MOODY'S
INVESTORS SERVICE

CREDIT OPINION
7 August 2020

Update

Rate this Research

Deutsche Hypothekenbank (Actien-Gesellschaft)

Update to credit analysis

RATINGS

Deutsche Hypothekenbank (Actien-Gesellschaft)

Domicile	Hannover, Germany
Long Term CRR	A3
Type	LT Counterparty Risk Rating - Fgn Curr
Outlook	Not Assigned
Long Term Debt	A3
Type	Senior Unsecured - Dom Curr
Outlook	Stable
Long Term Deposit	A3
Type	LT Bank Deposits - Fgn Curr
Outlook	Stable

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

Contacts

Swen Metzler, CFA +49.69.70730.762
VP-Sr Credit Officer
swen.metzler@moodys.com

Alexander Hendricks, CFA +49.69.70730.779
Associate Managing Director
alexander.hendricks@moodys.com

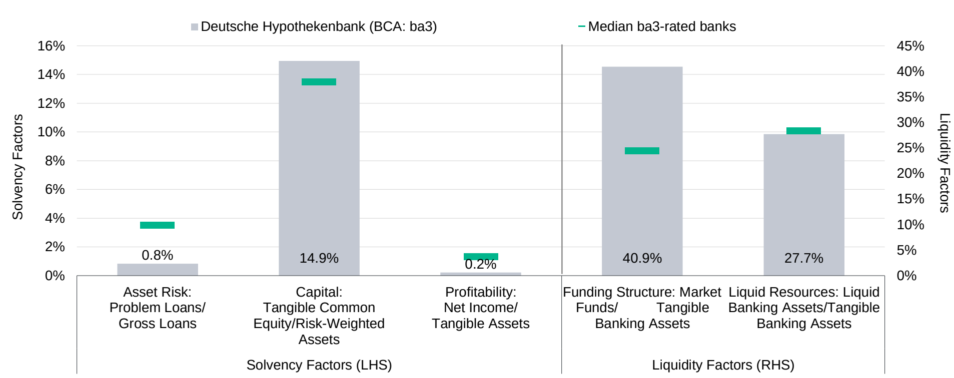
Summary

We assign A3(stable)/P-2 deposit and senior unsecured debt rating to Deutsche Hypothekenbank (Actien-Gesellschaft) (Deutsche Hypo). We further assign a Baseline Credit Assessment (BCA) of ba3 and an Adjusted BCA of ba1 to the Hanover-based bank.

Deutsche Hypo's ratings reflect its ba3 BCA, two notches of rating uplift incorporating our assessment that the bank will benefit from affiliate support of its sole owner Norddeutsche Landesbank GZ's (NORD/LB, A3 stable/A3 stable, ba3)[1] and its membership in the institutional protection scheme of Sparkassen-Finanzgruppe (Aa2 negative, a2)[2], the result of the application of our Loss Given Failure (LGF) analysis and inclusion in the resolution perimeter of NORD/LB, as well as our assumption of moderate government support for the bank's deposit and senior unsecured debt ratings, which leads to one notch of rating uplift.

While Deutsche Hypo's financial strength is better than that of its parent, it's ba3 BCA remains capped at the level of NORD/LB, because of the close interlinkages between the two banks, including a regulatory capital waiver and profit-and-loss transfer agreement. Deutsche Hypo's reports a sound asset quality but also high leverage and modest earnings capacity. The bank's BCA remains constrained by its monoline business model, as a result of its high concentration in commercial real estate (CRE) lending and limited earnings diversification. Our view on Deutsche Hypo's BCA could change if the coronavirus credit shock led to a sustained erosion of the bank's solvency strengths.

Exhibit 1
Rating Scorecard - Key financial ratios



Source: Moody's Financial Metrics

Credit strengths

» Sound asset quality, balanced by Deutsche Hypo's exclusive focus on commercial real estate (CRE) markets

» High dependence on market funding, balanced by a well-established covered bond franchise with good access to German investors, including Landesbanks and savings banks

» Senior unsecured creditors to benefit from low loss severity, because we expect Deutsche Hypo to form part of the NORD/LB group's resolution perimeter

Credit challenges

» Close integration with NORD/LB, underpinned by a regulatory capital waiver and profit-and-loss transfer agreement, which weighs on Deutsche Hypo's standalone credit profile

» Monoline business model on CRE lending, which constrains its earnings to a single lending activity

» Sound but declining liquidity as share of CRE loans increases

Outlook

The stable outlook on Deutsche Hypo's long-term debt and deposit ratings mirrors the stable outlook on its parent, NORD/LB.

Factors that could lead to an upgrade

» A rating upgrade of Deutsche Hypo's ratings would be subject to an upgrade of NORD/LB's ratings.

» We may consider upgrading NORD/LB's ratings in the event that the bank successfully executes the planned measures under its transformation programme until 2024, leading to a significantly smaller and de-risked balance sheet, including the disposal of remaining loans relating to ship finance; a maintained or even increased capitalisation; and a restored moderate level of profitability.

Factors that could lead to a downgrade

» We could downgrade Deutsche Hypo's ratings if NORD/LB's ratings are downgraded.

» We could downgrade Deutsche Hypo's BCA in the event that its financial profile were to weaken significantly. If we were to downgrade Deutsche Hypo's BCA, we do not expect this to translate into lower long-term ratings, unless its Adjusted BCA was also lowered as a result of a BCA downgrade of its parent.

» We could downgrade the long-term ratings of Deutsche Hypo if there is an increase in the expected loss severity at the level of its parent, NORD/LB, because of changes in NORD/LB's liability structure, which could result in fewer notches of rating uplift based on our Advanced LGF analysis.

