



# Pillar 3 Report as of March 31, 2022

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# Regulatory framework

## Introduction

This Pillar 3 Report provides disclosures for the consolidated Deutsche Bank Group (the Group) as required by the global regulatory framework for capital and liquidity, which was established by the Basel Committee on Banking Supervision, also known as Basel 3.

In the European Union (EU), the Basel 3 framework is implemented by the amended versions of “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”). 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 German Banking Act (“Kreditwesengesetz” or “KWG”) and the German Solvency Regulation (SolvV) and accompanying regulations. Jointly, these laws and regulations represent the regulatory framework applicable in Germany.

The disclosure requirements are provided in Part Eight of the CRR and in Section 26a of the KWG. Further disclosure guidance has been provided by the European Banking Authority (“EBA”) in its “Final draft implementing technical standards on public disclosures by institutions of the information referred to in Titles II and III of Part Eight of Regulation (EU) No 575/2013” (EBA ITS).

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

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.

Regulation (EU) 2019/876 and Directive (EU) 2019/878 introduced amendments to the CRR/CRD with various changes to the regulatory framework that are applicable since the reporting period ended June 30, 2021. A new standardized approach for counterparty credit risk (SA-CCR) was introduced and replaces the mark-to-market method to determine the exposure value for derivatives that are not in scope of the internal model method. In addition, a new framework to determine the risk weight for banking book investments in collective investment undertakings and default fund contributions to central counterparties was introduced. The large exposure framework was also modified such that a stricter definition of eligible capital is used. Eligible capital is now limited to Tier 1 capital, while previously it was Tier 1 and Tier 2 capital capped at one third of Tier 1 capital. This effectively reduces the general large exposure limit of 25 % of eligible capital. In addition, a new large exposure limit of 15 % of Tier 1 capital was introduced for exposures between Global Systemically Important Institutions (G-SIIs). At the same time the exposure measure for large exposure purposes was modified such that for derivatives SA-CCR is applied instead of the internal model method. Moreover, credit risk mitigation techniques became mandatory where credit risk mitigation is applied for RWA purposes, and entails a mandatory substitution of the exposure to the provider of the credit risk mitigation (e.g. to the issuer of the financial collateral).

Regulation (EU) 2021/558 and Regulation (EU) 2021/557 introduced targeted amendments to the securitization framework for securitizations of non-performing exposures and extended the framework applied to simple, transparent and standardized securitizations to synthetic securitizations. These changes applied for the first time in the Groups reporting period ended June 30, 2021.

Regulation (EU) 2019/876 has introduced a minimum regulatory leverage ratio of 3 % determined as the ratio of Tier 1 capital and the regulatory leverage exposure. The binding leverage ratio is applicable since the reporting period ended June 30, 2021. The minimum regulatory leverage ratio of 3 % is increased if certain Euro-based exposures facing Eurosystem central banks are excluded from the leverage exposure. This is currently the case based on Decision (EU) 2021/1074 of the European Central Bank until March 31, 2022. The regulatory leverage exposure is generally determined based on the accounting carrying value as the relevant exposure measure for assets. Specific regulatory exposure measures apply to derivatives, where a modified version of SA-CCR applies, and securities financing transactions (SFT) as well as off balance sheet exposures. The exposure for SFT is determined based on the sum of an asset component and an add-on for

counterparty credit risk. When determining the asset component, netting of SFT receivables and payables is only allowed where specific conditions are met. The add-on for counterparty credit risk is determined as a net exposure from the transaction towards the institution's counterparty, taking the securities legs and regulatory netting into account. For off-balance sheet items the leverage exposure is determined based on the credit conversion factors used in the credit risk standardized approach subject to a floor of 10 %. From January 1, 2023 an additional leverage ratio buffer requirement of 50 % of the applicable G-SII buffer rate will apply. It is currently expected that this additional requirement will increase the leverage ratio requirement by 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.

Regulation (EU) 2019/876 has introduced a minimum Net Stable Funding Ratio (NSFR) of 100 % that requires banks to maintain a stable funding profile in relation to their on and off balance sheet exposures. The NSFR is calculated as the ratio of available stable funding (ASF) divided by required stable funding (RSF) and is applicable since the reporting period June 30, 2021. All liabilities and capital instruments are assigned an ASF weight, while assets and certain off balance sheet positions receive an RSF weight.

