Financial Institutions

Deutsche Bank AG **Issuer Rating Report**





Overview

In September 2016 Scope Ratings downgraded Deutsche Bank's Issuer Credit-Strength Rating (ICSR) to A- from A and the senior unsecured debt rating to BBB+ from A-. This follows the completion of a review for possible downgrade which was initiated in August 2016. Ratings on the bank's Additional Tier 1 (AT1) securities were also downgraded to B+ from BB, incorporating a one-notch additional gap for the bank's AT1 securities with a total differentiation of six notches from the level of the senior unsecured rating. Deutsche Bank's short-term ratings have been confirmed at S-1. The Negative Outlook, which has been in place since April 2016, continues for all ratings. In June 2016, Scope adjusted ratings for German banks following an update of the Bank Rating Methodology, which addresses the ranking of TLAC/MREL senior unsecured debt. Scope's updated methodology notes that as a general rule all senior unsecured debt that may be specifically allocated to or eligible for MREL and/or TLAC would be rated at least one notch below the ICSR.

The ratings were not solicited by the issuer. Both ratings and analysis are based solely on publicly available information. For the full list of ratings, see the 'Ratings' section at the end of this report. The ratings are not applicable to unguaranteed debt issued by subsidiaries of Deutsche Bank AG.

Highlights

Our ratings on Deutsche Bank reflect the satisfactory financial fundamentals of the bank, but also its challenged business model and the likely fallout from the restructuring plan announced in 2015. Operating as a global universal bank with an emphasis on wholesale and investment banking, alongside a more marginally profitable domestic retail franchise, has been weighing on the bank's cost base. Strategy 2020 has identified many of the intrinsic weaknesses of Deutsche Bank's business model and fundamentals going forward. We consider that the path towards business model streamlining, cost-cutting, further deleveraging and capacity reduction already takes and will likely take a further toll on medium-term profitability. Material execution risks remain and the end-game is far from clear.

Our analysis also recognises the relative cross-cycle resilience of the wholesale and investment bank's revenue streams, despite a challenging revenue environment and difficult operating conditions. However, there are remaining uncertainties, especially related to outstanding and further potential litigation cases. In September 2016 negotiations with the US Department of Justice (DoJ) regarding fines in connection with the bank's issuance and underwriting of residential mortgage-backed securities (RMBS) moved into focus. Deutsche Bank's management has been unable to contain the headline risks related to the announcement of an opening position by the DoJ of a USD 14bn fine. On 23 December 2016, Deutsche Bank confirmed a settlement in principle with the DoJ, under which the bank will pay a civil penalty of USD 3.1bn and provide US consumers with USD 4.1bn of relief. As a consequence of the penalty, Deutsche Bank expects to record additional pre-tax charges of around USD 1.17bn in its Q4 2016 results. However, next to the actual financial consequences of the fine, it is difficult to fully assess the overall impact on Deutsche Bank's brand and reputation and the associated risks to earnings and liquidity. In its Q3 results, Deutsche Bank confirmed that revenues have been depressed and that it has experienced asset outflows in some businesses. In addition, the various headline risks the bank experienced in 2016 could produce time hurdles towards unimpeded capital generation. In our view, Deutsche Bank

Lead Analyst

Michaela Seimen Howat m.seimenhowat@scoperatings.com

Back-up Analyst

Chiara Romano c.romano@scoperatings.com

Team Leader

Sam Theodore s.theodore@scoperatings.com

Scope Ratings AG

Suite 407 2 Angel Square London EC1V 1NY

Phone +44 20 3457 0445

Headquarters

Lennéstraße 5 10785 Berlin

Phone +49 30 27891 0 +49 30 27891 100 Service +49 30 27891 300

info@scoperatings.com www.scoperatings.com





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1/12 23 January 2017



Issuer Rating Report

would need to provide clear and ongoing evidence of the successful implementation and impact of Strategy 2020, as well as a continued underlying competitiveness of its wholesale and investment banking franchise.

Rating drivers (summary)

The rating drivers, in decreasing order of importance in the rating assignment, are:

- 1. A challenged business model with a high cost base...
- 2. ...but Strategy 2020 is tackling the weaknesses
- 3. The Investment Banking earnings of Deutsche Bank have been relatively resilient
- 4. Internal capital generation capacity remains clouded by litigation charges and general reputational risks

Rating-change drivers



Any strategic initiative aimed at strengthening the link between the investment bank and other areas of the group would, in our view, increase the cohesion of the bank and therefore strengthen its business model. We had been encouraged by some measures announced at the time of the EUR 8.5bn capital increase in 2014, but we acknowledge that this type of initiative now seems less of a priority with the announcement of Strategy 2020 and the planned deconsolidation of Postbank. The deconsolidation seems to have been put on hold, but should ultimately make the bank less complex and could help re-invigorate its 'one bank' initiatives.



