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CREDIT OPINION
10 August 2023

Update

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RATINGS

DZ BANK AG

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

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DZ BANK AG

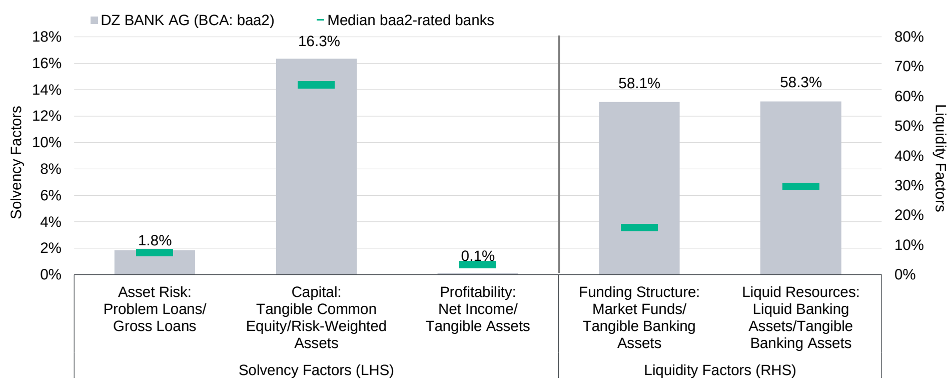
Update to credit analysis

Summary

DZ BANK AG's (DZ BANK) Aa2 deposit and senior unsecured debt ratings reflect its baa2 Baseline Credit Assessment (BCA); two notches of rating uplift from its membership in the institutional protection scheme of the German cooperative banking association, Genossenschaftliche FinanzGruppe (G-Finanzgruppe); three notches of rating uplift from our Advanced Loss Given Failure (LGF) analysis, which incorporates the relative loss severity of a liability class; and a one-notch rating uplift for government support because of its domestic systemic relevance.

DZ BANK's baa2 BCA considers its overall sound solvency profile, based on sound asset quality; a strong capitalization and moderate profitability; and its overall sound liquidity profile, with a high share of liquid assets mitigating its very high dependence on market funding. DZ BANK benefits from a degree of diversification across business activities which are only partly correlated, such as banking, asset management and insurance, but also shows some risk concentrations that could result in a more rapid deterioration of asset quality in an adverse scenario.

Exhibit 1
Rating Scorecard - Key financial ratios



Source: Moody's Investors Service

Credit strengths

» A proven support scheme for member banks of Germany's cooperative sector financial network

» Solid capital with ample but temporarily reduced buffers over minimum requirements

» Sizeable liquidity which remains temporarily supported by the ECB's refinancing programs, balanced by moderate asset encumbrance

Credit challenges

» Moderate profitability and earnings volatility reflecting dependence on capital markets-related activities, balanced by several consolidated business models which provide a degree of earnings diversification

» Very high market funding dependence, balanced by exclusive access to funding sources from Germany's cooperative sector

» DZ BANK's sound asset quality is challenged by weakening economic prospects, in particular from higher cyclical exposures from large corporates or commercial real estate

Outlook

We expect DZ BANK's and the cooperative banking sector's financial profiles to remain stable over the 12-to-18-month outlook horizon. We also expect DZ BANK's liability structure to result in unchanged notching outcomes for the bank's deposit and senior unsecured debt ratings.

Factors that could lead to an upgrade

» An upgrade of DZ BANK's ratings could be triggered by an upgrade of the bank's BCA, or by an improvement in the cooperative sector's financial strength. Additional rating uplift from our Advanced LGF analysis could occur for junior senior unsecured debt and lower ranking instruments if DZ BANK significantly increases the volume of instruments designed to absorb losses in resolution relative to its tangible banking assets. With three notches of rating uplift over the Adjusted BCA, the bank's deposit and senior unsecured debt ratings already benefit from the highest-possible LGF result.

» An upgrade of DZ BANK's BCA could be prompted by a meaningful reduction in higher-risk asset concentrations, in combination with a sustainable improvement in its profitability and a further improvement in its capitalisation.

Factors that could lead to a downgrade

» A downgrade of DZ BANK's ratings could result from a joint weakening of the financial strength of G-Finanzgruppe and DZ BANK, or if the bank issued less debt designed to absorb losses in bail-in compared with its tangible banking assets than the rating agency currently anticipates.