There is still uncertainty as to how some of the CRR / CRD rules should be interpreted and there are still related binding Technical Standards for which a final version is not yet available. Thus, we will continue to refine assumptions and models in line with evolution of these regulations 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 CRR/CRD measures may not be comparable with similarly labeled measures used by competitors as our competitors' assumptions and estimates may differ from Deutsche Banks.

## MREL (SRMR/BRRD) and TLAC (CRR)

Banks in the European Union are 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").

In addition and as required in the CRR, G-SIIs in Europe need to have at least the maximum of 18 % plus the combined buffer requirement of their RWA and 6.75 % of their LRE as Total Loss Absorbing Capacity ("TLAC").

Instruments which qualify for MREL and TLAC are own funds (Common Equity Tier 1, Additional Tier 1 and Tier 2) and 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, current and future MREL regulations allow the Single Resolution Board ("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.

MREL is determined by the competent resolution authorities for each supervised bank individually and depending on the preferred resolution strategy. In the case of Deutsche Bank AG, MREL is determined by the SRB. While there is no statutory minimum level of MREL, the CRR, SRMR, BRRD and delegated regulations 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).

In the fourth quarter of 2021, the SRB provided Deutsche Bank AG with the next update of its total MREL and subordinated MREL requirement. The update now reflects for the first time the legal changes of the banking reform package via amendments to the SRMR and the BRRD provided in June 2019 with the publication of Regulation (EU) 2019/877 and Directive (EU) 2019/879.

## 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, to apply effective risk management techniques and to maintain adequate capitalization. The Groups 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.

## New Definition of Default

In the third quarter of 2021, the Group introduced the new definition of default, which consists of two EBA guidelines. One guideline comprises an EBA technical standard regarding the materiality threshold for credit obligations past due (implemented with ECB regulation (EU) 2018/1845) and the second guideline covers the application of the definition of default. Both of these new requirements are jointly referred to below as EBA Guidelines on definition of default. The EBA Guidelines on definition of default replaced the default definition under Basel II and is applied to all key risk metrics throughout this Report, including as a trigger to Stage 3 in the Groups IFRS 9 expected credit loss (ECL) model.

## Key metrics

### Key metrics (Article 447 (a-g) and Article 438 (b) CRR)

In the following table EU KM1 we provide key regulatory metrics and ratios as well as related input components as defined by CRR and CRD. They comprise own funds, RWAs, capital ratios, additional requirements based on SREP, capital buffer requirements, leverage ratio, liquidity coverage ratio and net stable funding ratio.

## EU KM1 – Key metrics

in € m. (unless stated otherwise)		a	b	c	d
		Mar 31, 2022	Dec 31, 2021	Sep 30, 2021	Jun 30, 2021
<b>Available own funds (amounts)</b>					
1	Common Equity Tier 1 (CET 1) capital	46,687	46,506	45,633	45,476
2	Tier 1 capital	53,206	55,375	53,751	53,595
3	Total capital	63,093	62,732	61,203	61,128
<b>Risk weighted exposure amounts</b>					
4	Total risk-weighted exposure amount	364,431	351,629	350,733	344,945
<b>Capital ratios (as percentage of risk-weighted exposure amount)</b>					
5	Common Equity Tier 1 ratio (%)	12.8	13.2	13.0	13.2
6	Tier 1 ratio (%)	14.6	15.7	15.3	15.5
7	Total capital ratio (%)	17.3	17.8	17.5	17.7
<b>Additional own funds requirements based on SREP (as a percentage of risk-weighted exposure amount)</b>					
Additional own funds requirements to address risks other than the risk of excessive leverage (%)					
EU 7a	of which:	2.5	2.5	2.5	2.5
EU 7b	to be made up of CET 1 capital (percentage points)	1.4	1.4	1.4	1.4
EU 7c	to be made up of Tier 1 capital (percentage points)	1.9	1.9	1.9	1.9
EU 7d	Total SREP own funds requirements (%)	10.5	10.5	10.5	10.5
<b>Combined buffer requirement (as a percentage of risk-weighted exposure amount)</b>					
8	Capital conservation buffer (%)	2.5	2.5	2.5	2.5
Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)					
EU 8a		0.0	0.0	0.0	0.0
9	Institution specific countercyclical capital buffer (%)	0.02	0.03	0.02	0.02
EU 9a	Systemic risk buffer (%)	0.0	0.0	0.0	0.0
10	Global Systemically Important Institution buffer (%)	1.5	1.5	1.5	1.5
EU 10a	Other Systemically Important Institution buffer (%)	2.0	2.0	2.0	2.0
11	Combined buffer requirement (%)	4.5	4.5	4.5	4.5
EU 11a	Overall capital requirements (%)	15.0	15.0	15.0	15.0
12	CET 1 available after meeting the total SREP own funds requirements	24,507	25,738	24,376	24,909
<b>Leverage ratio<sup>2</sup></b>					
13	Leverage ratio total exposure measure	1,163,662	1,124,628	1,119,468	1,111,115
14	Leverage ratio (%)	4.6	4.9	4.7	4.7
<b>Additional own funds requirements to address risks of excessive leverage (as a percentage of leverage ratio total exposure amount)</b>					
Additional own funds requirements to address the risk of excessive leverage (%)					
EU 14a		0.0	0.0	0.0	0.0
EU 14b	of which: to be made up of CET 1 capital (percentage points)	0.0	0.0	0.0	0.0
EU 14c	Total SREP leverage ratio requirements (%)	3.2	3.2	3.2	3.2
<b>Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)</b>					
EU 14d	Leverage ratio buffer requirement (%)	0.0	0.0	0.0	0.0
EU 14e	Overall leverage ratio requirements (%)	3.2	3.2	3.2	3.2
<b>Liquidity Coverage Ratio</b>					
15	Total high-quality liquid assets (HQLA) (Weighted value - average)	218,448	219,604	220,467	221,606
EU 16a	Cash outflows - Total weighted value	211,611	212,302	212,397	212,712
EU 16b	Cash inflows - Total weighted value	55,092	57,441	58,515	61,603
16	Total net cash outflows (adjusted value)	156,519	154,861	153,882	151,109
17	Liquidity coverage ratio (%)	140	142	143	147
<b>Net Stable Funding Ratio</b>					
18	Total available stable funding	607,174	602,317	592,566	590,835
19	Total required stable funding	501,046	497,510	483,164	483,982
20	NSFR ratio (%) <sup>1</sup>	121	121	123	122

