Deutsche Bank

Pillar 3 Report as of March 31, 2023

Content

Regulatory framework

Basis of Presentation

Article 431 (1), (2) CRR, 433 CRR and 433a CRR
This Pillar 3 Report provides disclosures for the consolidated Deutsche Bank Group (the Group or the bank) 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 (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 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 Group adheres to the frequency of disclosure requirements as per Article 433 and 433a of the CRR and as provided within these EBA Guidelines and includes comparative periods in accordance with the requirements of EBA ITS. For those disclosures required only on an annual basis, the comparative period will be to the prior year. For those disclosures only required on a semi-annual basis, the comparative period is the prior half-year. Disclosures required on a quarterly basis generally include comparative information for prior quarter.

The information provided in this Pillar 3 Report is unaudited. Numbers presented throughout this document may not add up precisely to the totals and percentages may not precisely reflect the absolute figures due to rounding.

Basel 3 and CRR/CRD

The CRR/CRD lays the foundation for the calculation of the minimum regulatory requirements with respect to own funds and eligible liabilities, the liquidity coverage ratio and the net stable funding ratio.

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 minimum regulatory leverage ratio of 3% is increased if certain Euro-based exposures facing Eurosystem central banks are excluded from the leverage exposure. This was the case based on Decision (EU) 2021/1074 of the European Central Bank until March 31, 2022. From January 1, 2023 an additional leverage ratio buffer requirement of 50% of the applicable Global Systemic Important Institutions (G-SII) buffer rate applies. This additional requirement increases the leverage ratio requirement by 0.75%.

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, the Group 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 their assumptions and estimates may differ from Deutsche Bank’s.

MREL and TLAC

Banks in the European Union are required to meet at all times a minimum requirement for own funds and eligible liabilities 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, the CRR requires G-SIIs in Europe to have at least the maximum of 18% plus the combined buffer requirement of RWA and 6.75% of leverage exposure as total loss absorbing capacity.

Instruments which qualify for MREL and TLAC as own funds are Common Equity Tier 1, Additional Tier 1 and Tier 2 along with 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, MREL regulations allow the Single Resolution Board (SRB) to also set an additional subordination requirement within the MREL requirements (but separate from TLAC), which allows only subordinated liabilities and own funds to be counted.

MREL is determined by the competent resolution authorities for each supervised bank and its 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). Deutsche Bank AG received its current total MREL and current subordinated MREL requirement with immediate applicability in the second quarter of 2022.

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 Group's 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.

Key metrics

Article 447 (a-g) and Article 438 (b) CRR
The following table highlights Deutsche Bank's key regulatory metrics and ratios, and related input components as defined by CRR and CRD. In line with disclosure requirments the Liquidity Coverage Ratio is based on 12 months rolling averages and the other metrics are based on spot information.