» DZ BANK's BCA could be downgraded if substantial unexpected risks were to emerge from its commercial banking activities, or if the group's loss-absorption capacity through capital and profits were to materially decrease.

Key indicators

Exhibit 3

DZ BANK AG (Consolidated Financials) [1]

	12-22[2]	12-21[2]	12-20[2]	12-19[2]	12-18[2]	CAGR/Avg.[3]
Total Assets (EUR Billion)	599.1	607.6	567.6	545.6	506.7	4.3[4]
Total Assets (USD Billion)	639.4	688.5	694.5	612.5	579.3	2.5[4]
Tangible Common Equity (EUR Billion)	22.5	22.4	20.9	21.8	19.7	3.3[4]
Tangible Common Equity (USD Billion)	24.0	25.4	25.6	24.4	22.5	1.6[4]
Problem Loans / Gross Loans (%)	1.5	1.8	2.2	2.4	2.6	2.1[5]
Tangible Common Equity / Risk Weighted Assets (%)	16.3	14.9	14.2	15.1	14.9	15.1[6]
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	12.8	14.2	18.2	18.3	20.8	16.9[5]
Net Interest Margin (%)	0.5	0.4	0.5	0.5	0.6	0.5[5]
PPI / Average RWA (%)	1.5	2.0	1.3	2.0	1.2	1.6[6]
Net Income / Tangible Assets (%)	0.1	0.4	0.2	0.3	0.2	0.2[5]
Cost / Income Ratio (%)	66.2	58.5	66.7	58.8	71.4	64.3[5]
Market Funds / Tangible Banking Assets (%)	58.1	60.8	59.8	58.8	57.0	58.9[5]
Liquid Banking Assets / Tangible Banking Assets (%)	58.3	57.9	56.4	53.6	52.5	55.7[5]
Gross Loans / Due to Customers (%)	127.7	140.8	142.1	141.6	131.7	136.8[5]

[-] Further to the publication of our revised methodology in July 2021, only ratios from annual 2020 onwards included in this report reflect the change in analytical treatment of the "high-trigger" Additional Tier 1 instruments. [1] All figures and ratios are adjusted using Moody's standard adjustments. [2] Basel III - fully loaded or transitional phase-in; IFRS. [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.

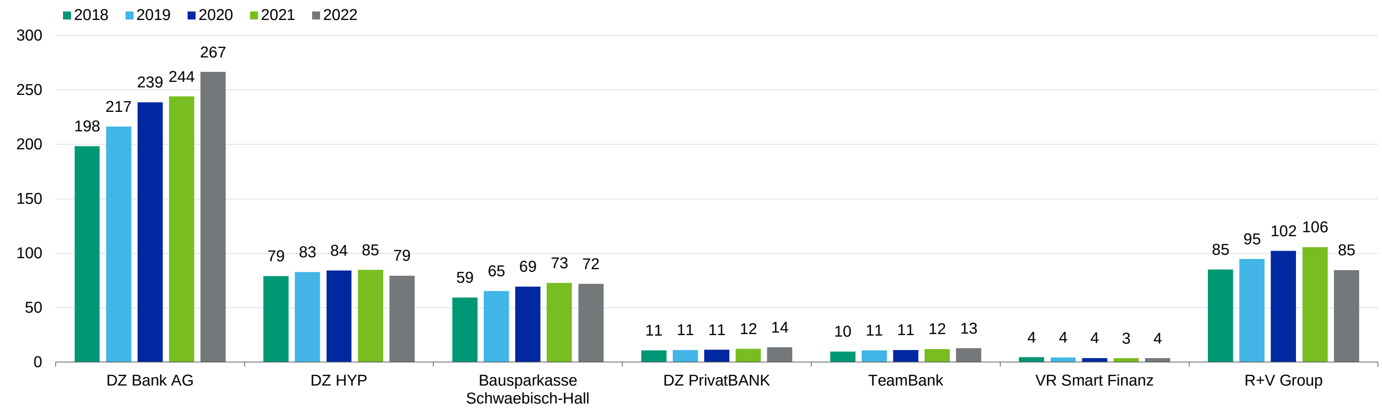
Sources: Moody's Investors Service and company filings

Profile

DZ BANK AG is a commercial bank and operates as the central institution for around 737 primary cooperative banks (*Volks- und Raiffeisenbanken*) in Germany. DZ BANK is also the holding company of DZ BANK Group, and, based on reported consolidated assets of €627 billion at the end of December 2022, represents the second-largest financial institutions group in Germany (Aaa stable), accounting for around 6% of the county's banking system assets.

