Creditreform Bankrating

Deutsche Bank AG (Konzern)

Creditreform Rating
www.creditreform-rating.de

Rating object	Rating information		
Deutsche Bank AG (Konzern)	Long Term Issuer Rating: **BBB+**	Short Term: **L2**	Outlook: **Stable**

Creditreform ID: 6070000944
Incorporation: 1870
(Main-) Industry: Banks
Management: John Cryan (CEO)

Dr. Marcus Schenck (President)

Christian Sewing (President)

Rating of Bank Capital and Unsecured Debt Instruments:

Senior Unsecured	Tier 2	Additional Tier 1
BBB+	BB	BB-

Prepared on:	**16 October 2017**
Monitoring until:	withdrawal of the rating
Publication:	08 February 2018
Rating type:	**unsolicited**
Rating system(s):	bank ratings; rating of bank capital and unsecured debt instruments
Rating history:	www.creditreform-rating.de

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Analysts

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SWOT-Analysis

Strengths

+ Largest bank in Germany (total assets) with a strong position in Europe
+ One of the most systemically important banks in the world with considerable networking in the economy of Germany
+ Relatively few non-performing loans in peer group comparison
+ Low depreciation rates due to credit concentration in good cyclical countries, especially in Germany
+ Sufficient liquidity at any time in 2016
+ Balanced income structure between interest and commission income

Weaknesses

- Unbalanced maturity transformation between short-term deposits and long-term liabilities leads to refinancing difficulties in case of customer deposits deduction and ECB policy shift
- Bad performance at EBA stress test 2016 compared to the other European banks
- Many legal disputes in recent years
- Inadequate market capitalization in relation to the total assets

Opportunities / Threats

+ Slightly positive development expected for 2017
+ Postbank has a good private customer base

+/- One of the major European banks with a higher level of securities assets than customer loans or cash holdings

- Stricter valuation of RWA´s in the future

Company Overview

Deutsche Bank AG (Deutsche Bank) was founded in 1870. Measured by its total assets, it's the largest "Privatbank" in Germany (as of 2016). With 101,115 employees, (45,457 in Germany) Deutsche Bank is one of the largest employers in the financial sector of Germany. Deutsche Bank operates in more than 70 countries and is due to its worldwide network one of the most systemically important financial institutions in the world. The core business areas of the Deutsche Bank Group are Corporate & Investment Banking, Deutsche Asset Management, Global Markets, Private Wealth & Commercial Clients and Postbank AG as a separate Business Line (as of 2016). The operating income (total: €28.8 billion) of the individual segments is according to the financial statement of the year 2016:

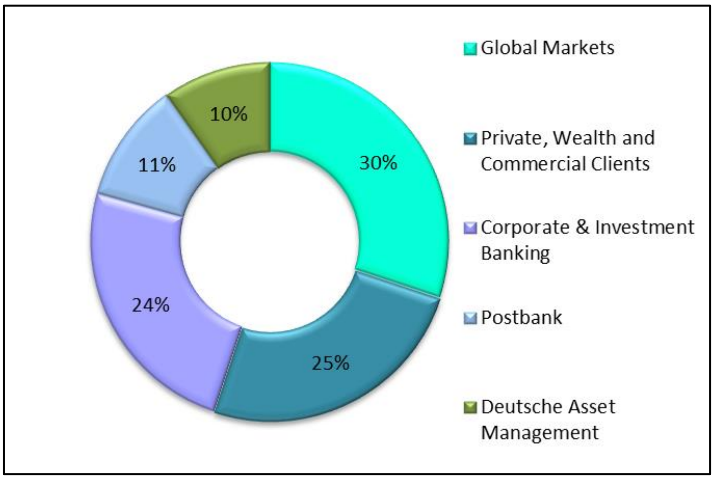

Illustration 1: Operating income by business lines
(Source: S&P Global Market Intelligence / Deutsche Bank)

On 28th October 2009 Deutsche Bank took over Sal. Oppenheim, a private bank which had been independent for over 220 years. Through a takeover bid to the shareholders of Deutsche Postbank AG, Deutsche Bank took the majority of Postbank AG in 2009. The integration is still in process.