EU KM1 – Key metrics

		a	b	c	d	e
	in € m. (unless stated otherwise)	Mar 31, 2023	Dec 31, 2022	Sep 30, 2022	Jun 30, 2022	Mar 31, 2022
	Available own funds (amounts)					
1	Common Equity Tier 1 (CET 1) capital	48,926	48,097	49,202	47,932	46,687
2	Tier 1 capital	57,254	56,616	56,470	55,201	53,206
3	Total capital	66,512	66,146	66,706	65,246	63,093
	Risk weighted exposure amounts					
4	Total risk-weighted exposure amount	359,534	360,003	369,210	369,970	364,431
	Capital ratios (as percentage of risk.weighted exposure amount)					
5	Common Equity Tier 1 ratio (%)	13.6	13.4	13.3	13.0	12.8
6	Tier 1 ratio (%)	15.9	15.7	15.3	14.9	14.6
7	Total capital ratio (%)	18.5	18.4	18.1	17.6	17.3
	Additional own funds requirements based on SREP (as a percentage of risk-weighted exposure amount)					
EU 7a	Additional own funds requirements to address risks other than the risk of excessive leverage (%)	2.7	2.5	2.5	2.5	2.5
EU 7b	of which: to be made up of CET 1 capital (percentage points)	1.5	1.4	1.4	1.4	1.4
EU 7c	to be made up of Tier 1 capital (percentage points)	2.0	1.9	1.9	1.9	1.9
EU 7d	Total SREP own funds requirements (%)	10.7	10.5	10.5	10.5	10.5
	Combined buffer requirement (as a percentage of risk-weighted exposure amount)					
8	Capital conservation buffer (%)	2.5	2.5	2.5	2.5	2.5
EU 8a	Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)	0.0	0.0	0.0	0.0	0.0
9	Institution specific countercyclical capital buffer (%)	0.38	0.07	0.03	0.02	0.02
EU 9a	Systemic risk buffer (%)	0.2	0.0	0.0	0.0	0.0
10	Global Systemically Important Institution buffer (%)	1.5	1.5	1.5	1.5	1.5
EU 10a	Other Systemically Important Institution buffer (%)	2.0	2.0	2.0	2.0	2.0
11	Combined buffer requirement (%)	5.1	4.6	4.5	4.5	4.5
EU 11a	Overall capital requirements (%)	15.8	15.1	15.0	15.0	15.0
12	CET 1 available after meeting the total SREP own funds requirements (%)	7.6	7.5	7.4	7.0	6.7
	CET 1 available after meeting the total SREP own funds requirements	27,286	26,834	27,395	26,066	24,507
	Leverage ratio[1]					
13	Leverage ratio total exposure measure	1,237,814	1,240,483	1,309,900	1,279,798	1,163,662
14	Leverage ratio (%)	4.6	4.6	4.3	4.3	4.6
	Additional own funds requirements to address risks of excessive leverage (as a percentage of leverage ratio total exposure amount)					
EU 14a	Additional own funds requirements to address the risk of excessive leverage (%)	0.0	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	0.0
EU 14c	Total SREP leverage ratio requirements (%)	3.0	3.0	3.0	3.0	3.2
	Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)					
EU 14d	Leverage ratio buffer requirement (%)	0.8	0.0	0.0	0.0	0.0
EU 14e	Overall leverage ratio requirements (%)	3.8	3.0	3.0	3.0	3.2
	Liquidity Coverage Ratio					
15	Total high-quality liquid assets (HQLA) (Weighted value - average)	218,535	217,925	217,686	215,480	218,448
EU 16a	Cash outflows - Total weighted value	218,746	220,132	217,308	214,162	211,611
EU 16b	Cash inflows - Total weighted value	57,603	58,887	57,625	56,978	55,092
16	Total net cash outflows (adjusted value)	161,143	161,245	159,683	157,184	156,519
17	Liquidity coverage ratio (%)	136	135	136	137	140
	Net Stable Funding Ratio					
18	Total available stable funding	594,721	605,783	606,353	598,440	607,170
19	Total required stable funding	496,579	506,698	521,760	513,910	501,030
20	NSFR ratio (%)	120	120	116	116	121

[1] Since April 1, 2022 Deutsche Bank no longer excludes certain central bank exposures, based on Article 429a (1) (n) CRR and the ECB Decision 2021/1074 as this temporary exemption during the COVID-19 pandemic ended on March 31, 2022; not applying the temporary exclusion of certain central bank exposures, the leverage exposure was € 1,247 billion as of March 31, 2022 and the corresponding leverage ratio was 4.3%