DZ BANK operates as a financial conglomerate including several banking subsidiaries ("the banking group") as well as one of Germany's largest insurance group, R+V Versicherungen (R+V). Around 84% of DZ BANK's consolidated lending arises from bank-type activities and include DZ BANK AG, the group's central institution, DZ HYP AG (DZ HYP, Aa2/Aa2 stable, ba1)[1], a leading commercial real estate company in Germany, Bausparkasse Schwaebisch Hall AG (BSH, Aa2/Aa2 stable, baa2), a large residential mortgage lender, as well as DZ Privatbank, the cooperative sector's private bank which complements the group's sizeable asset management activities, housed in Union Investment. DZ BANK also consolidates retail consumer loans provided via Team Bank AG and lending solutions for small- and medium-sized entities of VR Smart Finanz.

Exhibit 4
DZ BANK Group's largest consolidated entities
Lending volume in € billion



Source: Company reports and Moody's Investors Service

For more information on DZ BANK, please refer to the bank's Issuer Profile.

Weighted Macro Profile of Strong+

Around 83% of DZ BANK's consolidated risk exposures relate to Germany, complemented by European and international exposures of equal size each. DZ BANK's assigned Strong+ Weighted Macro Profile is therefore derived from Germany's Strong+ Macro Profile.

Detailed credit considerations

Solid capital with ample but temporarily reduced buffers over minimum requirements

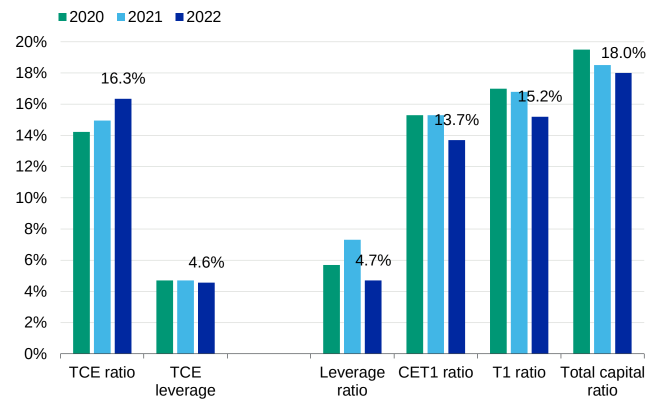
We assign an a3 Capital score to DZ BANK, four notches below its initial score. The downward adjustment reflects our expectation that DZ BANK will be able to maintain a Tangible Common Equity (TCE) ratio above 13%, and restore declining buffers over regulatory minimum requirements because of the temporary accounting differences from the valuation of insurance-related assets and liabilities. Our view also reflects the bank's moderate regulatory leverage ratio and our expectation of weakening economic prospects which will lead to rising risk-weighted assets (RWA).

As a financial conglomerate including several consolidated banks ("the banking group") and large insurance activities, DZ BANK has to comply with separate capital adequacy requirements for both subgroups, which somewhat reduces its capital fungibility at the consolidated level.

In 2022, DZ BANK's CET1 ratio declined to 13.7% as of year-end 2022, compared with 15.3% at the end of 2021. The main driver for the reduction was a temporary accounting difference[2] in the valuation of consolidated insurance assets and liabilities at its subsidiary R+V, which triggered a reduction in other comprehensive income (OCI) to negative €968 million at December 2022, from €3.8 billion at year-end 2021. This was the main driver for the decline in DZ BANK's CET1 capital to €18.8 billion in 2022, from €23.0 billion in 2021. Over the same period, the bank's RWA assets declined to €137.4 billion from €150.1 billion. As of year-end 2022, around 9% or €11.8 billion of DZ BANK's RWA derive from the €3.2 billion equity stake (2021: €7.3 billion) in the insurance subsidiary R+V, which is accounted for at-equity, and therefore included in the banking group's regulatory capital requirements.

