Deutsche Bank

Pillar 3 Report as of March 31, 2018

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Regulatory Framework

Introduction

This Report provides Pillar 3 disclosures on the consolidated level of Deutsche Bank 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. On European level these are implemented in the disclosure requirements as laid down in Part Eight of the “Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms” (Capital Requirements Regulation, or “CRR”) and the “Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms” (Capital Requirements Directive 4, or “CRD 4”). Germany implemented these CRD 4 requirements into national law in Section 26a of the German Banking Act (“Kreditwesengesetz” or “KWG”). Following an overall frequency assessment of all Pillar 3 disclosures this quarterly Pillar 3 Report provides principally an update to the risk weighted asset-related Pillar 3 disclosures which have a quarterly frequency assigned also in line with the recommendations 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*). For further details regarding own funds, leverage ratio, credit risk, market risk, operational risk and liquidity risk please refer to the respective sections in our Interim Report as of March 31, 2018. Per regulation it is not required to have Pillar 3 disclosures audited. As such the information provided in this Pillar 3 Report is unaudited.

Basel 3 and CRR/CRD 4

In the European Union, the Basel 3 capital framework was implemented by the “Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms” (Capital Requirements Regulation, or “CRR”) published on June 26, 2013, and the “Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms” (Capital Requirements Directive 4, or “CRD 4”) published on June 26, 2013. 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 own funds, regulatory capital requirements, leverage and liquidity as well as other relevant regulations. In addition, the CRD 4 was implemented into German law by means of further amendments to the German Banking Act (KWG) and the German Solvency Regulation (SolvV) and accompanying regulations. Jointly, these laws and regulations represent the new regulatory framework applicable in Germany.

The new regulatory framework became effective on January 1, 2014, subject to transitional rules. When referring to Deutsche Bank results according to transitional rules we use the term “CRR/CRD 4”. When referring to results according to full application of the final CRR/CRD 4 framework (without consideration of applicable transitional methodology) we use the term “CRR/CRD 4 fully loaded”. In some cases, CRR/CRD 4 maintains transitional rules that had been adopted in earlier capital adequacy frameworks through Basel 2 or Basel 2.5. These relate, e.g., to the risk weighting of certain categories of assets and include rules permitting the grandfathering of equity investments at a risk-weight of 100 %. In this regard, we assumed in our CRR/CRD 4 fully loaded methodology for a limited subset of equity positions that the impact of the expiration of these transitional rules will be mitigated through sales of the underlying assets or other measures prior to the expiration of the grandfathering provisions by the end of 2017. Since the fourth quarter of 2017 we have not applied this grandfathering rule anymore, but instead applied a risk weight between 190 % and 370 % determined based on Article 155 CRR under the CRR/CRD 4 fully loaded rules to all our equity positions. Consequently, no transitional arrangements are considered in our fully loaded RWA numbers since December 31, 2017. For the transitional CRR/CRD 4 RWA numbers these transitional arrangements have been considered lastly for December 31, 2017 and expired thereafter, resulting in no difference anymore for RWA under the fully loaded or transitional regime.

Since 2015 the Common Equity Tier 1 (CET1) minimum capital requirement applicable to the Group is 4.5 % of risk weighted assets. In addition to these minimum capital requirements, various capital buffer requirements were phased in starting 2016 and will become fully effective from 2019 onwards. The development and maintenance of a high quality capital base which should primarily consist of Common Equity Tier 1 reflects one of the core elements of the CRR/CRD 4 framework. Specific regulatory adjustments were subject to transitional rules. For instance, deductions for deferred tax assets that rely on future profitability or deductions for indirect and synthetic holdings of own instruments and capital instruments issued by financial sector entities were phased in. These phase-in arrangements to the CET1 were still applicable for December 31, 2017 reporting as the phase-in percentage was at 80 % in 2017. They are not applicable from January 1, 2018 onwards as the phase-in percentage increased to 100 %. At the same time minority interest only recognizable under the transitional rules is now phased out with a 100% phase-out rate since January 1, 2018.

Transitional arrangements are still applicable for Additional Tier 1 (AT1) and Tier 2 (T2) capital. Capital instruments that no longer qualify as AT1 or T2 capital under the CRR/CRD 4 fully loaded rules are subject to grandfathering rules during the transitional period and are being phased out from 2013 to 2022 with their recognition capped at 50 % in 2017, at 40 % in 2018 and the cap decreasing by ten percentage points every year thereafter.

Additionally, the leverage ratio has been introduced as a non-risk based capital requirement to complement the risk-based capital requirements. The CRR/CRD 4 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 and off-balance sheet exposures must be added to determine the total leverage exposure.

The CRR/CRD 4 framework further introduced new 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 delegated act adopted in October 2014. The LCR became a binding minimum requirement as of October 1, 2015 and is phased in progressively: 60 % from October 1, 2015, 70 % from 2016, 80 % from 2017 and 100 % from 2018, respectively.

