Deutsche Bank

Pillar 3 Report as of September 30, 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”). Further disclosure guidance has been provided by the European Banking Authority (“EBA”) in its “Final Report on the Guidelines on Disclosure Requirements under Part Eight of Regulation (EU) No 575/2013” (“EBA Guideline”, EBA/GL/2016/11, version 2*).

This quarterly Pillar 3 Report provides an update to the risk weighted asset-related Pillar 3 disclosures. 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 September 30, 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 CRR and CRD 4. 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 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”. CRR/CRD 4 maintained transitional rules that permitted the grandfathering of equity investments at a risk-weight of 100 %. These transitional arrangements have been considered lastly for December 31, 2017 and expired thereafter, resulting in no difference thereafter for RWA under the fully loaded or transitional regime.

Since 2015 the Common Equity Tier 1 (CET 1) minimum capital requirement applicable to the Group is 4.5 % of risk-weighted assets. In addition to this minimum capital requirement, various capital buffer requirements were phased in starting 2016 and 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 CET 1 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, 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 as well as off-balance sheet exposures and 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: the phase-in percentage is now at 100 % from 2018 and was 80 % from 2017.

The Net Stable Funding Ratio (NSFR) requires banks to maintain a stable funding profile in relation to their on- and off-balance sheet exposures. Within the European Trilogue a revision of the Capital Requirement Regulation ("CRR") is proposed 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") has set a binding MREL which was communicated to Deutsche Bank via the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, "BaFin") in the second quarter 2018. The MREL ratio on a consolidated basis has been set at 9.14 % of Total Liabilities and Own Funds ("TLOF") and applies immediately. The MREL ratio is in line with our expectations and consistent with our funding plans. As of September 30, 2018 TLOF was € 1,085 billion and available MREL was € 118 billion, corresponding to a ratio of 10.8 %. This means that Deutsche Bank has a comfortable buffer of own funds and eligible liabilities, which is € 19 billion above MREL.

The European minimum requirement for own funds and eligible liabilities is specifically designed to require banks to maintain a sufficient amount of instruments which are eligible to absorb losses in resolution without recourse to taxpayers' money. Within the European Trilogue a revision of the CRR as well as amendments to the SRM regulation and the BRRD are proposed. Under this proposal the instruments which qualify as MREL are Common Equity Tier 1, Additional Tier 1 and Tier 2 instruments as well as certain eligible unsecured liabilities. In addition, the proposal introduces a minimum requirement for European global systemically important institutions (G-SIIs) starting at 16 % of RWAs or 6 % of leverage exposure and amounting to 18 % of RWAs and 6.75 % of leverage exposure when fully phased in (details concerning timing are subject to the ongoing legislative process). If deemed necessary, the resolution authority would be able to request a firm-specific add-on.

Furthermore, under the German Banking Act, as amended by the German Resolution Mechanism Act, 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 has been published amending the ranking of unsecured debt instruments in the insolvency hierarchy for the purpose of banks' resolution and insolvency proceedings 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 rank junior to all other senior liabilities but are senior to subordinated debt provided they have an original contractual maturity of at least one year, do not contain embedded derivatives or are derivatives themselves and the contractual documentation explicitly refers to their lower ranking under normal insolvency proceedings. Germany has transposed this into national law by the amendment of Section 46f of the German Banking Act (KWG), effective July 21, 2018. The new provisions 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 are grandfathered and represent non-preferred senior debt instruments.