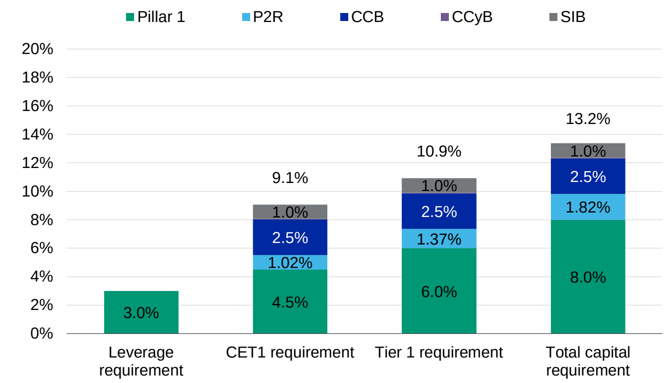
In contrast, DZ BANK's TCE ratio increased to 16.3% at the end of December, compared with 14.9% at year-end 2021. Our capital concept excludes changes of financial assets measured at fair value through OCI, because we consider these changes temporary. At year-end 2022, DZ BANK's banking group excess capital over its 9.01% CET1 P2R was 465 basis points (2021: 633 basis points). DZ BANK's Combined Buffer Requirements mainly included a total P2R of 1.70%[3], a 2.5% capital conservation buffer, and a 1.0% buffer for other systemic institutions. We believe that its buffers are large enough to comply with Germany's planned implementation of a countercyclical capital buffer (CCyB) requirement of 0.75% of domestic RWA and an additional 2.0% buffer for domestic loans backed by residential properties, effective 1 February 2023.

Exhibit 5
DZ BANK's capital ratios for banking activities, Moody's versus regulatory view
Data in percent of risk-weighted assets*



Note: *TCE leverage compares TCE to tangible banking assets. The regulatory Leverage ratio compares Tier 1 capital to Exposure at Default.
Sources: Company reports and Moody's Investors Service

Exhibit 6
DZ BANK exceeds its regulatory minimum capital requirements for banking activities
Data in percent of risk-weighted assets, as of 1 January 2023



Note: DZ BANK's total capital Pillar 2 add-on requirement of 1.82% can be fulfilled with CET1, the AT1 and Tier 2 instruments, based on the ECB's Capital Requirements Directive (CRD V).
Source: Company reports and Moody's Investors Service

Our TCE leverage ratio for DZ BANK remained broadly unchanged at 4.6% as of year-end 2022, compared with 4.7% in 2021. However, over the same period, the bank's regulatory Tier 1 leverage ratio decreased to 4.7% at 31 December 2022 from 7.3% in 2021. This reflects lower regulatory capital from the accounting difference as described above, as well as an increase in the group's Exposure at Default to €441 billion at 31 December 2022, up from €346 billion in 2021, which mainly reflects the termination of the temporary regulatory waiver to exclude central bank exposures from the leverage ratio. Since 28 June 2021, DZ BANK's leverage ratio benefits from the exclusion of intra-sector exposures to other member institutions for the cooperative sector in accordance with CRR II rules, which was around €105 billion at the end of 2022.

DZ BANK's sound asset quality is challenged by weakening economic prospects, in particular from higher cyclical exposures

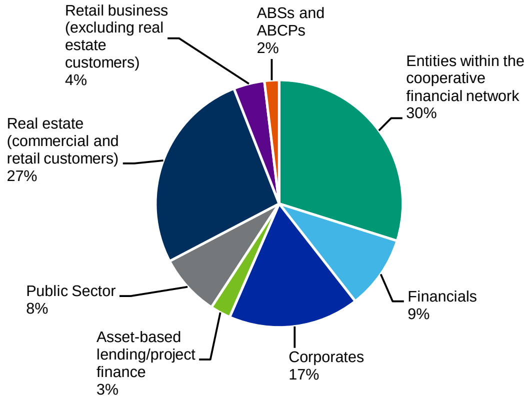
We assign a baa2 Asset Risk score to DZ BANK, four notches below its a1 initial score. The adjustment mainly captures the risks that an economic downturn may have on the bank's cyclical exposures, including commercial real estate and corporate lending. Our assessment also reflects a moderate level of market risk, which includes fair value fluctuations from its insurance-related financial securities.

DZ BANK's credit risks arise from its bank-type lending activities of €448 billion (Exhibit 6) at the end of December 2022 (2021: €431 billion) and are complemented by additional €84 billion (Exhibit 7) credit exposure (2021: €105 billion) from the group's insurance business, predominantly reflecting financial investments to cover risks from life insurance and property and casualty insurance contracts.