The Net Stable Funding Ratio (NSFR) requires banks to maintain a stable funding profile in relation to their on- and off-balance sheet exposures. On November 23, 2016, the European Commission proposed a revision of the Capital Requirement Regulation ("CRR") to implement the NSFR into EU legislation. It is expected that a binding minimum ratio for the NSFR will apply from end of 2020.

There are still some interpretation uncertainties with regard to CRR/CRD 4 rules and some of the related binding Technical Standards are 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 4 measures may not be comparable to previous expectations. Also, our CRR/CRD 4 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.

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. The Internal Liquidity Adequacy Assessment Process ("ILAAP") focuses on maintaining sufficient liquidity risk management. The Supervisory Review and Evaluation Process ("SREP") refers to the common methodology and standards used by the European Central Bank (ECB) in its role under the Single Supervisory Mechanism (SSM). In accordance with Article 97 of the Capital Requirements Directive (CRD 4), supervisors regularly review the arrangement, strategies, process and mechanisms implemented by banks and evaluate: (a) the risks to which the institution might be exposed; (b) the risks the institution might pose to the financial system in general; and (c) the risks revealed by stress testing.

MREL and TLAC

Under the Single Resolution Mechanism ("SRM") Regulation, the Bank Recovery and Resolution Directive ("BRRD") and the German Recovery and Resolution Act (Sanierungs- und Abwicklungsgesetz, "SAG") banks in the European Union ("EU") are required to meet at all times a robust Minimum Requirement for own funds and Eligible Liabilities ("MREL") which is determined on a case-by-case basis by the competent resolution authority.

The Single Resolution Board ("SRB") intends to set binding MREL targets for the majority of the largest and most complex banking groups in its remit as part of the 2017 resolution planning cycle and to communicate the MREL decision to them (via National Resolution Authorities) in the first quarter 2018.

In addition, on November 9, 2015, the Financial Stability Board ("FSB") published a standard that will require, when implemented as law, Global Systemically Important Banks ("G-SIBs") to meet a new firm-specific minimum requirement for Total Loss-Absorbing Capacity ("TLAC") starting on January 1, 2019.

On July 6, 2017, the FSB published guiding principles on internal TLAC, i.e., the loss absorbing capacity that a resolution entity has committed to material sub-groups so that losses and recapitalization needs of material sub-groups may be passed with legal certainty to the resolution entity of a G-SIB resolution group without subsidiaries within the material sub-groups entering into resolution.

Both the TLAC and MREL requirements are specifically designed to require banks to maintain a sufficient amount of instruments which are eligible to absorb losses in resolution with the aim of ensuring that failing banks can be resolved without recourse to taxpayers' money.

On November 23, 2016, the European Commission proposed a revision of the Capital Requirement Regulation ("CRR") to implement TLAC into EU legislation. In addition, it proposed amendments to the BRRD and the SRM Regulation. Under the Commission's CRR revision proposal, the loss absorbency regime for EU global systemically important institutions ("G-SIIs") would be closely aligned with the international TLAC term sheet. It introduces a minimum requirement of 16 % of Risk Weighted Assets ("RWA") or 6 % of leverage exposure by January 1, 2019; and 18 % of RWAs and 6.75 % of leverage exposure by 2022. The resolution authority would be able to request a firm-specific add-on if deemed necessary. For non-G-SIIs banks, the MREL would still be set on a case-by-case basis.

Furthermore, under the German Banking Act, as amended by the German Resolution Mechanism Act, which was published in November 2015, senior bonds rank junior to other senior liabilities, without constituting subordinated debt, in insolvency proceedings opened on or after January 1, 2017. On December 27, 2017, an EU Directive amending the ranking of unsecured debt instruments in the insolvency hierarchy for the purpose of banks' resolution and insolvency proceedings has been published which introduces a common EU approach to banks' creditor hierarchy, thereby enhancing legal certainty in the event of resolution. The Directive introduces non-preferred senior debt instruments as a separate category of senior debt. These new instruments will rank junior to all other senior liabilities but will be senior to sub-ordinated debt provided they have an original contractual maturity of at least one year, do not contain embedded derivatives or be derivatives themselves and the contractual documentation explicitly refers to their lower ranking under normal insolvency proceedings. Member States are required to transpose the amending Directive into national law by December 29, 2018. The new provisions will apply to unsecured debt instruments issued on or after the date of when the respective national law enters into force. Any senior bonds that rank junior to other senior liabilities in accordance with the German Banking Act provisions published in November 2015 will be grandfathered and represent non-preferred senior debt instruments according to the EU Directive published on December 27, 2017.