Even though we welcome the financial path of Strategy 2020, we nonetheless see a material execution risk. It is still not clear what the end-game will look like for Deutsche Bank and as a consequence we cannot exclude ongoing risk-return challenges and stresses which would continue to undermine the group's credit fundamentals.

Recent events

Q3 2016 results and DoJ settlement in principle

In Q3 2016 Deutsche Bank reported EUR 534m of net income (Q3 2015: EUR 4.6bn loss; FY 2015: EUR 6.8bn loss), with revenues for the first nine months of 2016 having been down by 15% on a year-on-year basis. The expense situation in 2016 improved compared to 2015 and expenses are around 31% lower. This improvement of the cost base could be a first positive effect of the ongoing cost-cutting. However, the bank's management previously pointed out that Q4 2016 results will carry a larger part of the restructuring costs for the branch closures in Germany and could therefore influence more strongly the overall performance of expenses in 2016.

Furthermore, during the first nine months of 2016 the bank did not provision for potential litigations, in line with previous years. The bank currently has provisions for around 15 individual proceedings, particularly focusing on civil litigations (EUR 1.8bn of provisions as per Q3 2016), regulatory enforcements (EUR 4.1bn) and mortgage repurchase demands (EUR 395m).

On 23 December 2016, Deutsche Bank confirmed that it has agreed on a settlement in principle with the DoJ in connection with the bank's issuance and underwriting of RMBS and related securitisation activities between 2005 and 2007. Under the settlement, Deutsche Bank has agreed to pay a civil monetary penalty of USD 3.1bn and to provide USD 4.1bn in consumer relief in the United States. As a consequence of the penalty, Deutsche Bank expects to record additional pre-tax charges of around USD 1.17bn in its fourth-quarter results for 2016.

Nevertheless, we expect that the bank's performance and results will be affected by not only the actual settlement costs, but also reputational risks this latter litigation case evoked. Following the DoJ announcement, the bank stated that revenues were

23 January 2017 2/12



depressed, and the situation has also led to asset outflows in some of its businesses. Given the DoJ's announcement was in late September, the impact on Deutsche Bank's Q3 results were less visible, but Q4 results could reflect this recent incident strongly.

With the Q3 result release, management gave an update on the progress of Strategy 2020 (the 2016-2020 strategic plan): The further disposal of some business units (Private Client Services in the US and the agreement to dispose of Abbey Life), the offloading of clients, and the exit from some countries shows that Deutsche Bank is underway in reducing its Non-Core Operations Unit, with the aim to have it closed by year-end 2016.

Deutsche Bank particularly focused in Q3 on the improvement of its capital ratios. As of September 2016, fully loaded (FL) CET1 ratio stood at 11.1%, before the expected gain of around 40bps to 50bps from the disposal of the 19.99% stake in Chinese Hua Xia Bank. This level is unchanged compared to year-end 2015, but during Q1 and Q2 2016, the FL CET1 ratio declined somewhat. The FL leverage ratio increased by 10bps to 3.5%, the same level as per year-end 2015. We consider these prudential metrics to be satisfactory but perfectible.

In November 2016, Deutsche Bank announced that it has sold its stake in Chinese Hua Xia Bank for around USD 3.4bn.

Triggered by the September 2016 DoJ announcement, Deutsche Bank also experienced some challenges regarding its funding and liquidity management. Although the bank reported EUR 32bn of liquidity surplus above the 100% level, there has been a EUR 23bn decrease in liquidity reserves in Q3, driven by a EUR 35bn reduction in funding sources. According to the bank, this was partially offset by asset reductions.

In its Q3 report, Deutsche Bank states that retail (including wealth management) and transaction banking deposits have decreased by EUR 13.2bn and EUR 8.0bn respectively; although these reductions were partially driven by initiatives under Strategy 2020 to improve profitability by refocusing on client, country and product parameters, the outflows also mirror the clients' reaction to the negative market perception of Deutsche Bank late in the third quarter.

Deutsche Bank raised EUR 8.2bn in secured funding via the ECB's targeted long-term refinancing operations (TLTRO).

Supervisory Review and Evaluation Process (SREP) requirements

Later in December 2015 and following the results of the 2016 Supervisory Review and Evaluation Process, Deutsche Bank published the ECB's decision regarding prudential minimum capital requirements for 2017. This indicates the level under which the bank would need to calculate the maximum distributable amount, which in turn would determine restrictions on dividends, coupons on AT1 securities, and variable compensation. Starting from January 2017, Deutsche Bank is required to maintain a phase-in Common Equity Tier 1 (CET 1) ratio of at least 9.51% on a consolidated basis, which is below Deutsche Bank's previous SREP requirement of 10.76% (for 2016). As of September 2016, Deutsche Bank reported a consolidated CET 1 capital ratio of 12.58% (on a phase-in basis).