<sup>1</sup> NSFR has been updated for June 30, 2021

<sup>2</sup> Starting with the first quarter of 2022, the leverage ratio is presented as reported. The fully loaded definition has been discontinued in the first quarter 2022 due to immaterial differences. The comparison periods show the fully loaded numbers following EBA guidance and do not include the IFRS 9 transitional provision as per Article 473a of the CRR. The transitional impact amounted to € 20 million as of March 31, 2022, € 39 million as of December 31, 2021 and € 29 million as of September 30, 2021 as well as of June 30, 2021.

## Key metrics of own funds and eligible liabilities (Article 447 (h) CRR and Article 45i(3)(a,c) BRRD)

The table below provides summary information about Deutsche Bank Group's "Minimum requirement for own funds and eligible liabilities" ("MREL") and its "G-SII Requirement for own funds and eligible liabilities" ("TLAC").

### EU KM2 – Key metrics - MREL and G-SII Requirement for own funds and eligible liabilities (TLAC)

		Minimum requirement for own funds and eligible liabilities (MREL)		G-SII Requirement for own funds and eligible liabilities (TLAC)		d	e
		a		b	c		
in € m. (unless stated otherwise)		Mar 31, 2022	Dec 31, 2021	Mar 31, 2022	Dec 31, 2021	Sep 30, 2021	Jun 30, 2021
<b>Own funds and eligible liabilities, ratios and components</b>							
1	Own funds and eligible liabilities	119,408	114,853	110,007	109,094	108,721	108,145
EU-1a	Own funds and subordinated liabilities	110,007	109,094	–	–	–	–
2	Total risk exposure amount of the resolution group (TREA)	364,431	351,629	364,431	351,629	350,733	344,945
3	Own funds and eligible liabilities as percentage of TREA	32.77	32.66	30.19	31.03	31.00	31.35
of which:							
EU-3a	Own funds and subordinated liabilities	30.19	31.03	–	–	–	–
4	Total exposure measure of the resolution group (TEM)	1,163,662	1,124,667	1,163,662	1,124,667	1,119,497 <sup>1</sup>	1,111,144 <sup>1</sup>
5	Own funds and eligible liabilities as percentage of TEM	10.26	10.21	9.45	9.70	9.71 <sup>1</sup>	9.73 <sup>1</sup>
of which:							
EU-5a	Own funds and subordinated liabilities	9.45	9.70	–	–	–	–
6a	Does the subordination exemption in Article 72b(4) of the CRR apply? (5% exemption)	–	–	no	no	no	no
6b	Pro-memo item - Aggregate amount of permitted non-subordinated eligible liabilities instruments if the subordination discretion as per Article 72b(3) CRR is applied (max 3.5% exemption)	–	–	0	0	0	0
6c	Pro-memo item: If a capped subordination exemption applies under Article 72b (3) CRR, the amount of funding issued that ranks pari passu with excluded liabilities and that is recognized under row 1, divided by funding issued that ranks pari passu with excluded Liabilities and that would be recognized under row 1 if no cap was applied (%)	–	–	0	0	0	0
<b>Minimum requirement for own funds and eligible liabilities (MREL)</b>							
EU-7	MREL requirement expressed as percentage of the TREA	24.05	24.05	–	–	–	–
of which:							
EU-8	to be met with own funds or subordinated liabilities	20.27	20.27	–	–	–	–
EU-9	MREL requirement expressed as percentage of TEM	6.88	6.88	–	–	–	–
of which:							
EU-10	to be met with own funds or subordinated liabilities	6.88	6.88	–	–	–	–