Key indicators

Exhibit 2
Deutsche Hypothekenbank (Actien-Gesellschaft) (Consolidated Financials) [1]

	12-19[2]	12-18[2]	12-17[2]	12-16[2]	12-15[2]	CAGR/Avg.[3]
Total Assets (EUR Billion)	20.5	21.0	23.7	25.2	26.9	(6.6)[4]
Total Assets (USD Billion)	23.0	24.0	28.4	26.5	29.2	(5.8)[4]
Tangible Common Equity (EUR Billion)	0.9	0.9	0.9	0.9	0.9	(0.0)[4]
Tangible Common Equity (USD Billion)	1.0	1.0	1.0	0.9	0.9	0.8[4]
Problem Loans / Gross Loans (%)	0.5	0.8	1.2	1.4	2.6	1.3[5]
Tangible Common Equity / Risk Weighted Assets (%)	14.9	14.9	15.4	13.6	13.5	14.5[6]
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	7.6	13.8	20.6	24.6	44.9	22.3[5]
Net Interest Margin (%)	0.9	0.8	0.8	0.8	0.8	0.8[5]
PPI / Average RWA (%)	1.8	1.5	1.9	2.0	2.1	1.9[6]
Net Income / Tangible Assets (%)	0.2	0.2	0.2	0.2	0.2	0.2[5]
Cost / Income Ratio (%)	46.8	52.2	46.6	39.4	38.7	44.7[5]
Market Funds / Tangible Banking Assets (%)	40.9	40.7	43.3	48.4	45.1	43.7[5]
Liquid Banking Assets / Tangible Banking Assets (%)	27.7	28.1	32.7	32.9	35.7	31.4[5]
Gross Loans / Due to Customers (%)	213.7	202.8	192.9	229.3	191.7	206.1[5]

[1] All figures and ratios are adjusted using Moody's standard adjustments. [2] Basel III - fully loaded or transitional phase-in; LOCAL GAAP. [3] May include rounding differences because of the scale of reported amounts. [4] Compound annual growth rate (%) based on the periods for the latest accounting regime. [5] Simple average of periods for the latest accounting regime. [6] Simple average of Basel III periods.
Sources: Moody's Investors Service and company filings

Profile

Deutsche Hypothekenbank (Actien-Gesellschaft) (Deutsche Hypo) is a German covered bond bank as defined by the Pfandbrief Act.[3] Since 2008, the bank is wholly owned by NORD/LB, a German Landesbank, and acts as NORD/LB's centre of competence for CRE financing. Deutsche Hypo's business segments comprise (1) commercial real estate finance, and (2) capital markets business and other business. As of 31 December 2019, Deutsche Hypo reported assets of €20.5 billion.

Although Deutsche Hypo operates mainly in Germany, it also conducts business in the UK, Spain, France, the Benelux countries[4], Poland and Austria. Deutsche Hypo provides banking products and services primarily related to real estate finance, including project development finance, leasing, acquisition finance, structuring and syndications. The bank's CRE lending is largely funded through the issuance of mortgage covered bonds. Over the last couple of years, Deutsche Hypo is reducing its exposure to the public sector, which is the main driver for the decreasing importance of its capital market business segment.

Deutsche Hypo's Macro Profile is in line with Germany's Strong+ Macro Profile

Deutsche Hypo's assigned Strong+ weighted Macro Profile reflects its focus on lending activities in Germany (see Germany's Strong+ Macro Profile) and also takes into account its moderate activities in other, mainly European, markets.

Recent developments

The coronavirus will cause unprecedented shock to the global economy. The full extent of the economic downswing will be unclear for some time; however, G-20 economies will contract in 2020. We presently expect the G-20 advanced economies as a group to contract by 6.4% in 2020 and the euro area by 8.5%, followed by a gradual recovery in 2021. In Europe, the coronavirus outbreak adds to late-cycle risks for European banks. The recession in 2020 will weigh on banks' asset quality and profitability. We expect fiscal policy measures, as already announced by a variety of euro-area governments, to mitigate the economic contraction caused by the outbreak.

In the current coronavirus-induced recession and its aftermath, capital levels will be a key differentiator of credit profiles among banks. Generally, banks are facing a sharp deterioration in asset quality and reductions in profitability from already low levels, while central banks are providing extraordinary levels of liquidity and governments have strong incentives to support banking systems to foster an eventual recovery. Thus, when comparing a bank to its peers, the level of capital with which it entered this recession and its ability to retain capital throughout the next several years take on particular importance.

The European Central Bank (ECB) announced a series of measures to help European Union (EU) economies weather the widening effects of the coronavirus pandemic, temporarily increasing banks' liquidity provisions, as well as lowering regulatory capital and liquidity requirements. As part of these temporary measures, the ECB increased its targeted long-term refinancing operations (TLTRO III) under more favourable terms as well as its financial asset purchase program, while refraining from lowering the ultralow interest rates further. The temporary suspension of buffer requirements for regulatory capital and the liquidity coverage ratio (LCR) gives banks greater flexibility and additional leeway to absorb the economic impacts, such as asset-quality declines. Overall, the package aims to help the banks continue to finance corporates and small and medium-sized businesses suffering from the effects of the coronavirus outbreak. We believe that the ECB's measures will provide a limited relief for banks and their borrowers, and that it will require meaningful fiscal policy measures by the European Union and its member states to avert higher default rates in banks' lending books.

