

CREDIT OPINION

20 August 2018

Update



Rate this Research

RATINGS

DekaBank Deutsche Girozentrale

Domicile	Frankfurt am Main, Germany
Long Term CRR	Aa2
Туре	LT Counterparty Risk Rating - Fgn Curr
Outlook	Not Assigned
Long Term Debt	Aa2
Туре	Senior Unsecured - Dom Curr
Outlook	Stable
Long Term Deposit	Aa2
Туре	LT Bank Deposits - Fgn Curr
Outlook	Stable

Please see the <u>ratings section</u> at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Goetz Thurm, CFA 49-69-70730-773

VP-Senior Analyst
goetz.thurm@moodys.com

Alexander Hendricks, 49-69-70730-779

Associate Managing Director - Banking alexander.hendricks@moodys.com

Carola Schuler 49-69-70730-766
Managing Director - Banking
carola.schuler@moodys.com

DekaBank Deutsche Girozentrale

Update following legislative change in Germany

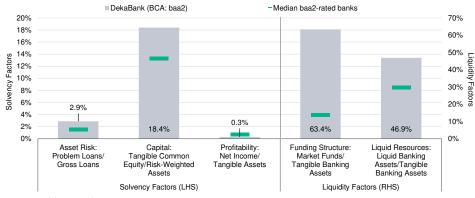
Summary

On <u>3 August 2018</u>, we reclassified as junior senior unsecured the senior debt instruments of <u>DekaBank Deutsche Girozentrale</u> (DekaBank) and downgraded them to A1 from Aa3 negative. At the same time, we reclassified complex structured debt instruments as senior unsecured and affirmed their ratings at Aa2 stable. We also affirmed the bank's Aa2(stable)/P-1 deposit and P-1 Commercial Paper ratings. We continue to assign a baa2 Baseline Credit Assessment (BCA), an a3 Adjusted BCA, and Aa2/P-1 Counterparty Risk Ratings (CRRs).

DekaBank's ratings reflect: (1) the bank's baa2 BCA; (2) its a3 Adjusted BCA, which incorporates our assumption of Very High affiliate support from <u>Sparkassen-Finanzgruppe</u> (S-Group, Aa2 stable, a2¹), resulting in two notches of rating uplift; (3) the results of our Advanced Loss Given Failure (LGF) analysis, which provide three notches of rating uplift for deposits and senior unsecured debt from the A3 Adjusted BCA; and (4) our assumption of Moderate support from the <u>Government of Germany</u> (Aaa stable²), for deposits and senior unsecured debt, yielding one-notch of rating uplift.

DekaBank's baa2 BCA reflects the group's sound regulatory capital ratios, stable fee income base and strong liquidity position. At the same time, it also captures its credit risk from commercial real estate, aircraft and ship financing, as well as the high reliance on market funding and moderate profitability.

Exhibit 1
Rating Scorecard - Key Financial Ratios



Source: Moody's Financial Metrics

Credit strengths

- » Sound capitalisation
- » High share of fee income stabilises profitability
- » Robust net new customer asset growth
- » Core institution of S-Group

Credit challenges

- » Rising asset risk from a growing commercial real estate book and potential write-down risks from remaining shipping exposures
- » Balance sheet growth and certain legal risks could soften capital levels somewhat
- » Depressed net interest income given the low interest-rate environment
- » Dependence on wholesale funding
- » In the long term, potential shifting preferences among German retail investors away from actively managed funds towards lowermargin passive investment products

Rating outlook

» The outlook on the ratings is stable, reflecting our anticipation that (1) the implied creditworthiness of DekaBank's owners as well as existing cross-sector support mechanisms will stay stable; and (2) the liability structure of the bank, which forms the basis for our Advanced LGF analysis, will stay broadly stable over the outlook horizon.