<sup>1</sup> Numbers have been updated.

As of March 31, 2022 the MREL ratio was 32.77 % as percentage of Total Risk Exposure Amount (TREA) compared to a requirement of 28.57 % of TREA including the 4.53 % combined buffer requirement, equalling a surplus of € 15.3 billion above its MREL requirement. The subordinated MREL ratio was 30.19 % as percentage of TREA compared to a requirement of 24.79 % of TREA including the 4.53 % combined buffer requirement. The subordinated MREL surplus is € 19.7 billion.

As of March 31, 2022 the TLAC ratio was 30.19 % as percentage of TREA compared to a requirement of 22.53 % including the 4.53 % combined buffer requirement, resulting in a surplus of € 27.9 billion. TLAC as a percentage of TEM was 9.45 % compared to a requirement of 6.75 %, which corresponds to a surplus of € 31.5 billion.

## Own funds

### Transitional arrangements for mitigating the impact of the introduction of IFRS 9 on own funds (Article 473a CRR)

As of June 30, 2020, we applied the transitional arrangements in relation to IFRS 9 as provided in Article 473a CRR to all of the CET 1 measures. The CRR allowed for a phase-in of the CET 1 reduction due to the increase in credit loss allowance, as a result of the implementation of IFRS 9, 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 and the phase-in period was extended until year-end 2024 (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 where the phase-in percentages have been modified to reflect the extended phase-in period).

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 applied. The same amount is included in the leverage exposure. The Group do make use of this simplification in application of transitional provisions.

The capital add back as of March 31, 2022 is € 19.7 million which includes € 14.6 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 from both CRSA and IBRA portfolios which compares credit loss allowance levels between January, 1 2018 and January, 1 2020. This is due to a reduction in credit loss allowance levels in the aforementioned period for the CRSA portfolio and the regulatory expected loss exceeding the credit loss allowance levels for the IRBA portfolio.

There is a contribution of € 5.1 million from the dynamic component which compares the credit loss allowance levels since January 1, 2020 and the reporting date. This is due to an increase in provisions for the CRSA portfolio since January 1, 2020.

The impact of the € 19.7 million capital add back as of March 31, 2022 on the 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. Therefore template 'IFRS 9-FL: Comparison of institutions' own funds and capital and leverage ratios with and without the application of transitional arrangements for IFRS 9 or analogous ECLs' is not being disclosed due to immateriality.

### Temporary treatment of unrealized gains and losses measured at fair value through other comprehensive income (Article 468 CRR)

Deutsche Bank did not elect to apply the new Article 468 of CRR 'quick fix' which relates to the temporary treatment of unrealized gains and losses measured at fair value through other comprehensive income in view of the COVID-19 pandemic.



# Capital requirements

## Overview of RWA and capital requirements (Article 438 (d) CRR)

The table below shows RWA broken down by risk types and model approaches compared to the previous quarter end. It also shows the corresponding minimum capital requirements, which is derived by multiplying the respective RWA by an 8 % capital ratio.