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, 2018		Dec 31, 2017	
			a1	b1	a2	b2
		in € m.	RWA	Minimum capital requirements	RWA	Minimum capital requirements
	1	Credit risk (excluding CCR)	167,328	13,386	159,864	12,789
		thereof:				
Art 438(c)(d)	2	The standardized approach	20,421	1,634	18,534	1,483
Art 438(c)(d)	3	The foundation IRB (FIRB) approach	3,580	286	3,271	262
Art 438(c)(d)	4	The advanced IRB (AIRB) approach	136,434	10,915	131,679	10,534
Art 438(d)	5	Equity IRB under the simple risk-weighted approach or the IMA	6,892	551	6,380	510
Art 107 Art 438(c)(d)	6	Counterparty credit risk (CCR)	40,956	3,276	40,065	3,205
		thereof:				
Art 438(c)(d)	7	Mark to market	4,949	396	5,951[1]	476[1]
Art 438(c)(d)	8	Original exposure	0	0	0	0
	9	The standardized approach	0	0	0	0
	10	Internal model method (IMM)	24,721	1,978	23,887	1,911
Art 438(c)(d)	11	Risk exposure amount for contributions to the default fund of a CCP	366	29	419	34
Art 438(c)(d)	12	Credit Valuation Adjustment (CVA)	7,572	606	6,451	516
Art 438(e)	13	Settlement risk	115	9	147	12
Art 449(o)(i)	14	Securitization exposures in the banking book (after the cap)	8,701	696	10,170	814
		thereof:				
	15	IRB approach	7,783	623	9,204	736
		thereof:				
	16	IRB supervisory formula approach (SFA)	5,824	466	7,422	594
	17	Internal assessment approach (IAA)	0	0	0	0
	18	Standardized approach	917	73	966	77
	19	Market risk	33,169	2,654	30,966	2,477
		thereof:				
	20	Standardized approach	6,205	496	5,763	461
	21	IMA	26,965	2,157	25,203	2,016
Art 438(e)	22	Large exposures	0	0	0	0
Art 438(f)	23	Operational risk	93,025	7,442	91,610	7,329
		thereof:				
	24	Basic indicator approach	0	0	0	0
	25	Standardized approach	0	0	0	0
	26	Advanced measurement approach	93,025	7,442	91,610	7,329
Art 437(2), 48,60	27	Amounts below the thresholds for deduction (subject to 250 % risk weight)	10,943	875	11,389	911
Art 500	28	Floor adjustment	0	0	0	0
	29	Total	**354,235**	**28,339**	344,212[2]	27,537

[1] RWA for CCR for mark to market method restated for 2017 figures to show derivatives exposures only. RWA for SFTs (securities financing transactions) financial collateral comprehensive method only shown in CCR total.
[2] The table reflects the fully loaded RWA amounts and does not include the transitional adjustment due to the grandfathering of equity investments (Dec 2017: (0.9) billion € RWA) and the respective shift of exposure from the advanced IRB to the standard approach.

The RWA according to CRR/CRD 4 fully-loaded were € 354.2 billion as of March 31, 2018, compared to € 344.2 billion at the end of 2017. The increase of €10.0 billion was mainly caused by credit risk RWA where we see a business-driven growth in our CIB and PCB segments. In addition market risk RWA contributed to the overall increase and was mainly driven by the stressed value-at-risk component. Furthermore our RWA for CVA increased by € 1.1 billion from lower hedge benefit resulting from portfolio effects. RWA for operational risk increased by € 1.4 billion driven by reduced budgets for operational risk expected losses. This overall increase was partly offset by FX movements of € 1.9 billion.

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 7, for counterparty credit risk in section "Article 438 (d) CRR - Development of Counterparty Credit Risk RWA" on page 8 and for market risk in section "Article 455 (e) CRR - Regulatory capital requirements for market risk" on page 9.

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 fourth quarter of 2017 and first quarter of 2018.

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

		Three months ended Mar 31, 2018		Three months ended Dec 31, 2017	
		a	b	a	b
	in € m.	RWA	Capital requirements	RWA	Capital requirements
1	Credit risk RWA opening balance	**134,950**	**10,796**	135,616	10,849
2	Book size	7,364	589	0	0
3	Book quality	(185)	(15)	(38)	(3)
4	Model updates	(45)	(4)	0	0
5	Methodology and Policy	(976)	(78)	0	0
6	Acquisitions and Disposals	0	0	0	0
7	Foreign exchange movements	(1,093)	(87)	(629)	(50)
8	Other	0	0	0	0
9	Credit risk RWA closing balance	**140,015**	**11,201**	134,950	10,796

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” is reserved to 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 by 3.8% or € 5.1 billion since December 31, 2017 is primarily driven by the increase in the category “Book size” representing business growth in our CIB and PCB segments. This increase was partly offset by the category “foreign exchange movements” as well as the category “Methodology and Policy”, which reflects the derecognition of certain irrevocable payment commitments to the Single Resolution Fund and the Deposit Guarantee Schemes which are deducted from CET1 since beginning of the year.