Factors that could lead to an upgrade

- » An upgrade of DekaBank's ratings could result from (1) an upgrade of its Adjusted BCA; and/or (2) a higher rating uplift as a result of our Advanced LGF analysis.
- » A strengthening of DekaBank's BCA would likely be offset by less affiliate support uplift and would therefore not lead to an upgrade of the a3 Adjusted BCA. Consequently, upward pressure on the Adjusted BCA could only develop if the creditworthiness of S-Group improves. DekaBank's BCA on its own could be upgraded in the event of an enduring improvement in the bank's capital levels, a material improvement of its profitability, and a pronounced reduction in its market-funding reliance.
- » Positive pressure resulting from our LGF analysis could only arise on the junior senior unsecured ratings, should DekaBank materially raise its volume of subordinated instruments; deposit and senior unsecured ratings already incorporate the highest possible rating uplift of three notches.

Factors that could lead to a downgrade

- » A downgrade of DekaBank's ratings could be triggered by (1) a lowering of the bank's BCA; (2) a deterioration in the implied creditworthiness of its owners; (3) weakening cross-sector support assumptions; and/or (4) a reduction in rating uplift as a result of our LGF analysis.
- » DekaBank's BCA could come under pressure if additional risks emerge from its commercial banking activities, if the bank fails to maintain capital ratios at adequate levels, or if profitability declines further. We would expect, though, that a one-notch downgrade of the BCA would be offset by additional affiliate support.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

» Negative pressure on the debt and deposit ratings could arise if DekaBank's volume of unsecured and subordinated debt instruments decreases relative to total banking assets.

Key indicators

Exhibit 2
DEKABANK DEUTSCHE GIROZENTRALE (Consolidated Financials) [1]

	12-17 ²	12-16 ²	12-15 ²	12-14 ²	12-13 ³	CAGR/Avg.4
Total Assets (EUR billion)	94	86	108	113	116	-5.2 ⁵
Total Assets (USD billion)	113	91	117	137	160	-8.4 ⁵
Tangible Common Equity (EUR billion)	4.6	4.4	4.3	3.9	3.7	5.8 ⁵
Tangible Common Equity (USD billion)	5.5	4.6	4.6	4.7	5.0	2.2 ⁵
Problem Loans / Gross Loans (%)	2.1	3.5	3.1	3.3	2.4	2.96
Tangible Common Equity / Risk Weighted Assets (%)	18.4	18.4	13.6	14.0	16.3	16.1 ⁷
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	9.2	17.1	15.6	18.8	17.2	15.6 ⁶
Net Interest Margin (%)	0.1	0.1	0.2	0.3	0.2	0.26
PPI / Average RWA (%)	2.2	2.3	2.2	3.2	2.4	2.5 ⁷
Net Income / Tangible Assets (%)	0.3	0.3	0.3	0.5	0.3	0.36
Cost / Income Ratio (%)	67.3	61.0	59.7	50.9	65.7	60.9 ⁶
Market Funds / Tangible Banking Assets (%)	63.4	64.0	65.9	69.1	70.3	66.5 ⁶
Liquid Banking Assets / Tangible Banking Assets (%)	46.9	37.1	50.2	43.7	45.4	44.7 ⁶
Gross Loans / Due to Customers (%)	78.0	99.0	77.2	85.3	99.1	87.7 ⁶
[1] All figures and making any adjusted union Manadad natural adjustments [2] Decal III. E.	H I I I I I I		nc [2] n Lu ur	DC [4] b4	1 1:00	

^[1] All figures and ratios are adjusted using Moody's standard adjustments [2] Basel III - fully-loaded or transitional phase-in; IFRS [3] Basel II; IFRS [4] May include rounding differences due to scale of reported amounts [5] Compound Annual Growth Rate (%) based on time period presented for the latest accounting regime [6] Simple average of periods presented for the latest accounting regime. [7] Simple average of Basel III periods presented Source: Moody's Financial Metrics

Profile

DekaBank is the securities service provider (Wertpapierhaus) for S-Group (on a combined basis, S-Group accounts for more than a third of the German banking system). As of 31 December 2017, DekaBank reported consolidated balance sheet assets of €94 billion, while its total customer assets, comprising on-balance sheet assets and off-balance sheet assets under management, amounted to €283 billion (€139 billion from retail customers and €144 billion from institutional customers).