### EU OV1 – Overview of RWA

		Mar 31, 2022		Dec 31, 2021	
		a	c1	b	c2
in €m.		RWA	Minimum capital requirements	RWA	Minimum capital requirements
1	Credit risk (excluding CCR)	224,482	17,959	212,294	16,984
	of which:				
2	The standardized approach (SA)	18,640	1,491	19,056	1,524
3	The foundation IRB (FIRB) approach	2,092	167	2,071	166
4	Slotting approach	680	54	699	56
EU 4a	Equities under the simple riskweighted approach	13,234	1,059	13,539	1,083
5	The advanced IRB (AIRB) approach	189,836	15,187	176,929	14,154
6	Counterparty credit risk (CCR)	30,686	2,455	31,285	2,503
	of which:				
7	The standardized approach	2,783	223	2,217	177
8	Internal model method (IMM)	19,045	1,524	19,957	1,597
EU 8a	Risk exposure to a CCP	655	52	737	59
EU 8b	Credit Valuation Adjustment (CVA)	6,256	501	6,327	506
9	Other CCR	1,948	156	2,047	164
15	Settlement risk	295	24	60	5
16	Securitization exposures in the banking book (after the cap)	12,555	1,004	12,189	975
	of which:				
17	SEC-IRBA approach	7,302	584	7,124	570
18	SEC-ERBA (including IAA)	532	43	476	38
19	SEC-SA approach	4,312	345	4,079	326
EU 19a	1250% / deduction	408	33	509	41
20	Market risk	21,939	1,755	19,773	1,582
	of which:				
20	Standardized approach	3,255	260	3,071	246
21	IMA	18,683	1,495	16,702	1,336
EU 22a	Large exposures	0	0	0	0
23	Operational risk	60,369	4,829	61,718	4,937
	of which:				
EU 23a	Basic indicator approach	0	0	0	0
EU 23b	Standardized approach	0	0	0	0
EU 23c	Advanced measurement approach	60,369	4,829	61,718	4,937
24	Amounts below the thresholds for deduction (subject to 250% risk weight)	14,106	1,128	14,311	1,145
29	Total	364,431	29,154	351,629	28,130

As of March 31, 2022, RWA was € 364.4 billion compared to € 351.6 billion as of December 31, 2021. The increase of € 12.8 billion was primarily driven by credit risk (excluding CCR) and market risk, which was partially offset by reductions in operational risk and counterparty credit risk (CCR) RWA. The increase in credit risk RWA (excluding CCR) by € 12.2 billion was mainly driven by impacts resulting from ECB mandated model adjustments, changes in counterparty ratings, business growth within the Core Bank and foreign exchange movements. The market risk RWA increased by € 2.2 billion primarily driven by the Stressed Value-at-Risk (SVaR) component, included in the internal model approach (IMA), due the change of the SVaR window from the Euro crisis to the COVID crisis. These RWA increases were partly offset by decreased operational risk RWA of € 1.3 billion resulting from a more favorable development of the Groups internal loss profile feeding into the capital model and a reduction due to updates to the qualitative adjustments. Additionally, counterparty credit risk (CCR) RWA decreased by € 0.6 billion mainly due to reduced internal model method (IMM)-exposure and termination of trades within the Investment Bank and Capital Release Unit, partly offset by an increase within the standardized approach.

The movements of RWA for credit and market risk are discussed below in sections “Development of credit risk RWA (Article 438 (h) CRR)”, “CCR exposures development (Article 438 (h) CRR)” and “Development of market risk RWA (Article 438 (h) CRR)”.

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

## Development of credit risk RWA (Article 438 (h) CRR)

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 the IRB approaches in the current and previous reporting period.

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

		Three months ended Mar 31, 2022	Three months ended Dec 31, 2021
		a	a
in € m.		RWA	RWA
1	Risk weighted exposure amount as at the end of the previous reporting period	179,700	175,642
2	Asset size	4,877	996
3	Asset quality	1,285	1,809
4	Model updates	(135)	(136)
5	Methodology and policy	5,541	116
6	Acquisitions and disposals	0	0
7	Foreign exchange movements	1,341	1,273
8	Other	0	0
9	Risk weighted exposure amount as at the end of the reporting period	192,608	179,700

Organic changes in the Groups portfolio size and composition are considered in the category “asset size”. The category “asset quality” 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 further roll out of advanced internal models. 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 acquisition 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 7.2 % or € 12.9 billion since December 31, 2021 is primarily observed in the “methodology and policy” category, which includes impacts resulting from ECB mandated model adjustments. The category “asset quality” reflects an RWA increase stemming from counterparty ratings deterioration, particularly relating to Russian clients, and parameter recalibrations. Additionally, an increase in the category “asset size” reflects growing client demand within the Core Bank business, partially offset by de-risking in the Capital Release Unit. Further increases resulted from Foreign exchange movements.