Key metrics of own funds and eligible liabilities

Article 447 (h) CRR and Article 45i(3)(a,c) BRRD

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)				
		a		b	c	d	e	f
in € m. (unless stated otherwise)		Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022	Sep 30, 2022	Jun 30, 2022	Mar 31, 2022
	Own funds and eligible liabilities, ratios and components							
1	Own funds and eligible liabilities	126,850	123,674	118,800	115,907	118,585	114,690	110,007
EU 1a	Own funds and subordinated liabilities	118,800	115,907	–	–	–	–	–
2	Total risk exposure amount of the resolution group (TREA)	359,534	360,003	359,534	360,003	369,210	369,970	364,431
3	Own funds and eligible liabilities as percentage of TREA	35.28	34.35	33.04	32.20	32.12	31.00	30.19
	of which:							
EU 3a	Own funds and subordinated liabilities	33.04	32.20	–	–	–	–	–
4	Total exposure measure of the resolution group (TEM)	1,237,814	1,240,483	1,237,814	1,240,483	1,309,900	1,279,798	0
5	Own funds and eligible liabilities as percentage of TEM	10.25	9.97	9.60	9.34	9.05	8.96	9.45
	of which:							
EU 5a	Own funds and subordinated liabilities	9.60	9.34	–	–	–	–	–
6a	Does the subordination exemption in Article 72b(4) of the CRR apply? (5% exemption)	–	–	no	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	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	0
	Minimum requirement for own funds and eligible liabilities (MREL)							
EU 7	MREL requirement expressed as percentage of the TREA	29.97	24.89	–	–	–	–	–
	of which:							
EU 8	to be met with own funds or subordinated liabilities	25.36	20.28	–	–	–	–	–
EU 9	MREL requirement expressed as percentage of TEM	7.01	7.01	–	–	–	–	–
	of which:							
EU 10	to be met with own funds or subordinated liabilities	7.01	7.01	–	–	–	–	–

As of March 31, 2023 the MREL ratio was 35.28% of Total Risk Exposure Amount (TREA) compared to a requirement of 29.97% of TREA including the 5.08% combined buffer requirement, equalling a surplus of € 19.1 billion above the bank's MREL requirement. The subordinated MREL ratio was 33.04% of TREA compared to a requirement of 25.36% of TREA including the 5.08% combined buffer requirement. The subordinated MREL surplus is € 27.6 billion.

As of March 31, 2023 the TLAC ratio was 33.04% of TREA compared to a requirement of 23.08% including the 5.08% combined buffer requirement, resulting in a surplus of € 35.8 billion. TLAC was 9.60% of TEM compared to a requirement of 6.75%, which corresponds to a surplus of € 35.2 billion.

Capital

IFRS 9 transitional arrangements on own funds

Article 473a CRR

As of June 30, 2020, Deutsche Bank 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 phase-in period of five years has expired at the end of 2022.

As per the CRR amendment published on June 26, 2020, the transitional provisions and phase-in percentages 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 until 2024.

The capital add back for the IFRS 9 transitional arrangements as of March 31, 2023 is € 1.7 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 credit risk standardized approach portfolio since January 1, 2020.

The impact of the € 1.7 million capital add-back as of March 31, 2023 on the CET 1, Tier 1 and Total Capital as well as risk weighted assets and leverage exposure did not result in a material change to the 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 disclosed due to immateriality.

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, 2023		Dec 31, 2022	
		a	c1	b	c2
	in € m.	RWA	Minimum capital requirements	RWA	Minimum capital requirements
1	Credit risk (excluding CCR)	220,050	17,604	219,190	17,535
	of which:				
2	The standardized approach (SA)	18,057	1,445	17,956	1,436
3	The foundation IRB (FIRB) approach	1,105	88	1,159	93
4	Slotting approach	554	44	601	48
EU 4a	Equities under the simple riskweighted approach	9,615	769	9,074	726
5	The advanced IRB (AIRB) approach	190,719	15,258	190,400	15,232
6	Counterparty credit risk (CCR)	30,640	2,451	29,997	2,400
	of which:				
7	The standardized approach	1,716	137	2,216	177
8	Internal model method (IMM)	18,879	1,510	19,251	1,540
EU 8a	Risk exposure to a CCP	1,123	90	975	78
EU 8b	Credit Valuation Adjustment (CVA)	6,165	493	6,184	495
9	Other CCR	2,756	220	1,370	110
15	Settlement risk	211	17	124	10
16	Securitization exposures in the banking book (after the cap)	12,795	1,024	13,092	1,047
	of which:				
17	SEC-IRBA approach	7,039	563	7,136	571
18	SEC-ERBA (including IAA)	639	51	678	54
19	SEC-SA approach	4,887	391	5,015	401
EU 19a	1250% / deduction	229	18	263	21
20	Market risk	24,471	1,958	26,131	2,090
	of which:				
20	Standardized approach	3,041	243	2,857	229
21	IMA	21,430	1,714	23,274	1,862
EU 22a	Large exposures	0	0	0	0
23	Operational risk	58,937	4,715	58,349	4,668
	of which:				
EU 23a	Basic indicator approach	0	0	0	0
EU 23b	Standardized approach	0	0	0	0
EU 23c	Advanced measurement approach	58,937	4,715	58,349	4,668
24	Amounts below the thresholds for deduction (subject to 250% risk weight)	12,430	994	13,120	1,050
29	Total	**359,534**	**28,763**	360,003	28,800