DekaBank provides its private and institutional clients with a range of fund-based products, covering all major asset classes. It also offers real estate funds and financing, lending, capital market-related trading and sales services, treasury facilities, including liquidity, asset and liability management, and funding.

DekaBank was established on 1 January 1999 following the merger of the DekaBank GmbH and Deutsche Girozentrale – Deutsche Kommunalbank. Since June 2011, the bank has been fully owned by the German Sparkassen (savings banks) through two joint shareholders – the Deutsche Sparkassen- und Giroverband ö.K. (DSGV ö.K., the German Savings Banks and Giro Association) and Deka Erwerbsgesellschaft mbH & Co. KG.

For more information, please see DekaBank's Issuer Profile and our German Banking System Profile.

DekaBank's Weighted Macro Profile is Strong (+)

DekaBank has exposures across Europe: 45% of total gross loans as of year-end 2017 related to its home market Germany, 4% to Eurozone periphery countries (Italy, Spain, Ireland), 22% to other Eurozone countries, 15% to the UK, 11% to OECD countries outside the EU, and the remainder mainly represented international organisations and exposures outside of Europe. Their weighted average results in a Strong (+) Macro Profile for DekaBank, one notch below the Very Strong (-) Macro Profile of Germany.

Detailed credit considerations

Asset risk from legacy shipping exposures declined, but CRE exposures increased

We assign a baa3 Asset Risk score, four notches below the a2 initial score (which is conditioned by the bank's Strong (+) Weighted Macro Profile), to reflect DekaBank's credit risks from illiquid lending positions and its market risk profile.

The ship finance book of DekaBank had dropped to €1.2 billion (representing 26% of TCE) by December 2017, from €1.6 billion at year-end 2016 and €1.7 billion at year-end 2015. Of gross exposures €0.3 billion related to legacy ship financing loans underwritten prior to 2010 and €0.9 billion represented positions originated post a change in lending risk strategy. The reduction in shipping loans was partly due to sales, which allowed the bank to cut its stock of problem loans by almost half and resulted in a much improved problem loan ratio of 2.1% as of December 2017.

While DekaBank has not been impacted as much by the global shipping crisis as some of the other German ship lenders, its remaining exposures might create further write-downs should shipping markets deteriorate again in 2018 and beyond, following the tentative recovery seen in 2017. During 2016 the bank had to record material write-downs of €187 million on its legacy shipping portfolio during 2016 and its problem loan ratio increased from 3.1% as of December 2015 to 3.5% as of December 2016.

In addition to the bank's ship financing exposures, DekaBank runs a sizeable commercial real estate (CRE) book with €7.1 billion of direct exposures and €1.4 billion of loans to open-ended property funds, which on a combined basis increased by €1.5 billion or 21% during 2017 and represented 186% of TCE as of December 2017. Further credit risk stems from the bank's €3.0 billion aircraft financing business (66% of TCE), which did not grow during 2017 in Euro-terms due to the weakened US Dollar, but which accounted for 23% of all new business underwritten in the Financing business segment in 2017. In contrast, the bank's savings bank financing book, which is low risk, declined to €5.3 billion from €7.3 billion during 2017.

Apart from the bank's credit risk, DekaBank runs considerable market risk related to investments and derivative positions. While market risk RWA have declined following the application of an internal model for the calculation of market price risk in 2016, dislocations in capital markets could represent tail risks for the bank's securities financing business. In addition, DekaBank is in the process of expanding its long-term, more illiquid lending book in the areas of commercial real estate and structured finance, which confer higher margins, but also higher risks. Hence, to take account of risks relating to the bank's still substantial market risk and the changing asset risk profile, we adjust the initial Asset Risk score of a2 downward by four notches to baa3.

Sound capitalisation, partly reflecting low risk-weighted density

We assign an a2 Capital score, three notches below the aa2 initial score, to take into account the bank's leverage ratio as well as potential balance sheet growth and certain legal risks.