## Counterparty credit risk (CCR)

### CCR exposures development (Article 438 (h) CRR)

The following table provides an analysis of key drivers for RWA movements observed for counterparty credit risk exposures calculated under the internal model method (IMM) in the current and previous reporting period.

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

in €m.	Three months ended Mar 31, 2022	Three months ended Dec 31, 2021
	a	a
	RWA	RWA
1 Counterparty credit risk RWA under the IMM opening balance	<b>20,171</b>	<b>19,894</b>
2 Asset size	(1,322)	177
3 Credit quality of counterparties	(18)	(155)
4 Model updates (IMM only)	0	0
5 Methodology and policy (IMM only)	0	0
6 Acquisitions and disposals	0	0
7 Foreign exchange movements	385	255
8 Other	0	0
9 Counterparty credit risk RWA under the IMM closing balance	<b>19,216</b>	20,171

Organic changes in portfolio size and composition are considered in the category “asset size”. The category “credit quality of counterparties” represents the effects from portfolio rating migrations, loss given default, model parameter recalibrations as well as collateral coverage and netting activities. “Model updates (IMM only)” include model refinements and further roll out of advanced internal models. RWA movements resulting from externally, regulatory-driven changes, e.g. applying new regulations, are considered in the “methodology and policy (IMM only)” section. “Acquisition and disposals” shows significant exposure movements which can be clearly assigned to acquisition 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 4.7 % or € 1.0 billion since December 31, 2021. The decrease in “asset size” reflects reduced IMM-exposure and termination of trades within the Investment Bank and Capital Release Unit. This was partly offset by increases stemming from Foreign exchange movements.

## Market risk

### Own funds requirements for market risk under the IMA

#### Development of market risk RWA (Article 438 (h) CRR)

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

in €m.	Three months ended Mar 31, 2022						
	a	b	c	d	e	f	g
	VaR	SVaR	IRC	Compre- hensive risk measure	Other <sup>2</sup>	Total RWA	Total capital requirements
<b>1</b> Market Risk RWA opening balance	<b>3,538</b>	<b>9,360</b>	<b>3,657</b>	–	<b>147</b>	<b>16,702</b>	<b>1,336</b>
1a Regulatory adjustment <sup>1</sup>	(2,625)	(6,996)	0	–	0	(9,621)	(770)
1b RWA at the previous quarter-end (end of the day)	913	2,364	3,657	–	147	7,081	566
<b>2</b> Movement in risk levels	<b>432</b>	<b>619</b>	<b>18</b>	–	<b>(147)</b>	<b>921</b>	<b>74</b>
3 Model updates/changes	0	0	0	–	0	0	0
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	13	1,256	0	–	0	1,269	102
7 Other	0	0	0	–	0	0	0
8a RWA at the end of the reporting period (end of the day)	1,357	4,239	3,675	–	0	9,271	742
8b Regulatory adjustment <sup>1</sup>	2,530	6,860	23	–	0	9,412	753
<b>8</b> Market Risk RWA closing balance	<b>3,887</b>	<b>11,099</b>	<b>3,698</b>	–	<b>0</b>	<b>18,683</b>	<b>1,495</b>

<sup>1</sup> Indicates the difference between reported RWA (based on 60day average) and RWA (based on VaR / SVaR as of quarter-end) at the beginning (1b) and end (8b) of period.

<sup>2</sup> Other includes risks that exceed the incremental impact of Risk Not In VaR (RNIV) thresholds and therefore need to be capitalized. As of December 31, 2021 the threshold was exceeded by €147 million and was capitalized. As of March 31, 2022, the RNIV threshold was not exceeded and the €147 million from the prior quarter was reversed.

in €m.	Three months ended Dec 31, 2021						
	a	b	c	d	e	f	g
	VaR	SVaR	IRC	Compre- hensive risk measure	Other <sup>2</sup>	Total RWA	Total capital requirements
<b>1</b> Market Risk RWA opening balance	<b>3,063</b>	<b>8,681</b>	<b>6,948</b>	–	<b>0</b>	<b>18,692</b>	<b>1,495</b>
1a Regulatory adjustment <sup>1</sup>	(2,272)	(5,751)	0	–	0	(8,023)	(642)
1b RWA at the previous quarter-end (end of the day)	791	2,930	6,948	–	0	10,668	853
<b>2</b> Movement in risk levels	<b>(113)</b>	<b>(628)</b>	<b>(3,291)</b>	–	<b>147</b>	<b>(3,885)</b>	<b>(311)</b>
3 Model updates/changes	0	0	0	–	0	0	0
4 Methodology and policy	0	63	0	–	0	63	5
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	235	0	0	–	0	235	19
7 Other	0	0	0	–	0	0	0
8a RWA at the end of the reporting period (end of the day)	913	2,364	3,657	–	147	7,081	566
8b Regulatory adjustment <sup>1</sup>	2,625	6,996	0	–	0	9,621	770
<b>8</b> Market Risk RWA closing balance	<b>3,538</b>	<b>9,360</b>	<b>3,657</b>	–	<b>147</b>	<b>16,702</b>	<b>1,336</b>