For 2017 the CET 1 capital requirement includes:

- the minimum Pillar 1 requirement (4.50%);
- the Pillar 2 requirement (2.75%);
- the capital conservation buffer (1.25%);
- the countercyclical buffer (currently 0.01%); and
- the requirement deriving from Deutsche Bank's designation as global systemically important bank (1.00%).

Deutsche Bank's requirements for Tier 1 capital has been set at 11.01% and for the Total capital ratio at 13.01% on a phase-in basis. As of September 2016, these ratios have been reported as 14.47% for Tier 1 capital and 16.15% for Total capital on a phase-in basis.

Rating drivers (details)

1. A challenged business model with a high cost base...

Deutsche Bank's business model is in principle structured around the types of clients that the bank serves – institutions, corporates, fiduciaries, and private clients – and hence incorporates four business divisions: Corporate & Investment Banking, Global Markets, Deutsche Asset Management, and Private, Wealth & Commercial Clients. Region-wise, the bank regards itself as Germany's leading bank, with a strong position in Europe and a significant presence in the Americas and the Asia Pacific.

23 January 2017 3/12



However, the complex structure and business model of Deutsche Bank, combined with increased regulatory constraints and strong competition, have resulted in a high and unsustainable cost base, which has been an ongoing challenge for management. More recently, in reported terms the cost/income ratio of Deutsche Bank grew from 92.5% in 2012 to 115% in 2015. In 2016 the bank's cost base fluctuated somewhat, but as of Q3 2016, the cost/income ratio stood at an improved 89.1%. Nevertheless, Deutsche Bank still has to incorporate some further restructuring costs in Q4 2016, which will impact the year-end results, and we expect the cost/income ratio per year-end to be somewhat higher.

To assess the large and fluctuating cost structure of Deutsche Bank in more detail, Figure 1 illustrates the breakdown of the bank's historical quarterly costs. In October 2015 the bank revisited its definition of adjusted cost, eliminating some of the carve-outs grouped under the "cost-to-achieve" label, mainly related to restructuring costs of the "Operational Excellence" programme, which ended in 2015. We applied the new definition retrospectively and starting from 2012, which now excludes litigation, impairments, restructuring costs and severance, and policyholder benefits and claims. As Figure 1 shows, the non-interest expense item has a cyclical evolution, but in yearly terms and on an adjusted basis the ratio has been increasing from 73.7% in 2012 to 79% at YE 2015.

In general, Deutsche runs a particularly high operational cost compared to peers. The adjusted cost is split between compensation (excluding severance) at 49%, and administrative and general expenses (excluding litigation) at 51% as of 2015. This expense item has increased by 8% in the last three years, driven by IT costs (+67%) and professional service fees (+40%).

Referring to the cost reductions planned under Strategy 2020, restructuring and severance will be the main "cost-to-achieve" component, given that the bank plans a heavy headcount reduction. Also IT costs will remain considerably high, based on the bank's efforts to redevelop its IT infrastructure and advance with digitalisation efforts across its business platforms.

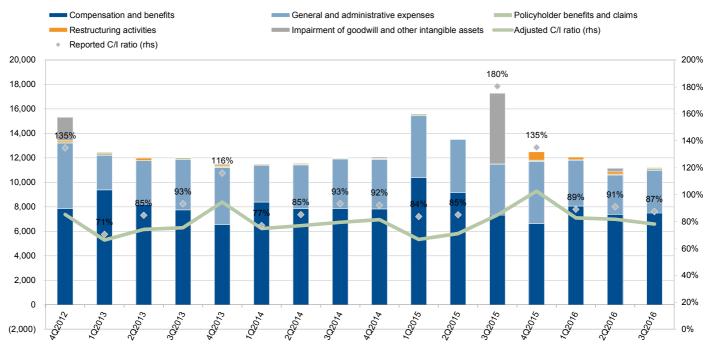


Figure 1: Deutsche Bank historical quarterly cost breakdown (EUR m) and cost/income ratio (%)

Source: Company data, Scope calculations

2. ...but Strategy 2020 is tackling the weaknesses

Since April 2015, and reaffirmed by the new management in October 2015, Deutsche Bank is in the process of implementing its five-year restructuring plan, Strategy 2020. The overlapping goal of the new strategy is to focus the bank's universal offering of products and services to become a less complex, more efficient, less risky and a better-capitalised institution.