DZ BANK's banking activities are dominated by intragroup exposures, reflecting the bank's central functions for group entities, as well as for Germany's primary cooperative banks (*Volks- und Raiffeisenbanken*). DZ BANK's corporate loans mainly relate to large German companies which cannot be serviced by the much smaller cooperative banks, or which at least require joint lending together with DZ BANK. The bank's €119 billion real estate exposures (2022: 27% of total) arises from the consolidation of BSH and DZ HYP. While we consider these activities more cyclical, in particular DZ HYP's commercial real estate activities, we believe that the credit risk is manageable, reflecting the very good asset quality of these portfolios as shown in Exhibit 8, with non-performing loan ratios of 0.7% and 0.1%, respectively at the end of 2022 (2021: 0.8%, 0.2%).

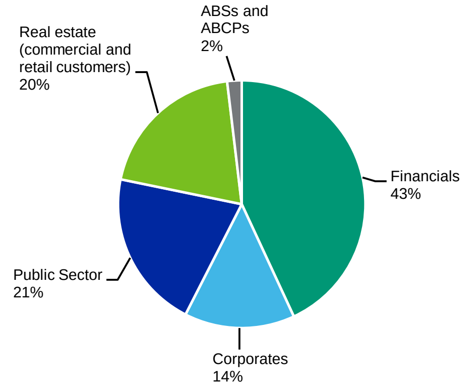
DZ BANK's insurance activities from R+V accounted for around €84 billion or 16% of the group's lending volume at year-end 2022. These create significant market risk for the group, which arise from the asset portfolios to cover for life insurance and property and casualty insurance risks and include different accounting treatments of assets and liabilities under international accounting rules (IFRS).

Exhibit 7
DZ BANK's credit exposures from banking activities
Data as of end December 2022



Note: *includes shipping and offshore.
Source: Company reports and Moody's Investors Service

Exhibit 8
DZ BANK's credit exposures from insurance activities
Data as of end December 2022

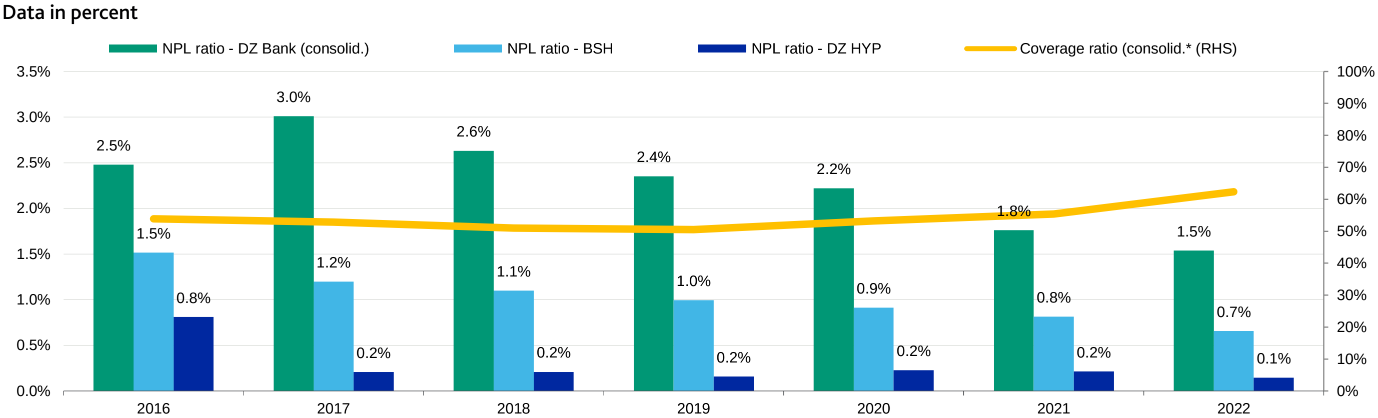


Source: Company reports and Moody's Investors Service

Market risks at DZ BANK also arise from exposure to euro area countries that are rated below single-A. At year-end 2022, the bank's total banking business-related exposure to Portugal (Baa2 stable), Italy (Baa3 negative), and Spain (Baa1 stable) was around €3.7 billion, down from €6.5 billion in 2021, and largely reflecting disposals as well as maturities at DZ HYP.[4] DZ BANK's insurance-related activities reported additional exposure to these countries, in total €4.4 billion in 2022 (2021: €5.8 billion), and mostly related to Italy and Spain.