As of December 2017, DekaBank reported a 16.7% fully loaded CET1 ratio under the Capital Requirements Regulation and Directive (CRR/CRD IV), unchanged from the December 2016 level. The steady result reflected the inclusion of full-year 2017 retained earnings in CET1, which thus moved 4% higher, and a 5% increase in risk-weighted assets (RWAs). The rise in RWAs was due to higher credit risk, market risk and operational risk RWAs, while counterparty risk declined materially from the 2016 level, despite the fact that DekaBank relevered again during 2017. The bank's balance sheet expanded by €8 billion, or 9%, to €94 billion during the period, which followed rapid shrinkage of exposures in the fourth quarter of 2016, as DekaBank chose not to roll-over highly liquid market risk positions. Most of these positions have now been rebuilt, which led to a decline in DekaBank's fully loaded leverage ratio to 4.7% as of December 2017 from 5.1% as of December 2016 (TCE to tangible assets declined to 4.9% from 5.1% as of the same dates). Despite the bank increasing its more illiquid balance sheet positions, its risk-weighted density (RWA to total assets) declined somewhat to 27% as of December 2017 from 28% as of December 2016.

Our assigned a2 Capital score, three notches below the aa2 initial score, takes into account the bank's leverage ratio, which remains below our 5% threshold level, as well as a negative impact on capital ratios from potential balance sheet growth and certain legal risks, mainly stemming from investigations into past transactions in German stocks near the record date. IFRS 9 has not had a material effect on capitalisation levels with the bank expecting balance sheet equity to have declined by €47 million on a pretax basis on 1 January 2018 (less than 1% of TCE). As of December 2017, DekaBank's minimum capital requirements determined by the Supervisory and Review Process (SREP) were 7.22% on a CET1 basis and 10.72% on a Total Capital basis, which DekaBank comfortably exceeded at all times.

High share of stable fee income provides earnings cushion

We assign a ba2 Profitability score, in line with the ba2 initial score, reflecting DekaBank's sustainable earnings run rate in the current low interest rate environment.

Owing to its strong and profitable asset-management franchise, DekaBank's fee income represents an important cushion for credit and market-related losses. As the preferred retail asset manager of the savings bank sector and a leading provider of institutional investment funds, DekaBank's resilient fee and commission income from asset-management activities accounted for 75% of net revenues during 2017. However, the implementation of the Markets in Financial Instruments Directive (MiFID II), which governs the permissibility of sales commission and other requirements for strengthening investor protection, could somewhat dampen DekaBank's profitability in the future. Furthermore, the market shift towards passive investments could put a dent in the bank's asset-based margin in the long-term. At present, though, net new asset generation from the bank's actively managed investment products remains robust.

In 2017, DekaBank's reported economic result (the bank's non-GAAP pretax measure) reached \leqslant 449 million, a \leqslant 34 million, or 8.1% increase on the previous year. This improved result reflected a \leqslant 95 million (8.6%) acceleration in net commission income to \leqslant 1,203 million, owing to higher assets under management, an improved net interest income result (up 11.8% to \leqslant 156 million), much lower loan loss provisions of \leqslant 18 million versus \leqslant 210 million in 2016 (due to shipping write-downs). This positive development was partially offset by \leqslant 70 million higher operating expenses of \leqslant 1,040, a \leqslant 27 million lower other operating income result of \leqslant 8 million, owing to acquisition gains that were recorded in 2016, and a \leqslant 160 million lower net financial income of \leqslant 156 million, which included a \leqslant 95 million general provision to cover potential risks. DekaBank's reported economic result incorporates several items not shown in the IFRS income statement, such as valuation gains and losses from hedged lending, actuarial gains and losses, potential charges, as well as interest expense related to AT1 bonds, to better represent the true economic position.

On an IFRS basis and following our standard adjustments, DekaBank reported net income of €285 million in 2017, €51 million more than in 2016. The return on tangible assets thus reached 0.3%, which we consider to be a sustainable run rate for DekaBank in the current low interest rate environment. As a result, we keep the assigned Profitability score in line with the ba2 initial score.

