	7,005	–	0	26,098	2,088

[1] Represents RWA at previous and current reporting period quarter end.
[2] Indicates the difference between RWA and RWA (end of day) at the beginning and end of period.
[3] For a given component (e.g. VaR) it refers to the RWA that would be computed if the previous or current quarter end snapshot figure of the component determines the quarter end RWA, as opposed to a 60-day average for regulatory purposes.

The market risk RWA movements due to position changes are represented in line “Movement in risk levels”. Changes to our market risk RWA internal models, such as methodology enhancements or risk scope extensions, are included in the category of “Model updates/changes”. In the “Methodology and policy” category we reflect regulatory driven changes to our market risk RWA models and calculations. Significant new businesses and disposals would be assigned to the line item “Acquisition and disposals”. The impacts of “Foreign exchange movements” are not calculated for IMA (Internal Models Approach) components.

Changes in market data levels, volatilities, correlations, liquidity and ratings are included under the “Market data changes and recalibrations” category.

As of March 31, 2021 the IMA components for market risk totaled € 20.3 billion, which was a decrease of € 5.8 billion since December 31, 2020 driven by a movement in risk levels due to portfolio de-risking and macro-hedging activities.

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