Germany launched a large stimulus package and the government's support is crucial for corporate borrowers in industries immediately hurt by the coronavirus outbreak like airlines, tourism, retail and the shipping sector, as well as smaller companies experiencing weak liquidity and high leverage. The scale of the support package is unprecedented and is far larger than the support provided during the financial crisis. At the same time, the government made it easier to access its short-work scheme ("Kurzarbeit") and extended it to a broader pool of workers, which will limit the spike in unemployment and the fall in domestic consumption. The measures, which are adapted according to the evolution of the economic effects of the pandemic, add to Germany's already expansionary fiscal policy stance as well as to automatic stabilizers that support household incomes when unemployment increases.

On 23 December 2019, NORD/LB announced the successful completion of the combined capital strengthening of €3.6 billion from its public-sector owners. The support package included fresh capital of €2.835 billion, of which €1.7 billion was injected by Lower Saxony and Saxony-Anhalt. The rest was provided by the German Savings Banks Association, which injected a combined €1.1 billion. In addition, Lower Saxony provides risk shields on certain assets, relieving capital by an equivalent to around €800 million.

Detailed credit considerations

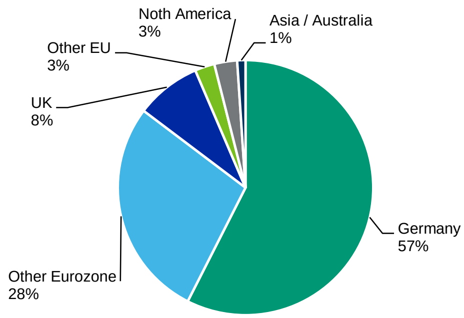
Sound asset quality balanced by high concentration risks from commercial real estate lending

We assign a baa3 Asset Risk score to Deutsche Hypo, seven notches below the aa2 initial score. The negative adjustment reflects the bank's high concentration risks arising from the sizeable exposure to commercial real estate financing, representing around 14.4x its equity, which may render the bank vulnerable in a stressed economic scenario.

At the end of 2019, around 85% of Deutsche Hypo's €22.8 billion credit exposures (2018: €23.5 billion) related to Germany (57% of the total) and other eurozone countries. Lending to real estate and the public sector accounted for a combined 70% of the bank's total credit exposure, and 18% or around €4.0 billion are represented by high liquid assets.

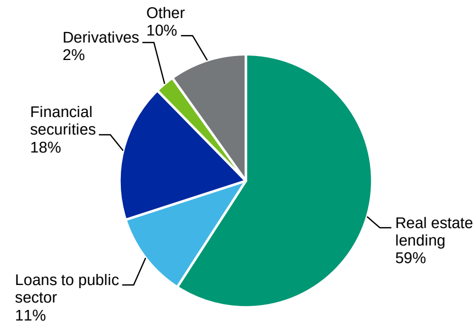
Deutsche Hypo's real estate loans of around €12.2 billion as of 31 December 2019 (2018: €13.5 billion) were largely geared towards the German property market (53% of the total), followed by Benelux (around 18%), the UK (around 14%), France (around 8%), and Poland (around 4%). 37% of the loans are invested into office buildings, 31% reflect retail premises, 18% are provided to residential properties, and around 8% to hotels.

Exhibit 3
Deutsche Hypo's exposure at default by region
Data in % at the end of 2019



Source: Moody's Financial Metrics, company reports

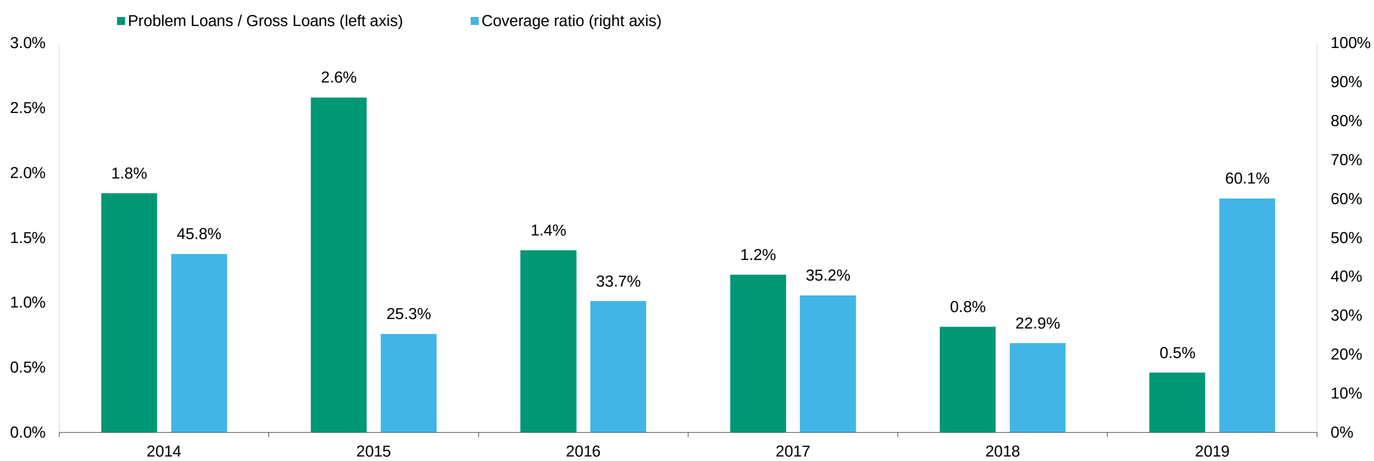
Exhibit 4
Deutsche Hypo's exposure by type/customer
Data in % at the end of 2019



Source: Moody's Financial Metrics, company reports

Supported by the benign credit environment across its core markets and the bank's prudent underwriting, Deutsche Hypo's benefited from improving asset quality. Since 2015, the bank's problem loan ratio declined from 2.6% to 0.5% at the end of 2019. Over the same period, non-performing loans decreased from €432 million to €67 million, and the bank reduced its loan-loss reserves from €109 million to €41 million.