<sup>1</sup> Indicates the difference between reported RWA (based on 60day average) and RWA (based on VaR / SVaR as of quarter-end) at the beginning (1b) and end (8b) of period.

<sup>2</sup> Other includes risks that exceed the incremental impact of Risk Not In VaR (RNIV) thresholds and therefore need to be capitalized. As of December 31, 2021 the threshold was exceeded by €147 million and was capitalized. As of March 31, 2022, the RNIV threshold was not exceeded and the €147 million from the prior quarter was reversed.

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 acquisitions 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, 2022, the IMA components for market risk totaled €18.7 billion, which was an increase of €2 billion since December 31, 2021. The increase in average stressed value-at-risk is driven by change in SVaR window from Euro crisis (August 02, 2011 – July 30, 2012) to Covid crisis (June 04, 2019 – June 01, 2020), worsening of FX non-linear exposures and reduction in short EUR rates exposure. The increase in average value-at-risk is driven by reduction in long interest rates volatility exposure.

## Liquidity risk

### Qualitative information on LCR (Article 451a CRR) (EU LIQB)

#### The Liquidity Coverage Ratio (LCR)

The LCR is intended to promote the short-term resilience of a bank's liquidity risk profile over a 30 day stress scenario. The ratio is defined as the amount of High Quality Liquid Assets ("HQLA") that could be used to raise liquidity, measured against the total volume of net cash outflows, arising from both contractual and modelled exposures, in a stressed scenario.

This requirement has been implemented into European law, via the Commission Delegated Regulation (EU) 2015/61, adopted in October 2014. Compliance with the LCR was required in the EU from October 1, 2015.

Our average LCR of 140 % (twelve months average) has been calculated in accordance with the Commission Delegated Regulation (EU) 2015/61 and the EBA Guidelines on LCR disclosure to complement the disclosure of liquidity risk management under Article 435 CRR.

The Group's Liquidity Coverage Ratio (LCR) was 135% as of March 31, 2022, or €55 billion of excess over the regulatory minimum of 100 %. This compares to 133%, or €52 billion of excess liquidity at December 31, 2021. The marginal increase in surplus was primarily driven by net new capital market issuances and retail deposit inflows partially offset by loan growth and higher outflows from commitments.

#### Concentration of funding and liquidity sources

Diversification of our funding profile in terms of investor types, regions and products is an important element of our liquidity risk management framework. Our most stable funding sources for which the Bank has introduced a minimum risk appetite stem from capital markets issuances and equity, as well as from retail, and transaction banking clients. Other customer deposits and secured funding and short positions are additional sources of funding. Unsecured wholesale funding represents unsecured wholesale liabilities sourced primarily by our Treasury Pool Management team. Given the relatively short-term nature of these liabilities, they are predominantly used to fund liquid trading assets.

To promote the additional diversification of our refinancing activities, we hold a license to issue mortgage Pfandbriefe. We continue to run a program for the purpose of issuing Covered Bonds under Spanish law (Cedulas) and participate in the TLTRO III program. Additionally, we expanded in 2020 our potential investor base by introducing our Sustainable Finance Framework and issued a Green Bond in June 2020.

Unsecured wholesale funding comprises a range of institutional products, such as Certificate of Deposits (CDs), Commercial Papers (CPs) as well as Money Market deposits.

To avoid any unwanted reliance on these short-term funding sources, and to promote a sound funding profile which complies with the defined risk appetite, we have implemented limits (across tenors) on these funding sources which are derived from our daily stress testing analysis. In addition, we limit the total volume of unsecured wholesale funding to manage the reliance on this funding source as part of the overall funding diversification.

#### Composition of HQLA

The average HQLA of 218 billion has been calculated in accordance with the Commission Delegated Regulation (EU) 2015/61 and the EBA Guidelines on LCR disclosure to complement the disclosure of liquidity risk management under Article 435 CRR.