Business Development

Performance

The operating income of Deutsche Bank amounted to €28.8bn last year and considerably decreased by 14% YOY (-€4,547m). Net interest income contributed with 51% the largest share to the operational income and significantly decreased by 7% YOY (-€1,174m). Fees and commissions contributed 41% and notably decreased by 8% YOY (-€1,021m). Of the three main drivers of operating income, net trading income contributed the smallest share with 3% and decreased by 79% YOY (-€2,734m). Operational expenses were about €27.7bn last year and significantly decreased by 15% YOY (-€4,758m). Personnel expenses accounted for 42.9% of total expenses last year and significantly decreased by 11% YOY (-€1,419m). Other expenses accounted for 27.6% of total expenses last year and substantially decreased by 32% YOY (-€3,631m). The Net Profit improved considerably over the previous year, however Deutsche Bank still posted a considerable loss of €1.4bn in 2016.

Income Statement	2013	%	2014	%	2015	%	2016	%
Income (€000)								
Net Interest Income	14,834,000	47.1%	14,272,000	45.0%	15,881,000	47.6%	14,707,000	51.0%
Net Fee & Commission Income	12,308,000	39.1%	12,409,000	39.1%	12,765,000	38.2%	11,744,000	40.7%
Net Insurance Income	-270,000	-0.9%	-148,000	-0.5%	-148,000	-0.4%	-285,000	-1.0%
Net Trading Income	3,333,000	10.6%	3,239,000	10.2%	3,478,000	10.4%	744,000	2.6%
Equity Accounted Results	369,000	1.2%	619,000	2.0%	164,000	0.5%	455,000	1.6%
Dividends from Equity Instruments	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Rental Revenue	23,000	0.1%	57,000	0.2%	40,000	0.1%	31,000	0.1%
Lease and Rental Revenue	NA	0.0%	NA	0.0%	NA	0.0%	NA	0.0%
Other Noninterest Income	919,000	2.9%	1,261,000	4.0%	1,194,000	3.6%	1,431,000	5.0%
Operating Income	**31,516,000**	**100%**	**31,709,000**	**100%**	**33,374,000**	**100%**	**28,827,000**	**100%**
Expenses (€000)								
Depreciation and Amortisation	1,143,000	4.3%	1,072,000	4.0%	1,149,000	3.5%	1,260,000	4.6%
Personnel Expense	12,329,000	46.2%	12,512,000	46.2%	13,293,000	41.0%	11,874,000	42.9%
Occupancy & Equipment	2,073,000	7.8%	1,978,000	7.3%	1,944,000	6.0%	1,972,000	7.1%
Marketing and Promotion Expense	294,000	1.1%	293,000	1.1%	294,000	0.9%	285,000	1.0%
Other Provisions	NA	0.0%	NA	0.0%	NA	0.0%	NA	0.0%
Other Expense	7,064,000	26.5%	7,166,000	26.5%	11,266,000	34.8%	7,635,000	27.6%
Operating Expense	**26,703,000**	**100%**	**27,079,000**	**100%**	**32,417,000**	**100%**	**27,659,000**	**100%**
Operating Profit & Impairment (€000)								
Pre-impairment Operating Profit	**4,813,000**		**4,630,000**		**957,000**		**1,168,000**	
Asset Writedowns	2,631,000		1,514,000		7,056,000		2,834,000	
Net Income (€000)								
Nonrecurring Revenue	0		NA		NA		854,000	
Nonrecurring Expense	725,000		NA		NA		0	
Pre-tax Profit	**1,457,000**		**3,116,000**		**-6,097,000**		**-810,000**	
Income Tax Expense	775,000	53.2%	1,425,000	45.7%	675,000	-11.1%	546,000	-67.4%
Discontinued Operations	0		0		0		0	
Net Profit	**681,000**		**1,691,000**		**-6,772,000**		**-1,356,000**	