We believe that these focal points target the current core weaknesses of the bank; nevertheless, we see stronger challenges in the fact that the implementation of this complex restructuring plan coincides with a period of shifting and changing economic and overall market structures, which generally demand higher flexibility from financial institutions. We also note that the bank has not

23 January 2017 4/12



Issuer Rating Report

provided a more precise vision of its envisaged market position, which makes it more difficult, in our view, to clearly recognise preliminary results and overall achievements.

The key decisions and details of Strategy 2020 encompass the following points:

- Cost base adjustments: the bank targets EUR 3.8bn of gross savings, achieved through a reshaping of businesses (EUR 2.1bn) and IT/infrastructure simplification (EUR 1.7bn). Disposals would have a EUR 4bn impact on the cost base, partially offset by EUR 3bn-3.5bn of expected restructuring and severance costs (also related to the reduction of 9,000 full-time employees), resulting in net savings of between EUR 1.5bn and EUR 2.5bn. Deutsche Bank is targeting a EUR 22bn adjusted cost base, which is a EUR 4.4bn decrease on FY 2015, but the two main caveats are:
 - 1) The disposals of the Non-Core Operations Unit's assets and Postbank, which would free up around EUR 4bn from the cost base. This represents more than 90% of the costs attached to both. Postbank's sales timing is deeply uncertain, and the Non-Core Operations Unit's wind-down has been quite fast (from EUR 38bn to EUR 27bn in 2015), but will slow down since more volatile and risky assets are left. However, management is targeting the closing of this unit by year-end 2016.
 - 2) High uncertainties regarding litigations. Deutsche Bank expects that by 2018 most of the cases should be resolved, although the bank still estimates litigation charges going forward.
- Reorganisation of operating divisions:
 - 1. Global Markets, encompassing sales and trading of equity and debt, was established. This division originated from Corporate Banking & Securities (CB&S).
 - 2. Corporate Finance (including origination, advisory and loan products) was merged with Global Transaction Banking to form Corporate & Investment Banking (CIB).
 - These changes are positive in our view and follow other banks' decisions of carving out trading from certain businesses in anticipation of regulatory practices.
- Reshaping of Investment Banking and focus on Asset Management: With the establishment of Global Markets, Deutsche Bank has reallocated resources from CB&S, with a net reduction of EUR 28bn in risk-weighted assets (RWAs) and EUR 70bn in leverage exposure. The bank will also exit a number of businesses.
- Reshaping the retail business: The deconsolidation of Postbank reflects Deutsche Bank's belief that its retail subsidiary was
 too costly in leverage ratio terms (EUR 140bn of mortgages had a lot of implications for a 5% leverage ratio target) and that
 cross-selling potential was limited. Deutsche Bank intends to transform its own retail business into a digitally enabled advisory
 bank for private and commercial clients and to improve synergies by combining it with Wealth Management.
- Rationalisation of the bank's international footprint: Deutsche Bank intends to exit from 10 countries within a 36-month period
 and decrease the client and product base. The banks aims to reduce its complexity and optimise the size of its current local
 presence, while taking into account operating and regulatory costs. This also involves a major overhaul and simplification of
 the IT infrastructure.
- A target 4.5% FL leverage ratio by 2018, 5% by 2020: This will mainly occur through deleveraging.

Prima facie, Deutsche may find it difficult to dispose of low-yielding assets or long-dated derivatives, particularly after the first EUR 250bn of deleveraging efforts. On top of the exit from uncleared CDSs, Deutsche Bank announced that it will drop legacy rates assets, agency RMBS trading and higher risk-weighted securitised trading. However, in October 2015 the bank proved more realistic regarding the size of the reduction and the P&L impact. Comfortingly enough the bank reviewed downwards the initial target for CB&S, from a net reduction of EUR 130bn-150bn to around EUR 70bn.

Deutsche Bank expects that the gross reductions will drive revenue losses of EUR 1.1bn until 2018. Most of the revenue loss is associated with the rationalisation of the debt business and the low-return client lending (EUR 700m), and initiatives to optimise the divisional balance sheet in terms of RWAs and leverage (EUR 600m negative impact on revenues). However, the reallocation of EUR 40bn to Corporate & Investment Banking and to Prime Brokerage is expected to have a positive impact on revenues in the measure of EUR 600m.

We see positively the refocusing on multi-product relationships in the Corporate Finance business and the reduction in the client base to increase efficiencies. Given the weight of the Investment Banking business on the revenues mix of Deutsche Bank, and

23 January 2017 5/12

that Global Markets has already delivered a EUR 23bn reduction year-on-year, a further net reduction of EUR 70bn should have a negative impact on margins in the business segment.