Counterparty credit risk (CCR)

Article 438 (d) CRR - Development of Counterparty Credit Risk RWA

The following tables provide an analysis of key drivers for RWA movements observed for counterparty credit risk exposures calculated under the internal model method (IMM) in the fourth quarter of 2017 and first quarter of 2018.

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

		Three months ended Mar 31, 2018		Three months ended Dec 31, 2017	
		a	b	a	b
	in € m.	RWA	Capital requirements	RWA	Capital requirements
1	Counterparty credit risk RWA under the IMM opening balance	**23,887**	**1,911**	20,988	1,679
2	Book size	774	62	1,732	139
3	Book quality	304	24	1,630	130
4	Model updates	0	0	(215)	(17)
5	Methodology and Policy	0	0	0	0
6	Acquisitions and Disposals	0	0	0	0
7	Foreign exchange movements	(244)	(20)	(248)	(20)
8	Other	0	0	0	0
9	Counterparty credit risk RWA under the IMM closing balance	**24,721**	**1,978**	23,887	1,911

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 increase in RWA for counterparty credit risk exposures under the IMM by 3.5 % or € 0.8 billion since December 2017 is predominantly driven by the category “Book size” from business growth in our CIB segment. The increase in “Book quality” is driven by parameter recalibrations and mostly offset by reductions due to foreign exchange movements.

Market risk

Own funds requirements for market risk under the IMA

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

For details on the capital requirements for market risk please refer to section “Article 438 (c-f) CRR - Overview of capital requirements” on page 6 of this Pillar 3 report.

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 fourth quarter of 2017 and first quarter of 2018.

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

		Three months ended Mar 31, 2018						
		a	b	c	d	e	f	g
	in € m.	VaR	SVaR	IRC	Comprehensive risk measure	Other	Total RWA	Total capital requirements
1	Market Risk RWA opening balance[1]	4,380	10,896	9,871	56	0	25,203	2,016
1a	Regulatory adjustment[2]	(3,112)	(7,728)	(1,984)	(1)	0	(12,826)	(1,026)
1b	RWA at the previous quarter-end (end of the day)[3]	1,268	3,168	7,886	55	0	12,377	990
2	Movement in risk levels	213	721	(684)	8	0	258	21
3	Model updates/changes	0	0	0	0	0	0	0
4	Methodology and Policy	0	0	0	0	0	0	0
5	Acquisitions and Disposals	0	0	0	0	0	0	0
6	Foreign exchange movements	0	0	0	0	0	0	0
6a	Market data changes and recalibrations	(98)	0	0	0	0	(98)	(8)
7	Other	0	0	0	0	0	0	0
8a	RWA at the end of the reporting period (end of the day)[3]	1,383	3,889	7,202	63	0	12,537	1,003
8b	Regulatory adjustment[2]	3,324	10,359	674	3	0	14,361	1,149
8	Market Risk RWA closing balance[1]	4,708	14,248	7,877	66	0	26,898	2,152

[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, 2017						
		a	b	c	d	e	f	g
	in € m.	VaR	SVaR	IRC	Comprehensive risk measure	Other	Total RWA	Total capital requirements
1	Market Risk RWA opening balance[1]	5,678	13,833	10,431	86	0	30,028	2,402
1a	Regulatory adjustment[2]	(4,242)	(11,244)	0	(27)	0	(15,512)	(1,241)
1b	RWA at the previous quarter-end (end of the day)[3]	1,437	2,589	10,431	59	0	14,515	1,161
2	Movement in risk levels	(55)	579	(2,545)	(4)	0	(2,025)	(162)
3	Model updates/changes	0	0	0	0	0	0	0
4	Methodology and Policy	0	0	0	0	0	0	0
5	Acquisitions and Disposals	0	0	0	0	0	0	0
6	Foreign exchange movements	0	0	0	0	0	0	0
6a	Market data changes and recalibrations	(113)	0	0	0	0	(113)	(9)
7	Other	0	0	0	0	0	0	0
8a	RWA at the end of the reporting period (end of the day)[3]	1,268	3,168	7,886	55	0	12,378	990
8b	Regulatory adjustment[2]	3,112	7,728	1,984	1	0	12,825	1,026
8	Market Risk RWA closing balance[1]	4,380	10,896	9,871	56	0	25,203	2,016

[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 only calculated for comprehensive risk measure. For the other measures this is captured in "Movements in risk levels". Changes in market data levels, volatilities, correlations, liquidity and ratings are included under the "Market data changes and recalibrations" category.

As of March 31, 2018 the RWA for market risk was € 33.2 billion. The IMA (Internal Models Approach) components of this totaled € 26.9 billion.

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