Figure 1: Group income statement
(Source: S&P Global Market Intelligence / Deutsche Bank)

The Cost Income Ratio of the bank was significantly worse than that of its peers and showed a decrease of 1.18 percentage points over the previous year. In the reporting year, the same figure increased for the peer group. The Cost Income Ratio ex trading of Deutsche Bank was considerably worse than that of its peers and showed a sizeable decrease of 9.94 percentage points over the previous year. The decrease for peer banks was less pronounced. Especially the ROAA, ROAE and RoRWA reflect the problematic situation of the Deutsche Bank due to the net loss. The previous year´s values for these three figures are also below average in the peer group comparison. The net interest margin of the bank was remarkably worse than that of its peers and showed a decrease of

0.05 percentage points over the previous year. The deterioration for peer banks was less pronounced. The earnings figures were weakest compared to the other examined business development parts.

Income Ratios (%)	2013	%	2014	%	2015	%	2016	%
Return on Average Assets (ROAA)	0.04	NA	0.10	0.06	-0.38	-0.48	-0.08	0.30
Return on Equity (ROAE)	1.21	NA	2.62	1.41	-9.25	-11.86	-2.04	7.21
RoRWA	0.22	NA	0.44	0.23	-1.64	-2.08	-0.35	1.29
Net Interest Margin	0.88	NA	0.96	0.09	1.01	0.04	0.96	-0.05
Cost income Ratio ex. Trading	94.75	NA	95.11	0.37	108.43	13.32	98.49	-9.94
Cost income Ratio	84.73	NA	85.40	0.67	97.13	11.73	95.95	-1.18
Change in %Points								

Figure 2: Group key earnings figures
(Source: S&P Global Market Intelligence / Deutsche Bank)

Assets and Asset Quality

In terms of total assets, financial assets made up 91% and fell by 3% YOY (-€46bn). Net loans to customers were responsible for 25% of the financial assets and considerably decreased by 6% YOY (-€25bn). Total securities contributed the largest share with 52% of the total assets and considerably declined by 11% YOY (-€103bn). Of the three main constituents of the asset side, cash positions made up the smallest share with 13% and significantly increased by 66% YOY (+€82bn). In times of negative interest rates this illustrates the difficulties of Deutsche Bank in the search for profitable business segments. Total assets of Deutsche Bank measured €1,591bn and lowered by 2% YOY (-€39bn).

Assets (€000)	2013	%	2014	%	2015	%	2016	%
Cash and Cash Equivalents	118,579,000	7.4%	106,631,000	6.2%	123,965,000	7.6%	206,246,000	13.0%
Net Loans to Customers	353,142,000	21.9%	382,553,000	22.4%	413,565,000	25.4%	395,633,000	24.9%
Total Securities	964,243,000	59.8%	1,020,363,000	59.7%	922,603,000	56.6%	819,640,000	51.5%
Financial Assets	**1,471,500,000**	**91%**	**1,544,438,000**	**90%**	**1,491,146,000**	**92%**	**1,444,978,000**	**91%**
Equity Accounted Investments	3,581,000	0.2%	4,143,000	0.2%	1,013,000	0.1%	1,027,000	0.1%
Other Investments	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Insurance Assets	NA	0.0%	NA	0.0%	NA	0.0%	NA	0.0%
Noncurrent Assets HFS & Discontinued Ops	6,670,000	0.4%	180,000	0.0%	3,491,000	0.2%	563,000	0.0%
Tangible and Intangible Assets	18,352,000	1.1%	17,860,000	1.0%	12,924,000	0.8%	11,786,000	0.7%
Tax Assets	9,393,000	0.6%	8,684,000	0.5%	9,047,000	0.6%	10,225,000	0.6%
Total Other Assets	101,906,000	6.3%	133,397,000	7.8%	111,510,000	6.8%	121,966,000	7.7%
Total Assets	**1,611,400,000**	**100%**	**1,708,703,000**	**100%**	**1,629,130,000**	**100%**	**1,590,546,000**	**100%**