3. The Investment Banking earnings of Deutsche Bank have been relatively resilient

The overall resilience of Investment Banking revenues is reflected at two levels – by net revenues and gross margin (Figure 2). All numbers have been restated for gains and losses through credit valuation adjustments, debt valuation adjustments, and funding valuation adjustments, as well as other one-offs. Although we note a general decrease of the contribution by debt sales and trading – or fixed income and currencies (FIC) as generally called – this business segment has nevertheless consistently contributed more than half of total revenues from CB&S. Deutsche Bank has been one of the main FIC players for years and, in the latest strategy, it has made clear its intention to keep growing in that franchise. Equity sales and trading have been steadily contributing between EUR 2.2bn and EUR 3bn to annual revenues since 2010.

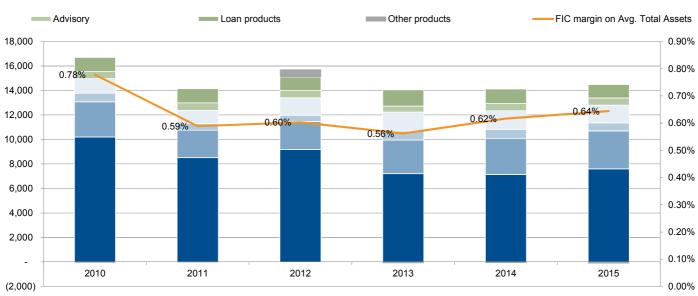
Deutsche has mostly managed to maintain its gross margin in a tight range between 56bps and 78bps. The line graph scaled on the right side of Figure 2 represents FIC margin on average total assets (including the gross present value of derivatives). Income resilience in this segment was achieved despite Deutsche Bank's Investment Banking assets having decreased from a peak of EUR 1.6trn in 2011 to EUR 1.1trn in 2015.

However, we note that at the same time the margin on RWAs declined from 6.2% in 2010 to 4.10% in 2015, as the increase of regulation-driven risk weights affected the operational-risk-charge component. A change in the allocation methodology between business lines also added EUR 28bn in RWAs (operational risk) to CB&S between 2014 and 2015. Operational risk RWA inflation at the bank level (from EUR 67bn at YE 2014 to EUR 90bn in 2015) was mainly linked to legal operational-risk losses (including provisions).

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Figure 2: The resilience of Deutsche Bank's Investment Banking revenues 2010-2015 in EUR m and in %

— Debt Sales & Trading — Equity Sales & Trading — ECM — DCM
— Advisory — Loan products — Other products — FIC margin on Avg. Total Assets



Source: Company data, Scope Ratings calculations

The analysis of Figure 2 cannot be easily pursued on a quarterly basis, considering the seasonality of FIC operations, which is typically skewed towards the first quarter of the year when client activity is at its highest.

In Q3 2016, Deutsche Bank reported increased revenues in Corporate Finance as both Equity Origination and Debt Origination revenues were higher, offsetting a year-on-year decline in advisory revenues.

4. Internal capital generation capacity remains clouded by litigation charges and general reputational risks

In 2014, Deutsche Bank undertook its last capital-raising exercise and its CET1 FL ratio went from 9.5% in Q1 to 11.5% in Q2, with 250bps due solely to the capital increase. However, since then, the pace of organic capital accumulation has been rather volatile, particularly in 2015 with litigation charges strongly impacting, if not completely offsetting, the bank's net results. Figure 3 below

23 January 2017 6/12

illustrates the development of CET1 FL ratio and capital in the hypothesis of no litigation charges. As of Q4 2015 Deutsche Bank's capital would have stood above EUR 55bn, compared to the EUR 44bn reported at year end. From a ratio perspective the CET1 would have been close to 13%, taking into account a 6% increase in RWAs in the period under consideration.

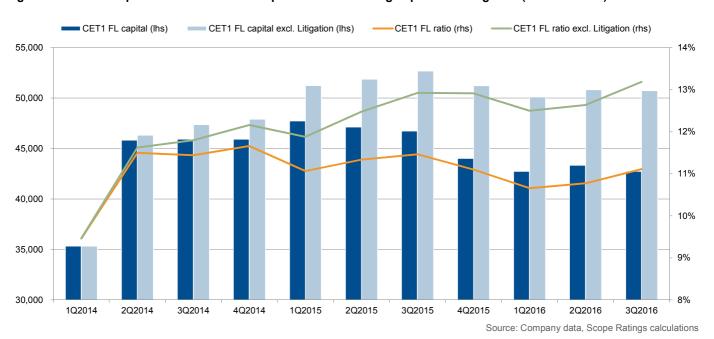
A particular constraint over the past two years was litigation expenses, which amounted to EUR 1.9bn in 2014, and as of year-end 2015 the amount of litigation provisions was EUR5.5bn. In 2016 Deutsche Bank's management guided in general towards some litigation costs, but until Q3 provisions have not seen levels close to the ones realised during previous years.