DZ BANK's solid asset quality is demonstrated by a problem loan ratio of 1.5% as of end December 2022, compared with 1.8% in 2021. The decrease reflects the decline in problem loans to €3.1 billion (2021: €3.4 billion), driven by the further wind-down of DVB's shipping exposures, which is now fully integrated into DZ Bank. We believe that DZ BANK's standalone underlying asset quality, which mainly reflects its own corporate lending exposures, gradually improved since the outbreak of the pandemic, a trend that continued in 2022. The group's real estate activities, which are domiciled in BSH and DZ HYP, continue to report stable and very low problem loan ratios. At the end of December 2022, R+V insurance activities did not report any impaired exposures.

Exhibit 9
DZ BANK's asset quality gradually improved since 2017, including problematic exposures from real estate lending activities housed in BSH and DZ HYP
Data in percent



Note: * The coverage ratio compares specific and generic loan-loss-reserves to problem loans.
Sources: Company reports and Moody's Investors Service

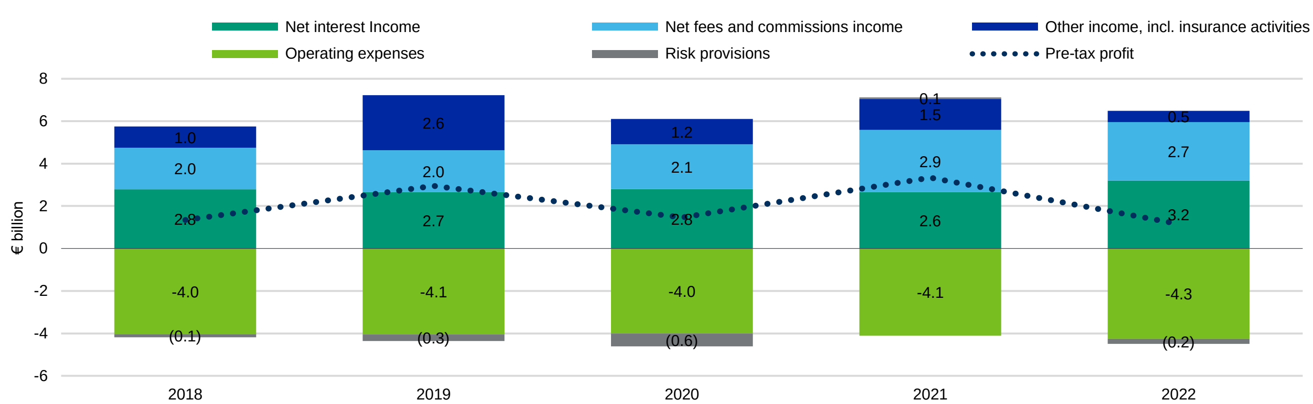
Moderate profitability from diversified activities which are partly sensitive to capital markets movements

We assign a ba2 Profitability score to DZ BANK, four notches above its initial score. The positive adjustments reflects our expectation that the group's underlying profitability is equivalent to net income to assets (ROA) of around 25-30 basis points (bps). As one of the largest financial conglomerate in Germany, DZ BANK's earnings composition is unique because its consolidates several financial institutions which exhibit a degree of uncorrelated income. However, since these activities by nature follow trends in capital markets, DZ BANK's earnings are also volatile, for example because of fair value changes from its insurance-related financial assets, or because revenues from assets management activities depend on the level of assets under management.

Over the last six years since 2017, DZ BANK's net income to asset (ROA) ratio was on average 23 bps, a moderate level of profitability but somewhat higher and more stable than at German peers. In 2022, DZ BANK reported a net income of €1.1 billion, compared with €2.2 billion in 2021, equivalent to an ROA of 10 bps (2021: 38 bps). The lower result was mainly due to lower earnings from its asset manager Union Investment, where lower asset valuations drove lower fee income, and from the insurance subsidiary R+V, where higher interest rates triggered lower fair values on assets (see Exhibit 10). These negatives were offset by higher pretax profits at DZ Bank itself, DZ HYP and BSH. The group has hence achieved a pretax profit of €1.8 billion (2021: €3.1 billion).