The HQLA as of March 31, 2022 of 214 billion is primarily held in Level 1 cash and central bank reserves (66%) and Level 1 high quality securities (32%). This compares to 207 billion as of December 31, 2021 primarily held in Level 1 cash and central bank reserves (81%) and Level 1 high quality securities (17%).

#### Derivative exposures and potential collateral calls

The majority of outflows related to derivative exposures and other collateral requirements shown in item 11 are in relation to derivative contractual cash outflows that are offset by derivative cash inflows shown in item 19 Other cash inflows.

Other significant outflows relate to the impact of an adverse market scenario on derivatives based on the 24 month historical look back approach and the potential posting of additional collateral as a result of a 3 notch downgrade of DB's credit rating (as per regulatory requirements).

#### Currency mismatch in the LCR

The LCR is calculated for EUR, USD and GBP which have been identified as significant currencies (having liabilities > 5 % of total group liabilities excluding regulatory capital and off balance sheet liabilities) in accordance with the Commission Delegated Regulation (EU) 2015/61. No explicit LCR risk appetite is set for the significant currencies. However, limits have been defined over the respective significant currency stressed Net Liquidity Position (sNLP). This allows the internal monitoring and management of risks stemming from currency mismatches that may arise from liquidity inflows and outflows over the short-term horizon.

#### Other items in the LCR calculation that are not captured in the LCR disclosure template but that the institution considers relevant for its liquidity profile

The Pillar 3 disclosure obligations require Banks to disclose the 12 months rolling averages each quarter. We do not consider anything else relevant for disclosure.

## Quantitative information on LCR (Article 451a CRR)

### EU LIQ1 – LCR disclosure template

in € b.		Total unweighted value (average)				Total weighted value (average)			
Quarter ending on		Mar 31, 2022	Dec 31, 2021	Sep 30, 2021	Jun 30, 2021	Mar 31, 2022	Dec 31, 2021	Sep 30, 2021	Jun 30, 2021
	Number of data points used in the calculation of averages	12	12	12	12	12	12	12	12
	<b>High-quality liquid assets</b>								
1	Total high-quality liquid assets (HQLA)	–	–	–	–	218	220	220	222
	<b>Cash-outflows</b>								
2	Retail deposits and deposits from small business costumers	279	280	281	279	16	16	17	17
	of which:								
3	Stable deposits	123	120	116	114	6	6	6	6
4	Less stable deposits	72	77	81	82	9	10	11	11
5	Unsecured wholesale funding	235	228	222	216	101	98	95	91
	of which:								
6	Operational deposits (all counterparties) and deposits in network of cooperative banks	84	83	82	83	21	20	20	21
7	Non-operational deposits (all counterparties)	149	144	137	132	79	76	73	69
8	Unsecured debt	2	2	2	2	2	2	2	2
9	Secured wholesale funding	–	–	–	–	15	17	19	19
10	Additional requirements	207	203	200	200	66	68	69	73
	of which:								
11	Outflows related to derivative exposures and other collateral requirements	25	27	28	32	20	23	25	30
12	Outflows related to loss of funding on debt products	0	0	0	0	0	0	0	0
13	Credit and liquidity facilities	181	176	172	168	46	45	44	43
14	Other contractual funding obligations	61	56	51	47	8	7	7	6
15	Other contingent funding obligations	201	173	142	127	5	5	5	6
16	Total cash outflows	–	–	–	–	212	212	212	213
	<b>Cash - inflows</b>								
17	Secured lending (e.g. reverse repos)	300	280	265	251	16	17	17	18
18	Inflows from fully performing exposures	49	47	44	42	34	33	31	30
19	Other cash inflows	8	11	13	18	8	11	13	18
EU 19a	Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies	–	–	–	–	3	3	3	4
EU 19b	Excess inflows from a related specialized credit institution	–	–	–	–	0	0	0	0
20	Total cash inflows	357	337	322	310	55	57	59	62
	of which:								
EU 20a	Fully exempt inflows	0	0	0	0	0	0	0	0
EU 20b	Inflows subject to 90 % cap	0	0	0	0	0	0	0	0
EU 20c	Inflows subject to 75 % cap	324	305	290	281	55	57	59	62
	<b>Total adjusted value</b>								
21	Liquidity buffer	–	–	–	–	218	220	220	222
22	Total net cash outflows	–	–	–	–	157	155	154	151
23	Liquidity coverage ratio (%)	–	–	–	–	140	142	143	147

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