Given the above-discussed agreement in principle with the DoJ and the respectively expected liquidation of reserves, we expect the bank to take some larger litigation charges in Q4 2016.

The finalisation of the disposal of Chinese Hua Xia Bank should give the bank some leeway with regard to the full impact on the bank's capital position. Deutsche Bank stated that it would not pay dividends for the fiscal years 2015 and 2016.

As of Q3 2016, FL CET1 stood at 11.1% (unchanged compared to year-end 2015) with the fully loaded CET1 capital having declined to EUR 42.9bn (year-end 2015: EUR44.1bn). RWAs (related to Non-Core Operations Unit and Global Markets) decreased by EUR 18bn to EUR 385bn.

Figure 3: CET1 FL capital and CET1 FL ratio reported and excluding impact from litigation (EUR m and %)



23 January 2017 7/12

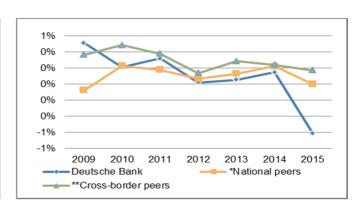


Appendix A: Peer comparison

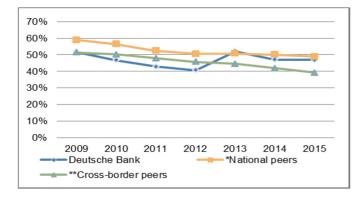
Trading income % revenues

30% 25% 20% 15% 10% 5% 0% -5% -10% 2010 2011 2012 2013 2014 2015 Deutsche Bank *National peers *Cross-border peers

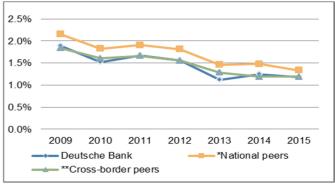
Return on average funded assets (%)



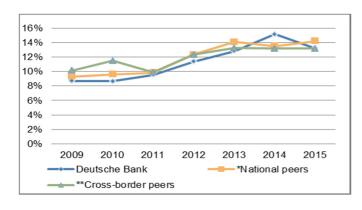
Wholesale funds % total funds



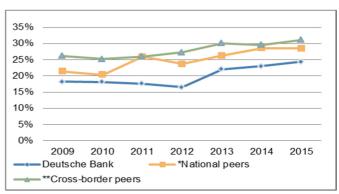
Cost of funds (%)



Common equity tier 1 ratio (transitional) (%)



Tier 1 leverage ratio (%)



Source: SNL, Scope Ratings

*German peers: Commerzbank, Deutsche Bank, DZ Bank (excl. in 2014)