Wholesale funding dependence mitigated by strong access to sector funding

We assign a ba3 Funding Structure score, four notches above the caa1 initial score, incorporating the bank's access to additional funding resources.

DekaBank is highly dependent on wholesale funds. More than half of the bank's balance sheet is funded through interbank repo and other short-term products, specifically institutional deposits and commercial paper. This high dependence on confidence-sensitive wholesale funding sources is balanced by DekaBank's strong and recurring access to funds from the savings banks sector, especially in medium- and long-term maturities, as well as substantial regular excess cash from its mutual funds franchise. These benefits are captured in our ba3 assigned Funding Structure score, four notches above the initial score. The modest volume of €21 billion of customer loans (as of December 2017) is sufficiently matched by medium- and long-term funds.

Highly liquid balance sheet despite asset encumbrance

We assign an a2 Liquid Resources score, two notches below the aa3 initial score, taking into account asset encumbrance.

Almost half of DekaBank's balance sheet can be considered as liquid, reflecting securities lending and reverse repo balances, cash, as well as trading positions, which are partly encumbered, though, as reflected in our a2 assigned Liquid Resources score. Structurally, DekaBank is slightly overfunded, with no liquidity shortfalls in short- and long-term buckets. Full coverage also applies in its combined stress scenario, a stress test introduced in compliance with domestic regulatory requirements, which points to a liquidity surplus under stress of €12.6 billion over a three months horizon. The bank's ample liquid resources are also expressed in its Liquidity Coverage Ratio (LCR), which reached an average of 132% during 2017 and stood at 153% at the end of the year.

Support and structural considerations

Affiliate support

DekaBank benefits from cross-sector support from S-Group. Cross-sector support materially reduces the probability of default, as it would be available to stabilise a distressed member bank and not just compensate for losses in resolution.

We consider the readiness of the sector to support DekaBank to be Very High, given the bank's key service function for the sector and its 100% ownership by the sector's savings banks. Cross-sector support continues to provide two notches of rating uplift from the baa2 BCA, leading to an a3 Adjusted BCA.

Loss Given Failure analysis

DekaBank is subject to the EU Bank Recovery and Resolution Directive (BRRD), which we consider to be an Operational Resolution Regime. We therefore apply our Advanced LGF analysis, where we consider the risks faced by the different debt and deposit classes across the liability structure should the bank enter resolution.

Our Advanced LGF analysis follows the recently revised insolvency legislation in Germany that became effective on 21 July 2018. Following the change in law, the legal hierarchy of bank claims in Germany is now consistent with most other European Union (EU) countries, where statutes do not provide full preference to deposits over senior unsecured debt. However, in our Advanced LGF analysis we now consider not only the results of both the formal legal position (pari passu, or 'de jure' scenario), to which we assign a 75% probability, but also an alternative liability ranking, reflecting resolution authority discretion to prefer deposits over senior unsecured debt (full depositor preference, or 'de facto' scenario), to which we assign a 25% probability.

We further assume residual tangible common equity of 3% and losses post-failure of 8% of tangible banking assets. In addition, we assume a 26% share of deposits being "junior" wholesale deposits, for which we factor in a 25% run-off prior to failure, while we assume a 5% run-off in preferred deposits. These ratios are in line with our standard assumptions. The results of our Advanced LGF analysis are:

- » For deposits and senior unsecured debt, as well as CRR liabilities, our LGF analysis indicates an extremely low loss-given-failure, leading us to position their Provisional Rating Assessments at aa3, three notches above the a3 Adjusted BCA.
- » For junior senior unsecured debt, our LGF analysis indicates a very low loss-given-failure, leading us to position its Provisional Rating Assessment at a1, two notches above the a3 Adjusted BCA.
- » For subordinated debt, our LGF analysis indicates a high loss-given-failure, leading us to position its Provisional Rating Assessment at baa1, one notch below the a3 Adjusted BCA.
- » For the perpetual Additional Tier 1 notes issued in 2014, the Provisional Rating Assessment is positioned at baa3, three notches below the a3 Adjusted BCA, reflecting our framework for rating non-viability Contingent Convertible Securities.