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

			Sep 30, 2018		Jun 30, 2018	
			a1	b1	a2	b2
		in € m.	RWA	Minimum capital requirements	RWA	Minimum capital requirements
	1	Credit risk (excluding CCR)	163,444	13,076	166,706	13,336
		of which:				
Art 438(c)(d)	2	The standardized approach	18,828	1,506	19,118	1,529
Art 438(c)(d)	3	The foundation IRB (FIRB) approach	3,638	291	3,491	279
Art 438(c)(d)	4	The advanced IRB (AIRB) approach	134,371	10,750	137,650	11,012
Art 438(d)	5	Equity IRB under the simple risk-weighted approach or the IMA	6,606	529	6,447	516
Art 107 Art 438(c)(d)	6	Counterparty credit risk (CCR)	36,117	2,889	37,717	3,017
		of which:				
Art 438(c)(d)	7	Mark to market	5,375	430	4,522	362
Art 438(c)(d)	8	Original exposure	0	0	0	0
	9	The standardized approach	0	0	0	0
	9a	Financial collateral comprehensive method (for SFTs)	2,226	178	2,270	182
	10	Internal model method (IMM)	18,714	1,497	21,524	1,722
Art 438(c)(d)	11	Risk exposure amount for contributions to the default fund of a CCP	615	49	516	41
Art 438(c)(d)	12	Credit Valuation Adjustment (CVA)	9,187	735	8,885	711
Art 438(e)	13	Settlement risk	53	4	358	29
Art 449(o)(i)	14	Securitization exposures in the banking book (after the cap)	8,369	669	7,541	603
		of which:				
	15	IRB approach	7,530	602	6,718	537
		of which:				
	16	IRB supervisory formula approach (SFA)	5,543	443	4,828	386
	17	Internal assessment approach (IAA)	0	0	0	0
	18	Standardized approach	838	67	824	66
	19	Market risk	30,219	2,418	30,437	2,435
		of which:				
	20	Standardized approach	4,824	386	4,516	361
	21	IMA	25,395	2,032	25,921	2,074
Art 438(e)	22	Large exposures	0	0	0	0
Art 438(f)	23	Operational risk	90,846	7,268	93,489	7,479
		of which:				
	24	Basic indicator approach	0	0	0	0
	25	Standardized approach	0	0	0	0
	26	Advanced measurement approach	90,846	7,268	93,489	7,479
Art 437(2), 48,60	27	Amounts below the thresholds for deduction (subject to 250 % risk weight)	12,677	1,014	12,070	966
Art 500	28	Floor adjustment	0	0	0	0
	29	Total	**341,725**	**27,338**	348,319	27,866

The RWA according to CRR/CRD 4 fully-loaded were € 341.7 billion as of September 30, 2018, compared to € 348.3 billion as of June 30, 2018. The decrease of € 6.6 billion is mainly driven by credit risk RWA excluding counterparty credit risk due to further de-risking activities in our CIB segment. Additionally operational Risk RWA contributed to this decrease as it benefited from a more favorable development of our internal and external loss profile. Further reductions in counterparty credit risk RWA resulted from model refinements of our internal model method for derivatives. These decreases have been partly offset by an increase in RWA for securitizations in the banking book predominantly driven by increased exposures.

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

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

Quantitative information on the use of the IRB approach

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

The following table provides an analysis of key drivers for RWA movements observed for credit risk, excluding counterparty credit risk, to the extent covered in IRB approaches in the current and previous reporting period.

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

		Three months ended Sep 30, 2018		Three months ended Jun 30, 2018	
		a	b	a	b
	in € m.	RWA	Capital requirements	RWA	Capital requirements
1	Credit risk RWA opening balance	**141,140**	**11,291**	140,015	11,201
2	Book size	(1,573)	(126)	2,806	224
3	Book quality	(995)	(80)	(624)	(50)
4	Model updates	(399)	(32)	0	0
5	Methodology and Policy	0	0	0	0
6	Acquisitions and Disposals	0	0	0	0
7	Foreign exchange movements	(164)	(13)	2,191	175
8	Other	0	0	(3,247)	(260)
9	Credit risk RWA closing balance	**138,009**	**11,041**	141,140	11,291

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 decrease in RWA for credit risk exposures under the IRB approach by 2.2 % or € 3.1 billion since June 30, 2018 is primarily driven by the decrease in the category “book size” representing further de-risiking activities in our CIB segment. Furthermore the categories “book quality” and “model updates” contributed to the reduction within the quarter and are driven by several favorable recalibration impacts across the businesses and the update of our dilution risk model. In addition the category “foreign exchange movements” reduced the credit risk RWA.