Exhibit 5
Deutsche Hypo's sound asset quality reflects the benign operating environment
Data in %



Note: Problem loans in accordance with Moody's definition. The coverage ratio compares loan-loss reserves to problem loans.
Sources: Moody's Financial Metrics, company reports

In the context of the UK's (Aa2 negative) exit from the European Union (EU), Deutsche Hypo may be exposed to increased credit and loan-extension risks because 13.9% of CRE loans related to UK properties at end of 2019 (2018: 12.9%). In 2019, around 10% of Deutsche Hypo's new business volume was from the UK (2018: around 12%). Although the relatively unseasoned exposures underwritten before the Brexit vote may expose the bank to increased risks, the bank's focus on the primary locations in London, the bank's prudent loan-to-value ratios and the resulting adequate stress tolerance of its portfolio mitigate the risks stemming from these exposures.

Deutsche Hypo does not have to comply with regulatory capital requirements

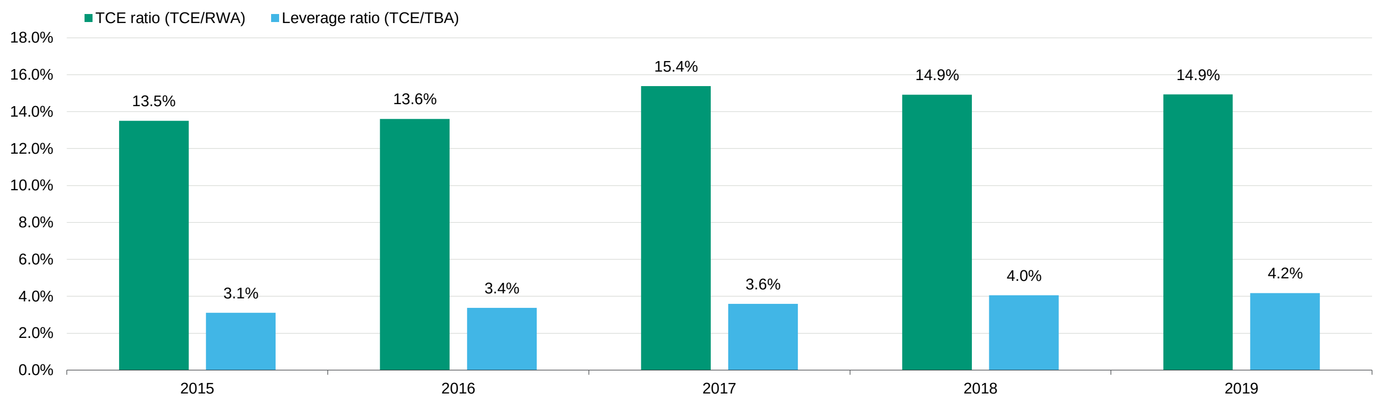
We assign Deutsche Hypo a baa1 Capital score, in line with the Capital score of NORD/LB. Our assessment reflects the capital waiver under which Deutsche Hypo is not obliged to meet the regulatory minima as a stand-alone entity.

Since 2013, Deutsche Hypo has been exempted from complying with the regulatory solvency requirements, reflecting a waiver granted initially by the German Federal Financial Supervisory Authority (BaFin), which was confirmed by the European Central Bank. The capital waiver is the most important of several links connecting Deutsche Hypo with NORD/LB, which led us to align the mortgage bank's BCA and ratings with those of its parent bank.

Exhibit 6

While exempt from reporting stand-alone capital ratios, Deutsche Hypo's solvency benefits from low risk-weighted assets compared to assets, at around 28% at the end of 2019

Data in %



Note: TCE = Tangible Common Equity, RWA = Risk-weighted assets, TBA = Tangible banking assets.
Source: Moody's Financial Metrics, company reports

For details on the group's capitalisation, please refer to NORD/LB's Credit Opinion.

Moderate but stable profits, which are upstreamed to NORD/LB under a profit-and-loss transfer agreement

We assign Deutsche Hypo a b1 Profitability score, which is in line with the initial score. Our assessment reflects the bank's modest and stable profitability, at around 0.25% of its assets[5], and also takes into account Deutsche Hypo's limited ability to retain profit because of the profit-and-loss transfer agreement with NORD/LB, which also transfers Deutsche Hypo's taxation to the group level. These observations are balanced by Deutsche Hypo's ability to build reserves according to §340f local GAAP, which provides an additional buffer to compensate for rising credit costs, if needed.

NORD/LB's CRE activities, which are largely housed at Deutsche Hypo, form an important pillar for the group's business model under the planned transformation until 2024. We expect that Deutsche Hypo's sound operating performance will add some level of stability to NORD/LB's consolidated profits.