In 2022, DZ BANK reported lower revenues of €6.6 billion, down from €7.3 billion in 2021. The main drivers were negative revenues of €179 million from insurance activities, reflecting fair value losses on financial assets, compared with positive revenue of €842 million a year earlier, and somewhat lower net fee and commission income, which decreased to €2.7 billion from €2.9 billion last year, mainly because of lower performance fees from assets management. These negatives were balanced by higher net interest income, which increased to €3.3 billion in 2022 from €2.8 billion in 2021, driven by higher business volume at DZ Bank and the mortgage activities of BSH. In 2022, DZ BANK's total operating expenses[5] increased by around 4.2% to €4.4 billion, reflecting 2.5% higher personnel expenses of €2.1 billion and around 7.3% higher administrative expenses, as well as broadly unchanged depreciation&amortization expenses of €315 million. The weakening economic conditions in Germany during 2022 triggered an increase of the bank's loan loss provisions to €304 million, compared with a release of €120 million in 2021, driven by DZ BANK's corporate lending, TeamBank's unsecured consumer lending, and DZ HYP's commercial real estate activities.

Exhibit 10
DZ BANK's sound and diversified earnings are volatile due to asset management and insurance activities and also reflect tight cost control and moderate risk provisions
Data in € billion

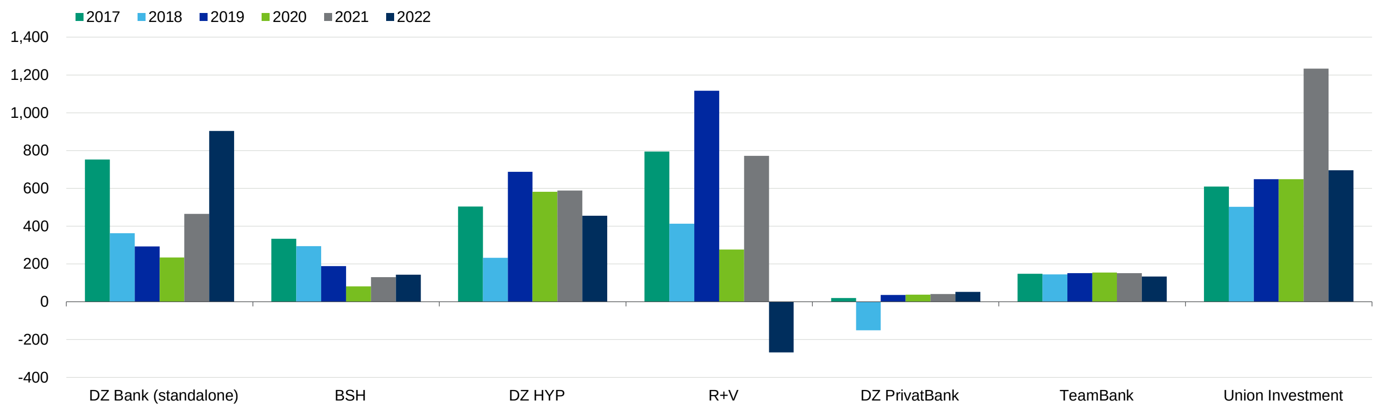


Source: Company reports and Moody's Investors Service estimates

Financial conglomerate which benefits from different business models

DZ BANK's consolidated earnings reflect the bank's standalone activities as the central institution of Germany's cooperative banking sector with a large corporate lending portfolio, the largely domestic mortgage and commercial real estate lending activities of BSH and DZ HYP, the insurance company of R+V, and the asset management activities of Union Investment. The performance of R+V and Union Investment is strongly geared to trends in capital markets, which can results in earnings volatility. The pretax profits contributions from DZ PrivateBank and the group's unsecured consumer lending activities of TeamBank, are rather small within the group context but very stable.