As of March 31, 2023, RWA was € 359.5 billion compared to € 360.0 billion as of December 31, 2022. The decrease of € 0.5 billion was primarily driven by the RWA for market risk, the amounts below threshold for deduction (subject to 250% risk weight) and the RWA for securitization exposures in the banking book (after cap), which was partially offset by increased RWA for credit risk (excluding counterparty credit risk), RWA for counterparty credit risk and RWA for operational risk.

The reduction in market risk RWA by € 1.7 billion was primarily driven by decreases in the Value-at-Risk and Stressed Value-at-Risk components due to a lower Capital Multiplier, following a reduction in the qualitative component. Exposure changes also led to a lower Stressed Value-at-Risk but a higher Incremental Risk Charge that offset each other. RWA for amounts below the thresholds for deduction (subject to 250% risk weight) decreased by € 0.7 billion and was primarily driven by lower RWA for deferred tax assets. Additionally, the RWA for securitization exposures in the banking book (after the cap) decreased by € 0.3 billion mainly driven by lower RWA for the securitization under the standardized and the IRB approach.

These decreases were partially offset by the increase in credit risk RWA (excluding counterparty credit risk) by € 0.9 billion which was mainly driven by the increase of € 0.5 billion in RWA for equities under simple risk weighted approach due to higher exposures in other equities. Additionally, RWA in the advanced IRB approach increased by € 0.3 billion primarily stemming from counterparty ratings deterioration and increased client demand, which was partially offset by foreign exchange movements. The increase of € 0.6 billion for counterparty credit risk RWA was mainly driven by the increase of € 1.4 billion in other CCR due to increased exposures for securities financing transactions under the financial collateral comprehensive method. This increase for counterparty credit risk was partially offset by reductions of € 0.5 billion under the standardized approach due to a decrease in exposures with corporates as well as € 0.4 billion for the internal model method mainly due to foreign exchange movements.

The movements of RWA for credit and market risk are discussed below in sections “Development of credit risk RWA”, “CCR exposures development” and “Development of market risk RWA”.

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, 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, 2023	Three months ended Dec 31, 2022
		a	a
	in € m.	RWA	RWA
1	Risk weighted exposure amount as at the end of the previous reporting period	**192,160**	195,887
2	Asset size	312	1,552
3	Asset quality	1,277	(2,016)
4	Model updates	0	0
5	Methodology and policy	(78)	2,998
6	Acquisitions and disposals	0	0
7	Foreign exchange movements	(1,293)	(6,261)
8	Other	0	0
9	Risk weighted exposure amount as at the end of the reporting period	**192,378**	192,160

Organic changes in the Group’s 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” is relating to 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 0.1% or € 0.2 billion since December 31, 2022, is primarily resulting from the category “asset quality” which reflects a RWA increase stemming particular from counterparty ratings deterioration. Additionally, the increase in category “asset size” reflects growing client demand. This increase was partly offset by 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