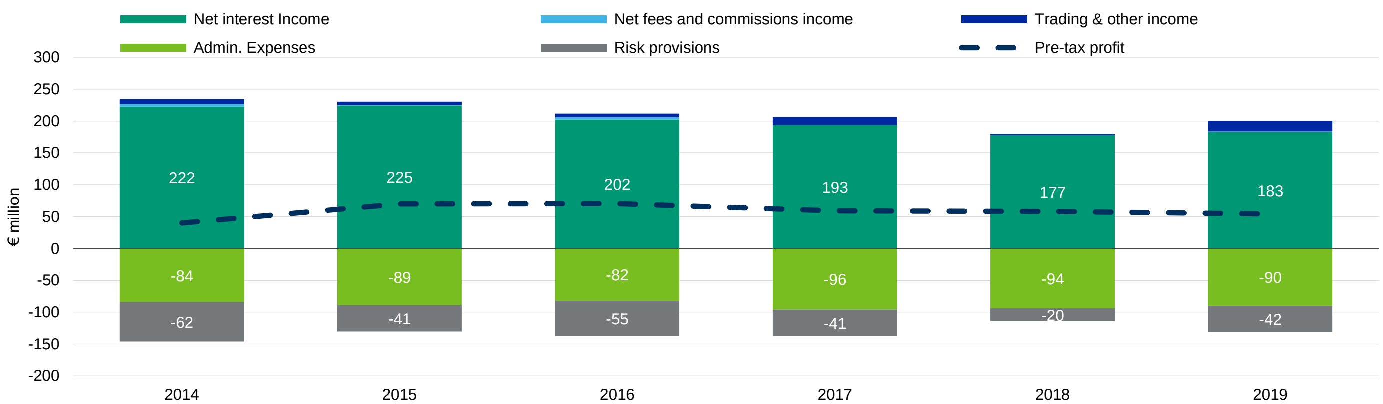
In 2019, Deutsche Hypo reported pretax profits of €54 million, compared with €58 million in 2018. The bank's revenues increased to €192 million from €180 million, which reflects moderately higher net interest income (NII) of €183 million (2018: €177 million) and the release of a legal provision of €7.6 million for existing lending contracts. The higher NII partly reflects higher new business volume in 2019, at around €3.0 billion, compared with €2.9 billion in 2018.

In 2019, Deutsche Hypo managed to reduce operating expenses to €90 million from €94 million the year before and increased loan-loss provisions (LLP) to €42 million compared with €20 million, which benefited from reversals, over the same period (2017: LLP expense of €41 million). The increase in credit costs partly reflects expenses for repurchases of Deutsche Hypo's covered bonds, while the bank's provisions for CRE remained low at €4.3 million in 2019, compared with a reversal of €16.3 million in 2018.

Exhibit 7

Deutsche Hypo's revenues are challenged by low interest rates, but pretax profits are supported by declining operating expenses and low risk provisions

Data in € million



Sources: Moody's Financial Metrics, company reports

Well-established covered bond franchise with good access to German investors, a balance to Deutsche Hypo's high dependence on market funding

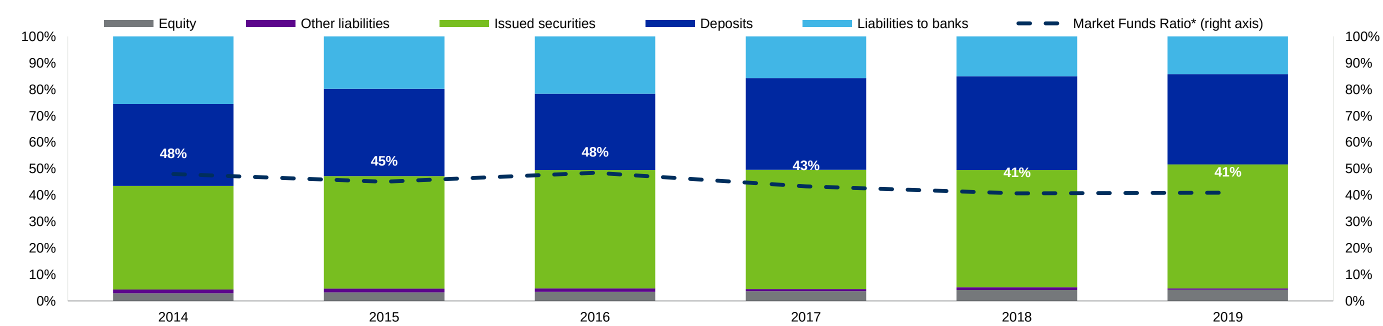
Deutsche Hypo's Funding Structure score is ba3, one notch above the b1 initial score. Our assessment reflects the bank's high dependence on wholesale funding, which is balanced by several mitigating factors. These are the bank's strong and independent covered bond franchise, its good access to funding from Germany's savings banks, as well as largely matched funded assets and liabilities.

At the end of 2019, around 57% of Deutsche Hypo's assets were funded through covered bonds, a ratio which is largely unchanged since 2015. The importance of mortgage covered bonds, which accounted for €8.3 billion or around 41% of assets, for Deutsche Hypo's funding is gradually increasing, as underpinned by this debt class' share of 35% in 2017 and 31% in 2015. In contrast, the percentage of assets funded through public sector covered bonds is gradually declining, representing around 16% of assets at the end of 2019 (2017: 19%; 2015: 26%), which reflects that this segment is no longer part of Deutsche Hypo's strategic focus.

Exhibit 8

The ability to issue covered bonds mitigates Deutsche Hypo's high market funding dependence

Data as % of tangible banking assets



Note: * Market Funds ratio = market funds/tangible banking assets.

Sources: Moody's Financial Metrics, company reports

Not all funding needs at Deutsche Hypo can be accomplished through the issuance of covered bonds. We believe that the need to issue senior unsecured debt is manageable for Deutsche Hypo, reflecting its close proximity to NORD/LB, the savings banks sector, and considering the fact that the bank can issue these debts in the form of private placements with comparatively short maturities. At the end of 2019, around €1.7 billion or 8.1% of assets (2018: 8.5%) were funded through senior unsecured bonds.