Figure 3: Development of assets
(Source: S&P Global Market Intelligence / Deutsche Bank)

By contrast the NPL ratio of the bank was significantly lower than that of its peers and showed a decrease of 0.1 percentage points over the previous year. The decline for peer banks was more pronounced, however. The NPL / RWA ratio of the bank was vastly better than that of its peers and showed an increase of 0.05 percentage points over the previous year. The same figure decreased for the peer group. The potential problem loans / NPL ratio was immensely better than that of its peers and showed a minor increase of 0.15 percentage points over the previous year. Peer banks noticed a more distinct increase. The Reserved /Impaired Loans ratio of the bank was significantly worse than that of its peers and displayed a decrease of 0.64 percentage points over the previous year. However, the same ratio increased for the peer group. By contrast the Net Write-offs / average RWA ratio of the bank was considerably better that of its peers and showed a large, relative increase of 0.19 percentage points over the previous year. The same ratio decreased for the peer group. The RWA / assets figure of the bank was better than that of its peers despite a significant decrease of two percentage points over the previous year. The decrease for peer banks was less pronounced. Generally speaking, Deutsche

Bank has a diversified and good asset quality. Of the four examined business development parts, the asset quality figures achieved the highest relative score.

Asset-Quality (%)	2013	%	2014	%	2015	%	2016	%
Non Performing Loans (NPL) / Loans	3.48	NA	2.93	-0.56	2.38	-0.54	2.28	-0.10
NPL / RWA	4.10	NA	2.82	-1.27	2.48	-0.34	2.53	0.05
Potential Problem Loans / NPL	17.55	NA	16.48	-1.07	17.23	0.75	17.38	0.15
Reserved / Impaired Loans	55.10	NA	55.76	0.65	61.69	5.93	61.04	-0.64
Net Write-offs / Risk-adjusted Assets	0.33	NA	0.39	0.06	0.26	-0.13	0.45	0.19
Risk-weighted Assets/ Assets	18.64	NA	23.21	4.57	24.39	1.18	22.40	-2.00
Change in % Points								

Figure 4: Development of asset quality
(Source: S&P Global Market Intelligence / Deutsche Bank)

Refinancing and Capital Adequacy

Financial liabilities of Deutsche Bank represented 89% of the total liabilities and remained at a constant level during the previous years. Customer deposits contributed for 28% of the total liabilities and declined by 3% YOY (-€14bn). For the most part, deposits from customers are short term (more than half of the deposits are overnight). The deposits are developing relatively steady, compared to the loans. Total debt represented 22% of total liabilities and increased markedly by 13% YOY (+€39bn). Total equity represented the smallest share with 4.1% of total assets and fell by 4% YOY (-€3bn).