Government support

Following the introduction of the BRRD, we have lowered our expectations about the degree of support the government might provide to a bank in Germany in the event of need. Owing to its size on a consolidated basis, we consider S-Group as systemically relevant and, therefore, attribute a Moderate probability of German government support for all members of the sector, in line with support assumptions for other systemically relevant banking groups in Europe. We, therefore, still include one notch of government support uplift in our CRRs, senior unsecured debt and deposit ratings of S-Group member banks that are incorporated in Germany, including DekaBank. For junior securities, we continue to believe that the likelihood for government support is Low and these ratings do not include any related uplift.

In particular for junior senior unsecured debt, the legal change to the German banks' insolvency rank order has lowered the likelihood of government support being available for these instruments, because legally they rank pari passu with the majority of outstanding (statutorily subordinated) senior unsecured instruments issued up until 20 July 2018. This pari passu ranking of new junior senior unsecured debt with legacy (statutorily subordinated) senior unsecured instruments makes it less likely that German authorities would selectively support the legacy instruments (which we reclassified into junior senior unsecured debt), following clarification that the German authorities expect these liabilities to bear losses in a resolution. As a result, we have reduced our government support assumption for these instruments to Low from Moderate.

Counterparty Risk Ratings (CRRs)

CRRs are opinions of the ability of entities to honour the uncollateralised portion of non-debt counterparty financial liabilities (CRR liabilities) and also reflect the expected financial losses in the event such liabilities are not honoured. CRRs are distinct from ratings assigned to senior unsecured debt instruments and from issuer ratings because they reflect that, in a resolution, CRR liabilities might benefit from preferential treatment compared with senior unsecured debt. Examples of CRR liabilities include the uncollateralised portion of payables arising from derivatives transactions and the uncollateralised portion of liabilities under sale and repurchase agreements.

DekaBank's CRRs are positioned at Aa2/P-1.

The CRRs, prior to government support, are positioned three notches above the Adjusted BCA of a3, reflecting the extremely low loss-given-failure from the high volume of instruments, primarily junior senior unsecured debt, that are subordinated to CRR liabilities. DekaBank's CRRs also benefit from one notch of rating uplift provided by government support, in line with our support assumptions on deposits and senior unsecured debt.

Counterparty Risk (CR) Assessment

The CR Assessment is an opinion of how counterparty obligations are likely to be treated if a bank fails, and is distinct from debt and deposit ratings in that it (1) considers only the risk of default rather than both the likelihood of default and the expected financial loss suffered in the event of default; and (2) applies to counterparty obligations and contractual commitments rather than debt or deposit instruments. The CR Assessment is an opinion of the counterparty risk related to a bank's covered bonds, contractual performance obligations (servicing), derivatives (e.g. swaps), letters of credit, guarantees and liquidity facilities.

DekaBank's CR Assessment is positioned at Aa2(cr)/P-1(cr)

The bank's CR Assessment is positioned four notches above the a3 Adjusted BCA, based on 1) the buffer against default provided by more subordinated instruments, primarily junior senior unsecured debt, to the senior obligations represented by the CR Assessment; and 2) government support uplift assuming a Moderate level of support. To determine the CR Assessment, we focus purely on subordination, taking no account of the volume of the instrument class.

Methodology and scorecard

Methodology

The principal methodology we used in rating DekaBank was the Banks methodology published in August 2018.

About Moody's Bank Scorecard

Our Bank Scorecard is designed to capture, express and explain in summary form our Rating Committee's judgment. When read in conjunction with our research, a fulsome presentation of our judgment is expressed. As a result, the output of our scorecard may materially differ from that suggested by raw data alone (though it has been calibrated to avoid the frequent need for strong divergence). The scorecard output and the individual scores are discussed in rating committees and may be adjusted up or down to reflect conditions specific to each rated entity.