Deutsche Hypo's access to cost-efficient funding is a key requirement for its business model. The bank's funding structure is generally geared towards confidence-sensitive wholesale funding sources, which renders the bank susceptible to changes in investor sentiment and market risk appetite. At the same time, the bank's access to the deposit-rich savings banks sector, which includes a significant bond off-take by the German Landesbanks, has proved to be an important mitigant to funding risk. In addition, Deutsche Hypo's own institutional clients are an important investor base for both its secured and unsecured bond issuances.

Sound but declining liquidity as share of loans increases

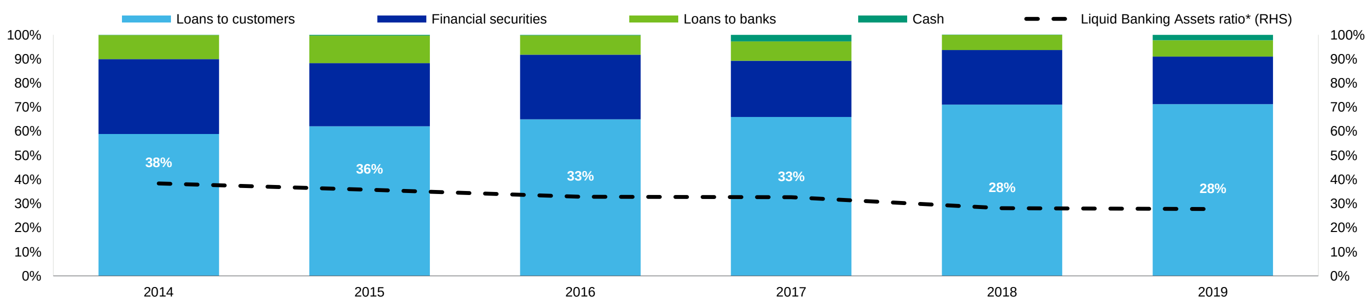
Deutsche Hypo's Liquid Resources score is baa2, which is two notches below the initial score. Our adjustment reflects that Deutsche Hypo has pledged as collateral some financial securities against the issued covered bonds. However, because of its long-dated loans and, therefore, modest maturities and cash outflow, we consider Deutsche Hypo's liquid resources adequate, representing 27.7% of tangible assets as of 31 December 2019 (2018: 28.1%). Our view is further underpinned by Deutsche Hypo's solid liquidity coverage ratio of 396% as of 31 December 2019 (2018: 264%, 2017: 346%).

During recent years, Deutsche Hypo has strengthened its focus on commercial real estate lending, which has triggered a rising share of CRE loans. At the end of 2019, around 71% of the bank's assets are represented by loans, compared with 58% in 2014. The shift reflects a strategic decision to reduce Deutsche Hypo's public sector lending activities, which is included in its capital market segment, compared with the stable environment and improving returns of its CRE activities. However, the shift has triggered a reduction in the bank's financial securities, its prime source for liquidity.

Exhibit 9

Deutsche Hypo's balance-sheet mix has shifted towards loans at the expense of declining volume of financial securities

Data as % of tangible banking assets



Note: * Liquid Banking Assets ratio = liquid assets/tangible banking assets.
Sources: Moody's Financial Metrics, company reports

Under stressed conditions, Deutsche Hypo's liquidity buffer allows the bank to meet its obligations over at least the six months, without having to access capital markets. In addition, given its close integration into NORD/LB group, Deutsche Hypo has access to short-term liquidity lines with its parent bank, in case of need.

Qualitative adjustment reflects limited business diversification

Deutsche Hypo's BCA is constrained by its monoline business model, as a result of its high concentration in commercial real estate (CRE) lending and limited earnings diversification. We therefore lower the bank's weighted average outcome of the assigned baa3 Financial Profile factor score by one notch.

Business diversification is an important measure of a bank's sensitivity to stress in a single business line. It is related to earnings stability in the sense that earnings diversification across distinct and relatively uncorrelated lines of business increases the reliability of a bank's earnings streams and its potential to absorb shocks affecting a business line.

Being a CRE lending specialist, Deutsche Hypo is exposed to a through-the-cycle volatile asset class. We consider CRE lending highly cyclical and, therefore, a higher-risk sector exposure. Being a specialist CRE lender benefits the bank's sector-specific risk management know-how, but at the same time, it naturally limits the potential for (earnings) diversification within the bank. Because CRE exposures can cause high losses in times of financial market stress, Deutsche Hypo's high reliability on CRE-related earnings renders the bank vulnerable to economic shocks that are likely to hurt its income statement in an adverse scenario. As a result, we classify Deutsche Hypo as a monoline bank according to our approach for business diversification.

Deutsche Hypo's BCA is constrained by NORD/LB's standalone credit profile

In addition to the qualitative adjustment, Deutsche Hypo's BCA is constrained at the level of NORD/LB's ba3 BCA. Our assessment reflects Deutsche Hypo's regulatory capital waiver, the existence of a profit-and-loss transfer agreement with NORD/LB, as well as the close integration of Deutsche Hypo with NORD/LB, in particular for its risk management and senior unsecured funding activities.

Environmental, social and governance (ESG) consideration

Environmental considerations

Deutsche Hypo's exposure to Environmental risks is low, consistent with our general assessment for the global banking sector.[6] See our Environmental risk heatmaps for further information. Deutsche Hypo has started to issue Green Bonds which intend to meet the growing demand of investors for investments in environmentally sustainable projects.