Counterparty credit risk (CCR)

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

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 Sep 30, 2018		Three months ended Jun 30, 2018	
		a	b	a	b
	in € m.	RWA	Capital requirements	RWA	Capital requirements
1	Counterparty credit risk RWA under the IMM opening balance	**21,525**	**1,722**	24,721	1,978
2	Book size	(1,852)	(148)	(3,470)	(278)
3	Book quality	(69)	(6)	(212)	(17)
4	Model updates	(850)	(68)	0	0
5	Methodology and Policy	0	0	0	0
6	Acquisitions and Disposals	0	0	0	0
7	Foreign exchange movements	(40)	(3)	486	39
8	Other	0	0	0	0
9	Counterparty credit risk RWA under the IMM closing balance	**18,714**	**1,497**	21,525	1,722

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 decrease in RWA for counterparty credit risk exposures under the IMM by 13.1 % or € 2.8 billion since June 30, 2018 is predominantly driven by the category “book size” reflecting termination of trades and deleveraging activities in our CIB segment. The decrease in “model updates” resulted from refinements in our internal model method for derivatives whereas the decrease in “book quality” reflects parameter recalibrations.

Market risk

Own funds requirements for market risk under the IMA

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

The following table EU MR2-B provides an analysis of key drivers for movements observed for market risk RWA covered by internal models (i.e. value-at-risk, stressed value-at-risk, incremental risk charge and comprehensive risk measure) in the current and previous reporting period.

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

		Three months ended Sep 30, 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]	4,614	13,908	7,335	64	0	25,921	2,074
1a	Regulatory adjustment[2]	(3,403)	(9,834)	(451)	(30)	0	(13,719)	(1,098)
1b	RWA at the previous quarter-end (end of the day)[3]	1,211	4,074	6,883	34	0	12,202	976
2	Movement in risk levels	(146)	(1,152)	891	19	0	(388)	(31)
3	Model updates/changes	(10)	36	80	0	0	106	8
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	4	0	0	0	0	4	0
7	Other	0	0	0	0	0	0	0
8a	RWA at the end of the reporting period (end of the day)[3]	1,059	2,957	7,854	53	0	11,924	954
8b	Regulatory adjustment[2]	3,483	9,989	0	0	0	13,471	1,078
8	Market Risk RWA closing balance[1]	4,542	12,946	7,854	53	0	25,395	2,032

[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 Jun 30, 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]	4,708	14,248	7,877	66	0	26,898	2,152
1a	Regulatory adjustment[2]	(3,324)	(10,359)	(674)	(3)	0	(14,361)	(1,149)
1b	RWA at the previous quarter-end (end of the day)[3]	1,383	3,889	7,202	63	0	12,537	1,003
2	Movement in risk levels	(303)	(58)	33	(29)	0	(357)	(29)
3	Model updates/changes	11	64	0	0	0	75	6
4	Methodology and policy	44	179	(352)	0	0	(129)	(10)
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	75	0	0	0	0	75	6
7	Other	0	0	0	0	0	0	0
8a	RWA at the end of the reporting period (end of the day)[3]	1,211	4,074	6,883	34	0	12,202	976
8b	Regulatory adjustment[2]	3,403	9,834	451	30	0	13,719	1,098
8	Market Risk RWA closing balance[1]	4,614	13,908	7,335	64	0	25,921	2,074

[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 September 30, 2018 the RWA for market risk was € 30.2 billion. The IMA (Internal Models Approach) components of this totaled € 25.4 billion. The decrease in the IMA component since June 30, 2018 was driven by a reduction in risk levels coming from stressed value-at-risk which was partly offset by the an increase in the incremental risk charge.

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