		Three months ended Mar 31, 2023	Three months ended Dec 31, 2022
		a	a
	in € m.	RWA	RWA
1	Counterparty credit risk RWA under the IMM opening balance	**19,406**	22,786
2	Asset size	68	(2,339)
3	Credit quality of counterparties	127	80
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	(247)	(1,122)
8	Other	0	0
9	Counterparty credit risk RWA under the IMM closing balance	**19,353**	19,406

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” is relating to 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 0.3% or € 0.1 billion since December 31, 2022 and is primarily driven by foreign exchange movements. This decrease is partly offset by the increase in category “credit quality of counterparties” which is resulting from counterparty ratings deterioration. Additionally, the increase in category “asset size” reflects higher trading activities within the Investment Bank.

Market risk

Own funds requirements for market risk under the IMA

Development of market risk RWA

Article 438 (h) CRR

The following table 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, 2023						
		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	7,413	12,221	3,639	–	0	23,274	1,862
1a	Regulatory adjustment[1]	(5,885)	(10,300)	(262)	–	0	(16,447)	(1,316)
1b	RWA at the previous quarter-end (end of the day)	1,528	1,921	3,377	–	0	6,827	546
2	Movement in risk levels	(105)	(318)	269	–	0	(154)	(12)
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	69	0	0	–	0	69	6
7	Other	0	0	0	–	0	0	0
8a	RWA at the end of the reporting period (end of the day)	1,492	1,603	3,646	–	0	6,742	539
8b	Regulatory adjustment[1]	5,191	7,565	1,932	–	0	14,688	1,175
8	Market Risk RWA closing balance	6,684	9,168	5,578	–	0	21,430	1,714

[1] 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 (8a) of the reporting period.

		Three months ended Dec 31, 2022						
		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	7,758	10,117	3,455	–	0	21,330	1,706
1a	Regulatory adjustment[1]	(6,149)	(6,570)	(357)	–	0	(13,075)	(1,046)
1b	RWA at the previous quarter-end (end of the day)	1,610	3,547	3,099	–	0	8,256	660
2	Movement in risk levels	(903)	(1,626)	278	–	0	(2,251)	(180)
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	822	0	0	–	0	822	66
7	Other	0	0	0	–	0	0	0
8a	RWA at the end of the reporting period (end of the day)	1,528	1,921	3,377	–	0	6,827	546
8b	Regulatory adjustment[1]	5,885	10,300	262	–	0	16,447	1,316
8	Market Risk RWA closing balance	7,413	12,221	3,639	–	0	23,274	1,862

[1] 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 the reporting period.

The market risk RWA movements due to position changes are represented in line "Movement in risk levels". Changes to the Group's 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 the Group reflects regulatory driven changes to its 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, return assumptions for negative market levels, volatilities, correlations, liquidity and ratings are included under the "Market data changes and recalibrations" category.

As of March 31, 2023, the IMA components for market risk totaled € 21.4 billion, which was a decrease of € 1.8 billion since December 31, 2022. The decrease in average value-at-risk and stressed value-at-risk was driven by reduction in capital multiplier from 4.85 to 4.35 due to decrease in qualitative multiplier from 1.0 to 0.5 following closure of audit findings and approval by ECB. Additionally, average stressed value-at-risk decreased by positional changes under Global Foreign Exchange business. The increase in average incremental risk charge was driven by longer sovereign exposures under Fixed Income and Currencies (FIC) Sales & Trading business.

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.

The Group's average LCR of 136% (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 LCR was 143% as of March 31, 2023, or € 63 billion of excess over the regulatory minimum of 100%. This compares to 142%, or € 64 billion of excess liquidity at December 31, 2022.

Concentration of funding and liquidity sources

Diversification of the Group's funding profile in terms of investor types, regions and products is an important element of the Group's liquidity risk management framework. The Group's most stable funding sources stem from capital markets issuances and equity, as well as from Private Bank and Corporate Bank deposits. Other customer deposits and secured funding and short positions are additional sources of funding. Unsecured wholesale funding represents unsecured wholesale liabilities sourced primarily by the Treasury Pool Management team. Given the relatively short-term nature of these liabilities, it is predominantly used to fund liquid trading assets.