Social considerations

Overall, we consider banks to face moderate social risks.[7] See our Social risk heat maps for further information.

Corporate governance considerations

Governance[8] is highly relevant for Deutsche Hypo, as it is to all institutions in the banking industry. Corporate governance weaknesses can lead to a deterioration in a bank's credit quality, while governance strengths can benefit a bank's credit profile. Governance risks are largely internal rather than externally driven. Corporate governance remains a key credit consideration and requires ongoing monitoring. For Deutsche Hypo, we do not have any particular governance concern.

Support and structural considerations

Affiliate support

Deutsche Hypo is affiliate-backed by NORD/LB and, therefore, we align its Adjusted BCA with NORD/LB's ba1 Adjusted BCA. Our assessment is supported by Deutsche Hypo's high degree of integration with the NORD/LB group, as reflected by the profit-and-loss transfer agreement between the parent and the subsidiary and Deutsche Hypo's exemption from having to comply with regulatory capital requirements.

Our positioning of Deutsche Hypo's Adjusted BCA includes the benefits of the bank's membership in and support from Sparkassen-Finanzgruppe (Aa2 negative, a2)[9], which effectively reduces the probability of default because this support would be available for stabilising a distressed member bank and not just to compensate for losses in resolution. Our assumption of high cross-sector support provides two notches of rating uplift to Deutsche Hypo's ba3 BCA.

Loss Given Failure (LGF) analysis

Deutsche Hypo is subject to the EU Bank Recovery and Resolution Directive, which we consider an operational resolution regime. We expect Deutsche Hypo to be included in the resolution perimeter of its parent entity NORD/LB, and we therefore apply our LGF analysis for NORD/LB, which considers the risks faced by the different debt and deposit classes across the liability structure at failure at the group level.

We assume residual tangible common equity of 3%, post-failure losses of 8% of tangible banking assets, a 25% runoff in junior wholesale deposits and a 5% run-off in preferred deposits. These are in line with our standard assumptions.

- » For Deutsche Hypo's deposits and senior unsecured debt, our group-level LGF analysis indicates an extremely low loss given failure, leading to a three-notch uplift from the bank's ba1 Adjusted BCA.
- » For Deutsche Hypo's junior senior unsecured debt, our group-level LGF analysis indicates a very low loss given failure, leading to a two-notch uplift from the bank's ba1 Adjusted BCA.
- » For Deutsche Hypo's subordinated debt instruments, our group-level LGF analysis indicates a high loss given failure, leading to a Ba2 rating, which is one notch below the bank's ba1 Adjusted BCA.

Government support considerations

Because of its size and importance to financial stability in Germany, we consider member institutions of Sparkassen-Finanzgruppe systemically significant. Therefore, we assume a moderate probability of government support for all members of the sector, in line with our support assumptions for other systemically relevant banking groups in Europe.

For Deutsche Hypo, we include one notch of uplift stemming from government support for the senior unsecured debt and deposit ratings. For the junior senior unsecured debt and subordinated debt, the potential for government support is low and these ratings do not benefit from any uplift stemming from government support.

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.

Deutsche Hypo's CRRs are positioned at A3/P-2

The CRRs, before government support, are positioned three notches above Deutsche Hypo's Adjusted BCA of ba1, reflecting the extremely low loss given failure from the high volume of instruments that are subordinated to CRR liabilities. Deutsche Hypo's CRRs benefit from a one-notch rating uplift based on government support, in line with our support assumptions on deposits and senior unsecured debt.

Counterparty Risk (CR) Assessment

CR Assessments are opinions of how counterparty obligations are likely to be treated if a bank fails and are distinct from debt and deposit ratings in that they (1) consider only the risk of default rather than both the likelihood of default and the expected financial loss, and (2) apply 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 (for example, swaps), letters of credit, guarantees and liquidity facilities.

Deutsche Hypo's CR Assessment is positioned at A3(cr)/P-2(cr)

The CR Assessment, before government support, is positioned three notches above Deutsche Hypo's Adjusted BCA of ba1, based on the buffer against default provided to the senior obligations represented by the CR Assessment by more subordinated instruments, including junior deposits and senior unsecured debt. Deutsche Hypo's CR Assessment benefits from a one-notch rating uplift based on government support, in line with our support assumptions on deposits and senior unsecured debt.

Methodology and scorecard

The principal methodology used in rating Deutsche Hypo was Banks Methodology, published in November 2019.

About Moody's Bank Scorecard

Our scorecard is designed to capture, express and explain in summary form our Rating Committee's judgement. When read in conjunction with our research, a fulsome presentation of our judgement 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 10

Deutsche Hypothekenbank (Actien-Gesellschaft)

Macro Factors		
Weighted Macro Profile	**Strong +**	**100%**

Factor	**Historic Ratio**	**Initial Score**	**Expected Trend**	**Assigned Score**	**Key driver #1**	**Key driver #2**
Solvency						
Asset Risk						
Problem Loans / Gross Loans	0.8%	aa2	←→	baa3	Sector concentration	Unseasoned risk
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel III - transitional phase-in)	14.9%	a1	←→	baa1	Access to capital	Stress capital resilience
Profitability						
Net Income / Tangible Assets	0.2%	b1	←→	b1	Return on assets	Expected trend
Combined Solvency Score		a2		baa3		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	40.9%	b1	←→	ba3	Extent of market funding reliance	Market funding quality
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	27.7%	a3	←→	baa2	Asset encumbrance	Stock of liquid assets
Combined Liquidity Score		ba1		ba1		
Financial Profile				baa3		
Qualitative Adjustments				Adjustment		
Business Diversification				-1		
Opacity and Complexity				0		
Corporate Behavior				0		
Total Qualitative Adjustments				-1		
Sovereign or Affiliate constraint				Ba3		
BCA Scorecard-indicated Outcome - Range				ba2 - b1		
Assigned BCA				ba3		
Affiliate Support notching				2		
Adjusted BCA				ba1		

Balance Sheet is not applicable.