Rating methodology and scorecard factors

Exhibit 3

DEKABANK DEUTSCHE GIROZENTRALE

Macro Factors			-		
Weighted Macro Profile	Strong +	100%			

Factor	Historic Ratio	Macro Adjusted Score	Credit Trend	Assigned Score	Key driver #1	Key driver #2
Solvency	,					
Asset Risk						
Problem Loans / Gross Loans	2.9%	a2	\leftarrow \rightarrow	baa3	Sector concentration	Market risk
Capital						
TCE / RWA	18.4%	aa2	\leftarrow \rightarrow	a2	Expected trend	Nominal leverage
Profitability						
Net Income / Tangible Assets	0.3%	ba2	$\leftarrow \rightarrow$	ba2	Expected trend	
Combined Solvency Score		a2		baa2		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	63.4%	caa1	1	ba3	Market	Term structure
					funding quality	
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	46.9%	aa3	$\leftarrow \rightarrow$	a2	Asset encumbrance	
Combined Liquidity Score		ba1		baa3		
Financial Profile				baa2		
Business Diversification				0		
Opacity and Complexity				0		
Corporate Behavior				0		
Total Qualitative Adjustments				0		
Sovereign or Affiliate constraint:				Aaa		
Scorecard Calculated BCA range				baa1-baa3		
Assigned BCA				baa2		
Affiliate Support notching				2		
Adjusted BCA				a3		

Balance Sheet is not applicable.

Debt class	De Jure w	aterfal	ll De Facto waterfall N		Notching LGF		Assigned	Additiona	Additional Preliminary	
	Instrument volume + o		Instrument on volume + o		De Jure	De Facto	Notching Guidance		notching	Rating Assessment
	subordination	l	subordination	n			vs. Adjusted BCA			
Counterparty Risk Rating								3	0	aa3
Counterparty Risk Assessment								3	0	aa3 (cr)
Deposits								3	0	aa3
Senior unsecured bank debt								3	0	aa3
Junior senior unsecured bank debt								2	0	a1
Dated subordinated bank debt								-1	0	baa1
Non-cumulative bank preference share	s							-1	-2	baa3 (hyb)

Instrument class	Loss Given Failure notching	Additional Notching	Preliminary Rating Assessment	Government Support notching	Local Currency Rating	Foreign Currency Rating
Counterparty Risk Rating	3	0	aa3	1	Aa2	Aa2
Counterparty Risk Assessment	3	0	aa3 (cr)	1	Aa2 (cr)	
Deposits	3	0	aa3	1	Aa2	Aa2
Senior unsecured bank debt	3	0	aa3	1	Aa2	
Junior senior unsecured bank debt	2	0	a1	0	A1	
Dated subordinated bank debt	-1	0	baa1	0	Baa1	
Non-cumulative bank preference shares	-1	-2	baa3 (hyb)	0	Baa3 (hyb)	

^[1] Where dashes are shown for a particular factor (or sub-factor), the score is based on non-public information. Source: Moody's Financial Metrics

Ratings

Ex	hi	bit	4

Category	Moody's Rating
DEKABANK DEUTSCHE GIROZENTRALE	
Outlook	Stable
Counterparty Risk Rating	Aa2/P-1
Bank Deposits	Aa2/P-1
Baseline Credit Assessment	baa2
Adjusted Baseline Credit Assessment	a3
Counterparty Risk Assessment	Aa2(cr)/P-1(cr)
Senior Unsecured -Dom Curr	Aa2
Junior Senior Unsecured -Dom Curr	A1
Subordinate -Dom Curr	Baa1
Pref. Stock Non-cumulative -Dom Curr	Baa3 (hyb)
Commercial Paper -Dom Curr	P-1
Other Short Term -Dom Curr	(P)P-1
Source: Moody's Investors Service	

Endnotes

- 1 The ratings shown are S-Group's Corporate Family Rating and outlook and its Baseline Credit Assessment
- 2 The rating shown is the Government of Germany's long-term issuer rating and outlook

© 2018 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS AND MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURPLIASE HOLDING. OR SALE

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOFVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

 $MJKK\ and\ MSFJ\ also\ maintain\ policies\ and\ procedures\ to\ address\ Japanese\ regulatory\ requirements.$

REPORT NUMBER 1136635