Liabilities (€000)	2013	%	2014	%	2015	%	2016	%
Total Deposits from Banks	114,176,000	7.3%	108,350,000	6.6%	119,065,000	7.6%	116,094,000	7.6%
Total Deposits from Customers	413,574,000	26.6%	424,584,000	26.0%	447,909,000	28.7%	434,110,000	28.5%
Total Debt	358,588,000	23.0%	263,406,000	16.1%	299,871,000	19.2%	338,825,000	22.2%
Derivative Liabilities	484,044,000	31.1%	615,265,000	37.6%	500,441,000	32.0%	468,451,000	30.7%
Securities Sold, not yet Purchased	NA	0.0%	NA	0.0%	NA	0.0%	NA	0.0%
Other Financial Liabilities	7,780,000	0.5%	27,136,000	1.7%	5,402,000	0.3%	4,019,000	0.3%
Total Financial Liabilities	**1,378,162,000**	**89%**	**1,438,737,000**	**88%**	**1,372,690,000**	**88%**	**1,361,498,000**	**89%**
Insurance Liabilities	NA	0.0%	NA	0.0%	NA	0.0%	NA	0.0%
Unit-Linked Insurance and Investment Contr.	8,067,000	0.5%	8,523,000	0.5%	8,522,000	0.5%	592,000	0.0%
Tax Liabilities	2,701,000	0.2%	2,783,000	0.2%	2,445,000	0.2%	1,815,000	0.1%
Noncurrent Asset Retirement Obligations	NA	0.0%	NA	0.0%	NA	0.0%	NA	0.0%
Other Provisions	4,524,000	0.3%	6,677,000	0.4%	9,207,000	0.6%	10,973,000	0.7%
Total Other Liabilities	156,715,000	10.1%	178,760,000	10.9%	168,603,000	10.8%	150,146,000	9.8%
Total Liabilities	**1,556,434,000**	**96.6%**	**1,635,481,000**	**95.7%**	**1,561,506,000**	**95.8%**	**1,525,727,000**	**95.9%**
Total Equity	**54,966,000**	**3.4%**	**73,223,000**	**4.3%**	**67,624,000**	**4.2%**	**64,819,000**	**4.1%**
Total Passiva	**1,611,400,000**	**100%**	**1,708,703,000**	**100%**	**1,629,130,000**	**100%**	**1,590,546,000**	**100%**
Deposits from Customers Growth*	-28.35	NA	2.66	31.01	5.49	2.83	-3.08	-8.57
Change in % Points								

Figure 5: Development of refinancing and capital adequacy
(Source: S&P Global Market Intelligence / Deutsche Bank)

The decline in equity did not lead to any deterioration in the capital ratios (see figure 6), because the RWA´s were disproportionately reduced within one year. Just the equity ratio of Deutsche Bank was significantly worse than that of its peers and showed a decrease of 0.08 percentage points over the previous year. The decrease for peer banks was less distinct. The CET1 Ratio of the bank was comparable to that of its peers and showed an increase of 0.22 percentage points over the previous year. The increase for peer banks was less pronounced. The Tier 1 ratio of the bank was comparable to that of its peers and showed a significant increase of 0.92 percentage points over the previous year. The increase for peer banks was less striking. The total capital ratio was comparable to that of its peers and showed a considerable increase of 1.21 percentage points over the previous year. Peer banks observed a lesser increase. The leverage ratio of Deutsche Bank was significantly worse than that of its peers and remained unchanged at 3.5% over the previous three years. The decrease for peer banks was less pronounced.

Capital (€000)	2013	%	2014	%	2015	%	2016	%
Total Capital	55,464,000	NA	68,293,000	23.13	64,522,000	-5.52	62,158,000	-3.66
Total Risk-weighted Assets	300,369,000	NA	396,648,000	32.05	397,382,000	0.19	356,235,000	-10.35
Capital Ratios (%)								
Core Tier 1 Ratio	12.83	NA	15.15	2.32	13.19	-1.96	13.41	0.22
Tier 1 Ratio	16.88	NA	16.11	-0.78	14.65	-1.46	15.58	0.92
Total Capital Ratio	18.47	NA	17.22	-1.25	16.24	-0.98	17.45	1.21
Leverage Ratio	2.40	NA	3.50	1.10	3.50	0.00	3.50	0.00
Fully Loaded: Common Equity Tier 1 Ratio	12.83	NA	11.70	-1.13	11.12	-0.58	11.83	0.71
Fully Loaded: Tier 1 Ratio	16.88	NA	12.87	-4.02	12.26	-0.60	13.10	0.83
Fully Loaded: Risk-weighted Capital Ratio	18.47	NA	16.01	-2.46	15.37	-0.64	16.64	1.27
Total Equity/ Total Assets	3.41	NA	4.29	0.87	4.15	-0.13	4.08	-0.08
Change in %Points								