Debt Class	De Jure waterfall		De Facto waterfall		Notching		LGF Notching Guidance vs. Adjusted BCA	Assigned LGF notching	Additional Notching	Preliminary Rating Assessment
	Instrument volume + subordination	Sub-ordination	Instrument volume + subordination	Sub-ordination	De Jure	De Facto				
Counterparty Risk Rating	-	-	-	-	-	-	-	3	0	baa1
Counterparty Risk Assessment	-	-	-	-	-	-	-	3	0	baa1 (cr)
Deposits	-	-	-	-	-	-	-	3	0	baa1
Senior unsecured bank debt	-	-	-	-	-	-	-	3	0	baa1
Junior senior unsecured bank debt	-	-	-	-	-	-	-	2	0	baa2
Dated subordinated bank debt	-	-	-	-	-	-	-	-1	0	ba2

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	baa1	1	A3	A3
Counterparty Risk Assessment	3	0	baa1 (cr)	1	A3(cr)	
Deposits	3	0	baa1	1	A3	A3
Senior unsecured bank debt	3	0	baa1	1	A3	A3
Junior senior unsecured bank debt	2	0	baa2	0	Baa2	
Dated subordinated bank debt	-1	0	ba2	0	Ba2	

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

Ratings

Exhibit 11

Category	Moody's Rating
DEUTSCHE HYPOTHEKENBANK (ACTIEN-GESELLSCHAFT)	
Outlook	Stable
Counterparty Risk Rating	A3/P-2
Bank Deposits	A3/P-2
Baseline Credit Assessment	ba3
Adjusted Baseline Credit Assessment	ba1
Counterparty Risk Assessment	A3(cr)/P-2(cr)
Issuer Rating	A3
Senior Unsecured -Dom Curr	A3
Junior Senior Unsecured -Dom Curr	Baa2
Subordinate -Dom Curr	Ba2
ST Issuer Rating	P-2
Other Short Term -Dom Curr	(P)P-2
PARENT: NORDDEUTSCHE LANDESBANK GZ	
Outlook	Stable
Counterparty Risk Rating	A3/P-2
Bank Deposits	A3/P-2
Baseline Credit Assessment	ba3
Adjusted Baseline Credit Assessment	ba1
Counterparty Risk Assessment	A3(cr)/P-2(cr)
Issuer Rating	A3
Senior Unsecured -Dom Curr	A3
Junior Senior Unsecured	Baa2
Junior Senior Unsecured MTN -Dom Curr	(P)Baa2
Subordinate	Ba2
Commercial Paper	P-2
Other Short Term -Dom Curr	(P)P-2

Source: Moody's Investors Service

Endnotes

1 The ratings shown are NORD/LB's long-term deposit rating and outlook, its long-term senior unsecured debt rating and outlook, as well as the bank's Baseline Credit Assessment.

2 The ratings shown are the corporate family rating and outlook, and the BCA.

3 Pfandbrief Bank is the term used by the Pfandbrief Act for banks authorised to issue Pfandbriefe, which are debt securities covered by specific assets such as mortgages on property or loans to local authorities.

4 The Benelux countries are Belgium, the Netherlands and Luxembourg.

5 Considering the fact that the bank does not pay taxes at the bank level, our net income/tangible assets includes a tax adjustment to make the bank's net income ratios comparable with those of peers.

6 Environmental risks can be defined as environmental hazards encompassing the impacts of air pollution, soil/water pollution, water shortages and natural and man-made hazards (physical risks). Additionally, regulatory or policy risks, like the impact of carbon regulation or other regulatory restrictions, including the related transition risks like policy, legal, technology and market shifts, that could impair the evaluation of assets are an important factor. In our Environmental risk heat map, we scored 84 sectors according to their overall exposure to environmental risks.

7 The most relevant social risks for banks arise from the way they interact with their customers. Social risks are particularly high in the area of data security and customer privacy, which is partly mitigated by sizeable technology investments and banks' long track record of handling sensitive client data. Fines and reputational damage due to product mis-selling or other types of misconduct is a further social risk. Social trends are also relevant in a number of areas, such as shifting customer preferences towards digital banking services increasing information technology cost, aging population concerns in several countries impacting demand for financial services or socially driven policy agendas that may translate into regulation that affects banks' revenue base.

8 Corporate governance is a well-established key driver for banks and related risks are typically included in our evaluation of the banks' financial profile. Further factors like specific corporate behaviour, key person risk, insider and related-party risk, strategy and management risk factors and dividend policy may be captured in individual adjustments to the BCA, if deemed applicable. Corporate governance weaknesses can lead to a deterioration in a company's credit quality, while governance strengths can benefit its credit profile. When credit quality deteriorates due to poor governance, such as break-down in controls resulting in financial misconduct, it can take a long time to recover. Governance risks are also largely internal rather than externally driven.

9 The ratings shown are Sparkassen-Finanzgruppe's Corporate Family Rating and outlook, and its BCA.

REPORT NUMBER 1236073

Contacts

Gerson Morgenstern +49.69.70730.796
Associate Analyst
gerson.morgenstern@moodys.com

MOODY'S
INVESTORS SERVICE