To promote the additional diversification of the Group's refinancing activities, the bank holds a license to issue mortgage Pfandbriefe. The Group continues to run a program for the purpose of issuing Covered Bonds under Spanish law (Cedulas) and participate in the ECB's TLTRO program. Additionally, the Group also issues green bonds under the Group's Sustainable Finance Framework. The Group also issued an inaugural Panda bond, following recent regulatory changes by PBoC and SAFE to facilitate foreign remittance of Panda bond proceeds

Unsecured wholesale funding comprises a range of institutional products, such as certificate of deposits, commercial papers 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, the Group has implemented limits (across tenors) on these funding sources which are derived from daily stress testing analysis. In addition, the bank limits 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 € 219 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, 2023 of € 208 billion is primarily held in Level 1 cash and central bank reserves (67%) and Level 1 high quality securities (30%). This compares to € 218 billion is primarily held in Level 1 cash and central bank reserves (71%) and Level 1 high quality securities (27%).

Derivative exposures and potential collateral calls

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

Other significant outflows included in item 11 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. The Group does not consider anything else relevant for disclosure.

Quantitative information on LCR

Article 451a CRR

EU LIQ1 – LCR disclosure template

	in € bn.	Total unweighted value (average)				Total weighted value (average)			
	Quarter ending on	Mar 31, 2023	Dec 31, 2022	Sep 30, 2022	Jun 30, 2022	Mar 31, 2023	Dec 31, 2022	Sep 30, 2022	Jun 30, 2022
	Number of data points used in the calculation of averages	12	12	12	12	12	12	12	12
	High-quality liquid assets								
1	Total high-quality liquid assets (HQLA)	–	–	–	–	219	218	218	215
	Cash-outflows								
2	Retail deposits and deposits from small business costumers	278	278	277	277	15	15	15	15
	of which:								
3	Stable deposits	131	130	129	127	7	7	6	6
4	Less stable deposits	67	67	66	67	9	9	8	9
5	Unsecured wholesale funding	246	249	248	242	106	108	108	105
	of which:								
6	Operational deposits (all counterparties) and deposits in network of cooperative banks	88	89	89	86	22	22	22	21
7	Non-operational deposits (all counterparties)	157	158	157	154	83	84	84	82
8	Unsecured debt	1	2	2	2	1	2	2	2
9	Secured wholesale funding	–	–	–	–	10	11	11	13
10	Additional requirements	225	225	220	214	76	74	71	68
	of which:								
11	Outflows related to derivative exposures and other collateral requirements	29	28	27	26	25	25	23	22
12	Outflows related to loss of funding on debt products	0	0	0	0	0	0	0	0
13	Credit and liquidity facilities	196	197	193	187	51	50	48	46
14	Other contractual funding obligations	63	64	66	65	9	9	8	8
15	Other contingent funding obligations	264	257	246	223	2	3	4	5
16	Total cash outflows	–	–	–	–	219	220	217	214
	Cash - inflows								
17	Secured lending (e.g. reverse repos)	307	314	310	310	12	14	14	15
18	Inflows from fully performing exposures	54	54	54	52	37	38	38	36
19	Other cash inflows	12	12	11	10	12	12	11	10
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	–	–	–	–	4	5	5	4
EU 19b	Excess inflows from a related specialized credit institution	–	–	–	–	0	0	0	0
20	Total cash inflows	372	380	375	371	58	59	58	57
	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	345	351	345	339	58	59	58	57
	Total adjusted value								
21	Liquidity buffer	–	–	–	–	219	218	218	215
22	Total net cash outflows	–	–	–	–	161	161	160	157
23	Liquidity coverage ratio (%)	–	–	–	–	136	135	136	137

List of tables