Figure 6: Development of capital ratios
(Source: S&P Global Market Intelligence / Deutsche Bank)

Liquidity

The liquidity situation of Deutsche Bank was apt at any given time in 2016. The loan to deposit ratio of the bank was significantly less than that of its peers and displayed a decrease of 1.2 percentage points over the previous year. At the same time, the decline for peer banks was more pronounced. The interbank ratio was much lower that of its peers and showed a decrease of 0.48 percentage points over the previous year. This value is an indicator of the continued confidence of other banks in the solvency of Deutsche Bank. The LTD ratio, on the other hand, is more balanced than the interbank ratio. The liquidity coverage ratio was significantly worse than that of its peers and displayed a considerable increase of 7.96 percentage points over the previous year. With regard to the maturity structure between customer deposits and customer liabilities, it should be noted that 90% of the deposits have a maturity of <3 months, the liabilities exceed 70% > 1 year. As a result, Deutsche Bank should be wary of short term refinancing difficulties.

Liquidity (%)	2013	%	2014	%	2015	%	2016	%
Liquidity Coverage Ratio	NA	NA	119.00	NA	119.25	0.25	127.22	7.96
Interbank Ratio	20.53	NA	21.28	0.75	11.91	-9.37	11.44	-0.48
Loan to Deposit (LTD)	85.39	NA	90.10	4.71	92.33	2.23	91.14	-1.20
Change in %Points								

Figure 7: Development of liquidity
(Source: S&P Global Market Intelligence / Deutsche Bank)

Conclusion

Deutsche Bank has a number of tasks and challenges to deal with in the near future. On the one hand, there are many internal restructuring tasks, such as a sensible integration of the Postbank AG. On the other hand, the external problems are in form of legal disputes and the resulting negative image. Deutsche Bank´s ambivalent/negative image has already led to the loss of customer deposits and declining new business. Therefore, the restructuring of the bank has to improve the image of the bank, so that the market position can be further expanded. Additionally, the digitalization of the banking business must make cost savings possible in the future, so that the profit situation can be sustainably improved.

In contrast to the development of income, the asset quality has improved in the recent years and ranks highly in the peer group comparison.

As a result of the capital increase (+€8bn) in 2017, the capital ratios are much higher than 2016. The new ratios are above the peer group average. The improved equity situation will likely lead to a better performance in future EBA stress tests. The liquidity situation was satisfactory at any given time in 2016.

The current half-year figures for 2017 show a profit recovery, especially due to cost reduction. The asset quality remains high and the RWA´s could be reduced slightly. Due to the equity increase, the capital ratios are now satisfactory.

The bank´s efforts to make a turnaround are already positive in key figures.

As part of a scenario analysis, the "Best Case" would result in a substantial improvement in the rating. In the "Worst Case" scenario the result would be significantly lower.

Ratings Detail

Bank ratings

The bank ratings are dependent on a host of quantitative and qualitative factors. An improvement in either sub-category may result in a higher rating score.

LT Issuer / Short-Term / Outlook **BBB+ / L2 / Stable**

Bank Capital and Debt Instruments Ratings

The ratings for bank capital and debt instruments are inter alia dependent on subordination and relative size of the instrument class, based on the long-term issuer rating of the bank.

'preferred' senior unsecured debt: **BBB+**
Tier 2 (T2): **BB**
Tier 1 (AT1): **BB-**

Ratings Detail and History

Ratings		
Bank Capital and Debt Instruments		
'preferred' senior unsecured	01 February 2018	BBB+
Tier 2	01 February 2018	BB
Tier 1	01 February 2018	BB-
Bank Issuer Rating History		
LT Issuer / Short-Term / Outlook	16 October 2017	BBB+ / L2 / Stable

Figure 8: Ratings

Regulatory

Creditreform Rating AG was neither commissioned by the rating object nor by any other third parties for the rating. The analysis took place on a voluntary basis by Creditreform Rating AG and is to be described in the regulatory sense as an unsolicited rating.