**Cross-border peers: BNP Paribas, Societe Generale, Deutsche Bank, UBS, Barclays, HSBC

23 January 2017 8/12



Appendix B: Selected financial information – Deutsche Bank Group

	2012	2013	2014	2015	2016E	2017E	2018E
Balance Sheet summary (EUR billion)							
<u>.</u>							
Assets							
Cash and Interbank Assets	148.5	118.6	106.6	124.0	141.0	137.0	134.7
Total Securities	512.6	455.7	386.0	403.9	395.8	391.8	387.9
Derivatives	776.7	508.6	634.4	518.7	570.6	582.0	593.7
Net Loans to Customers	436.2	388.7	417.4	444.6	440.1	440.1	440.1
Other Assets	148.2	139.9	164.3	138.0	133.6	129.4	125.4
Total assets	2,022.3	1,611.4	1,708.7	1,629.1	1,681.2	1,680.4	1,681.8
Liabilities							
Interbank liabilities	0.0	114.2	108.4	119.1	116.7	116.7	116.7
Senior Debt	376.6	317.0	247.8	258.1	268.4	265.7	263.0
Derivatives	756.3	484.0	615.3	500.4	550.5	561.5	572.7
Deposits from Customers	577.2	413.6	424.6	447.9	425.5	404.2	384.0
Subordinated Debt + Non Equity Hybrids	20.9	19.5	15.6	13.4	13.8	14.0	14.1
Other Liabilities	237.0	208.1	223.9	222.6	243.6	255.2	267.3
Total Liabilities	1,968.0	1,556.4	1,635.5	1,561.5	1,618.5	1,617.2	1,617.9
Ordinary Equity	54.0	54.7	68.4	62.7	57.6	58.2	58.9
Equity Hybrids	0.0	0.0	4.6	4.7	4.7	4.7	4.7
Minority Interests	0.0	0.0	0.3	0.3	0.3	0.3	0.3
Total Liabilities and Equity	2,022.3	1,611.4	1,708.7	1,629.1	1,681.2	1,680.4	1,681.8
Core Tier 1 / Common Equity Tier 1 Capital	38.0	38.5	60.1	52.4	51.8	52.4	53.1
Core Her 17 Common Equity Her 1 Capital	30.0	30.5	00.1	JZ. 4	31.0	J2. 4	33.1
Income Statement summary (EUR billion)							
Net Interest Income	16.0	14.8	14.3	15.9			
Net Fee & Commission Income	11.4	12.3	12.4	12.8			
Net Trading Income	6.3	4.2	4.5	4.0			
Other income	-0.4	0.1	0.4	0.9			
Operating Income	33.3	31.5	31.7	33.5	31.3	34.5	34.6
Operating Expense	28.5	27.0	26.9	32.9	33.5	31.9	31.7
Pre-provision Income	4.8	4.4	4.7	0.6	-2.2	2.6	2.8
Loan Loss Provision charges	1.7	2.1	1.2	1.0	1.1	1.2	1.3
Other Impairments	1.9	0.5	0.3	5.8	0.0	0.0	0.0
Non-recurring items	-0.4	-0.4	-0.1	0.0	3.0	0.0	0.0
Pre-tax Profit	0.8	1.5	3.1	-6.1	-0.3	1.4	1.6
Discontinued Operations	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Income Tax Expense	0.5	0.8	1.4	0.7	-0.1	0.4	0.5
Net Profit Attributable to Minority Interests	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Net Profit Attributable to Parent	0.3	0.7	1.7	-6.8	-0.3	0.9	1.1

Notes: Scope's forecasts are based on publicly available information and were last updated in December 2016. Please refer to 'Methodologies Used for this Report' for further details.

Source: SNL, Scope Ratings

23 January 2017 9/12



Appendix C: Ratios – Deutsche Bank Group

	2012	2013	2014	2015	2016E	2017E	2018E
Funding/Liquidity							
Gross loans % Total deposits	76.4%	95.3%	99.5%	100.4%	104.6%	110.1%	115.9%
Total deposits % Total funds	59.2%	47.9%	53.0%	53.1%	51.3%	50.2%	49.1%
Wholesale funds % Total funds	40.8%	52.1%	47.0%	46.9%	48.7%	49.8%	50.9%
Liquidity coverage ratio (%)			119.0%	119.0%			
Net stable funding ratio (%)			n.a.	n.a.			
Asset Mix, Quality and Growth							
Gross loans % Funded assets	34.8%	35.0%	38.7%	39.8%	39.4%	39.8%	40.1%
Impaired loans % Gross loans	2.3%	2.6%	2.2%	1.8%	1.8%	1.8%	1.7%
Loan loss reserves % Impaired loans	45.4%	55.1%	55.8%	61.7%	62.9%	64.2%	65.6%
<u> </u>							
Gross loan growth (%)	-4.5%	-10.6%	7.2%	6.4%	-1.0%	0.0%	0.0%
Impaired loan growth (%)	2.6%	-1.9%	-7.8%	-12.8%	-2.0%	-2.0%	-3.0%
Funded assets growth (%)	-4.1%	-10.9%	-3.0%	3.2%	0.2%	-1.0%	-0.9%
Earnings							
Net interest income % Revenues	47.9%	47.2%	45.1%	47.4%			
Fees & commissions % Revenues	34.2%	39.1%	39.2%	38.1%			
Trading income % Revenues	19.0%	13.4%	14.3%	11.9%			
Other income % Revenues	-1.1%	0.3%	1.4%	2.7%			
Net interest margin (%)	2.6%	2.7%	2.1%	1.9%			
Pre-provision Income % Risk-weighted assets (RWAs)	1.3%	1.3%	1.3%	0.2%	-0.6%	0.6%	0.7%
Loan loss provision charges % Pre-provision income	35.7%	47.9%	25.1%	150.6%	-52.3%	46.6%	44.4%
Loan loss provision charges % Gross loans (cost of risk)	0.4%	0.5%	0.3%	0.2%	0.3%	0.3%	0.3%
Cost income ratio (%)	85.6%	85.9%	85.1%	98.1%	107.0%	92.5%	91.8%
Net Interest Income / Loan loss charges (x)	9.3	7.0	12.1	16.6			
Return on average equity (ROAE) (%)	0.5%	1.2%	2.7%	-10.4%	-0.5%	1.6%	1.8%
Return on average funded assets (%)	0.0%	0.1%	0.1%	-0.6%	0.0%	0.1%	0.1%
Retained earnings % Prior year's book equity	-1.0%	-0.2%	1.1%	-10.5%	-1.0%	1.0%	1.2%
Pre-tax return on common equity tier 1 capital	2.2%	3.8%	6.3%	-10.8%	-0.7%	2.6%	3.0%
Capital and Risk Protection							
Common equity tier 1 ratio (%, Fully loaded)		9.7%	11.7%	11.1%	10.9%	10.9%	11.0%
Common equity tier 1 ratio (%, Transitional)	11.4%	12.8%	15.2%	13.2%	13.0%	12.9%	13.1%
Tier 1 capital ratio (%, Transitional)	15.1%	16.9%	16.1%	14.7%	14.4%	14.4%	14.5%
Total capital ratio (%, Transitional)	17.1%	18.5%	17.2%	16.2%	16.0%	15.9%	16.1%
Tier 1 leverage ratio (%, Fully loaded)		3.1%	3.5%	3.5%	3.6%	3.7%	3.8%
Total loss coverage (CET1 + loan loss provisions) % RWAs	12.8%	12.4%	16.6%	14.5%	14.2%	14.2%	14.3%
Non-senior MREL estimate (%)	5.9%	6.6%	8.1%	7.2%	6.8%	6.9%	7.0%
Asset risk intensity (RWAs % total assets)	16.5%	22.1%	23.1%	24.4%	23.7%	24.1%	24.1%