The rating is based on publicly available information and internal evaluation methods for the rated bank. The quantitative analysis is based mainly on the latest annual accounts, interim reports, other investor relations information of the bank, and calculated key figures by S&P Global Market Intelligence subject to a peer group analysis were 41 competing institutes.

The information and documents processed satisfied the requirements according to the rating system of Creditreform Rating AG published on the website www.creditreform-rating.de. The rating was carried out on the basis of the rating methodology for unsolicited bank ratings as well as the methodology for the rating of bank capital and unsecured debt instruments.

On 01 February 2018, the rating was presented by the analysts to the rating committee and adopted in a resolution.

The rating result was communicated to Deutsche Bank AG (Konzern) and the preliminary rating report was made available to it. There was no change in the rating score.

The rating is subject to one-year monitoring from the creation date (see cover sheet). Within this period, the rating can be updated. At the latest after one year, a follow-up is required to maintain the validity of the rating.

In 2011 Creditreform Rating AG was registered within the European Union according to EU Regulation 1060/2009 (CRA-Regulation). Based on the registration Creditreform Rating AG (CRAG) is allowed to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation.

Conflict of Interests

No conflicts of interest were identified during the rating process that might influence the analyses and judgements of the rating analysts involved or any other natural person whose services are placed at the disposal or under the control of Creditreform Rating AG and who are directly involved in credit rating activities or approving credit ratings and rating outlooks.

In case of providing ancillary services to the rated entity, CRA will disclose all ancillary services in the credit rating report.

Rules on the Presentation of Credit Ratings and Rating Outlooks

The approval of credit ratings and rating outlooks follows our internal policies and procedures. In line with our policy “Rating Committee,” all credit ratings and rating outlooks are approved by a rating committee based on the principle of unanimity.

To prepare this credit rating, CRA has used following substantially material sources:

1. External service provider for aggregated data base

2. Website of the rated bank

3. Annual report

4. Abridged version of the annual report

There are no other attributes and limitations of the credit rating or rating outlook other than displayed on the CRA website. Furthermore CRA considers satisfactory the quality and extent of information available on the rated entity. In regard to the rated entity Creditreform Rating AG regarded available historical data as sufficient.

Between the disclosure of the credit rating to the rated entity and the public disclosure no amendments were made to the credit rating.

The "Basic data" information card indicates the principal methodology or version of methodology that was used in determining the rating, with a reference to its comprehensive description.

In case where the credit rating is based on more than one methodology or where reference only to the principal methodology might cause investors to overlook other important aspects of the credit rating, including any significant adjustments and deviations, Creditreform Rating AG explains this fact in the credit rating and indicates how the different methodologies or these other aspects are taken into account in the credit rating. This information is integrated in the credit rating report.

The meaning of each rating category, the definition of default or recovery and any appropriate risk warning, including a sensitivity analysis of the relevant key rating assumptions, such as mathematical or correlation assumptions, accompanied by worst-case scenario credit ratings as well as best-case scenario credit ratings are explained.

The date at which the credit rating was released for distribution for the first time and when it was last updated including any rating outlooks is indicated clearly and prominently in the "Basic data" card as a "Rating action"; first release is indicated as "initial rating", other updates are indicated as an "update", "upgrade or downgrade", "not rated", "confirmed", "selective default" or "default".

In the case of a rating outlook, the time horizon is provided during which a change in the credit rating is expected. This information is available within „Basic data" information card.

In accordance to Article 11 (2) EU-Regulation (EC) No 1060/2009 registered or certified credit rating agency shall make available in a central repository established by ESMA information on its historical performance data, including the ratings transition frequency, and information about credit ratings issued in the past and on their changes. Requested data are available at the ESMA website: https://cerep.esma.europa.eu/cerep-web/statistics/defaults.xhtml.

An explanatory statement of the meaning of Creditreform`s default rates are available in the credit rating methodologies disclosed on the website.

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