Notes: Scope's forecasts are based on publicly available information and were last updated in December 2016. Please refer to 'Methodologies Used for this Report' for further details.

Source: SNL, Scope Ratings

23 January 2017 10/12



Issuer Rating Report

Ratings*			
Issuer Credit-Strength Rating	A-		
Outlook	Negative		
Senior unsecured debt	BBB+		
Additional Tier 1 instruments	B+		
Short-term debt rating	S-1		
Short-term debt rating outlook	Negative		
Senior secured – Hypothekenpfandbriefe	AAA		
Outlook	Stable		

	Ratings history (ICSR)					
	02.04.2014	First assignment	A-			
	20.05.2014	Outlook change – Positive	A-			
	30.04.2015	Outlook change – Stable	A-			
	15.04.2016	Outlook change – Negative	A-			
	09.06.2016	Upgrade – methodology update	Α			
	01.09.2016	Downgrade	A-			
The rating outlook indicates the most likely direction of the rating if the ratin						

The rating outlook indicates the most likely direction of the rating if the rating were to change within the next 12 to 18 months. A rating change is, however, not automatically ensured.

Regulatory Disclosures

Information pursuant to Regulation (EC) No 1060/2009 on credit rating agencies, as amended by Regulations (EU) No. 513/2011 and (EU) No. 462/2013

Responsibility

The party responsible for the dissemination of the financial analysis is Scope Ratings AG, Berlin, District Court for Berlin (Charlottenburg) HRB 161306 B, Executive Board: Torsten Hinrichs (CEO), Dr. Stefan Bund and Dr. Sven Janssen.

The rating analysis has been prepared by Michaela Seimen Howat, Executive Director

Responsible for approving the rating: Sam Theodore, Group Managing Director

The rating outlook indicates the most likely direction of the rating if the rating were to change within the next 12 to 18 months. A rating change is, however, not automatically ensured.

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Website of the rated entity/issuer, Annual reports/quarterly reports of the rated entity/issuer, Current performance record, Data provided by external data providers, External market reports, Press reports / other public information.

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Examination of the rating by the rated entity prior to publication

Prior to publication, the rated entity was given the opportunity to examine the rating and the rating drivers, including the principal grounds on which the credit rating or rating outlook is based. The rated entity was subsequently provided with at least one full working day, to point out any factual errors, or to appeal the rating decision and deliver additional material information. Following that examination, the rating was not modified.

23 January 2017 11/12

^{*} The ratings are not applicable to debt issued by unguaranteed subsidiaries of the rated parent.



Issuer Rating Report

Methodology

The methodologies applicable for this rating "Bank Rating Methodology" (May 2016) & & "Bank Capital Instruments Rating Methodology" (May 2016) are available on www.scoperatings.com. The historical default rates of Scope Ratings can be viewed on the central platform (CEREP) of the European Securities and Markets Authority (ESMA): http://cerep.esma.europa.eu/cerep-web/statistics/defaults.xhtml. A comprehensive clarification of Scope's credit rating, definitions of rating symbols and further information on the analysis components of a rating can be found in the documents on methodologies on the rating agency's website.

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23 January 2017 12/12