Exhibit 11
DZ BANK's pretax profits by consolidated legal entity
Data in € million



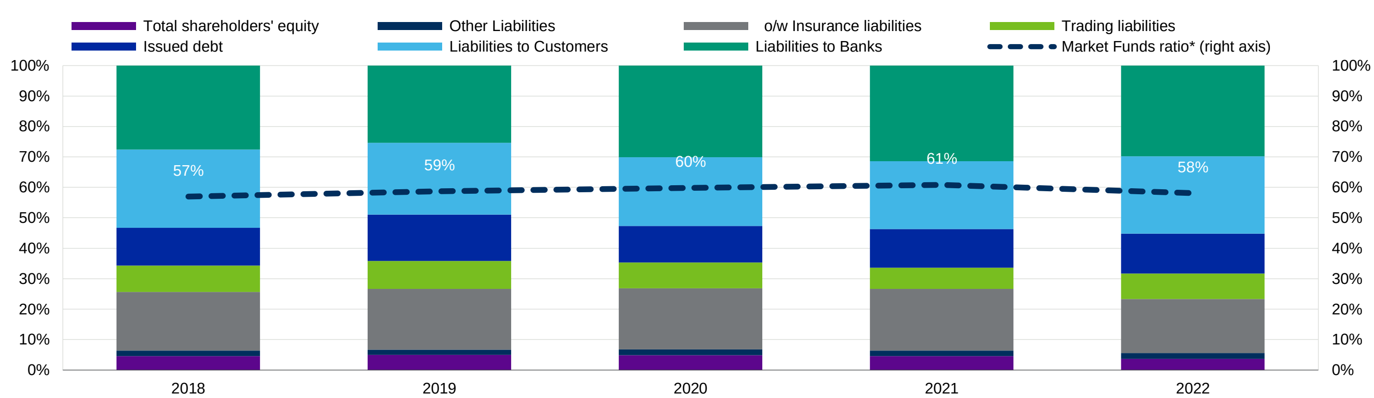
Source: Company reports and Moody's Investors Service

Very high market funding dependence, balanced by exclusive access to funding sources from Germany's cooperative sector

Our assigned Funding Structure score to DZ BANK is baa3, six notches above the b3 initial score. Our large positive adjustment captures DZ BANK's exclusive access and ability to source funds from the cooperative sector, and development banks. We consider these reliable funding sources for DZ BANK, even in times of market distress. As the central institution of the cooperative sector, DZ BANK strongly benefits from access to the cash-rich primary cooperative banks and its effective treasury which ensures access to duration-matched funding for all consolidated subsidiaries of DZ BANK.

DZ BANK's very high market funding dependence is demonstrated by our Market Funds ratio of 58.1% at the end of 2022, broadly unchanged since 2018, but somewhat down from 60.1% in 2021 because of the TLTRO repayment to €11 billion from around €32 billion.[6] The high ratio reflects the bank's relatively low share of deposits, accounting for 25% of assets in 2022, which largely relates to corporate and institutional deposits which we consider confidence sensitive. DZ BANK's market funding primarily reflects reported liabilities to banks, at €179 billion or 30% of assets as of December 2022, €82 billion of issued debt (13%), and €52 billion trading liabilities (8%), which mainly reflect the bond and derivative component of issued structured products.

Exhibit 12
DZ BANK's very high wholesale funding dependence is balanced by the exclusive access to funding sources of the Germany's cooperative sector
Liability breakdown



Note: *Market funds ratio = Market funds/tangible banking assets.
Source: Company reports and Moody's Investors Service

As the cooperative sector's centralized access point for promotional funds[7] provided by development banks such as [Kreditanstalt fuer Wiederaufbau](#) (KfW, Aaa/Aaa stable)[8], DZ BANK had around €76 billion promotional loans in liabilities to banks at year-end

2022 (2021: €72.7 billion), which carries no refinancing risk for the bank, but also do not constitute readily available liquid resources. Therefore, we exclude these exposures from our market funding and liquid resources assessments which is reflected in the positive and negative adjustments.

Further, DZ BANK's liabilities to banks included €75.2 billion intragroup funding from member banks of the cooperative sector at the end of 2022. These banks pass on their deposit overhang as unsecured short-term funding and acquire medium-term unsecured bonds for their own security portfolios and on behalf of retail clients who are also active investors of DZ BANK's structured notes. Finally, this position includes DZ BANK's remaining drawdown from the ECB's tender programs (TLTRO III) of €11.0 billion as of 31 December 2022 (2021: €32.4 billion). We expect DZ BANK's temporarily increased central bank funding to be repaid to a large extent out of the similarly inflated cash balances.

Sizeable liquidity which remains temporarily supported by the ECB's refinancing programs, balanced by moderate asset encumbrance

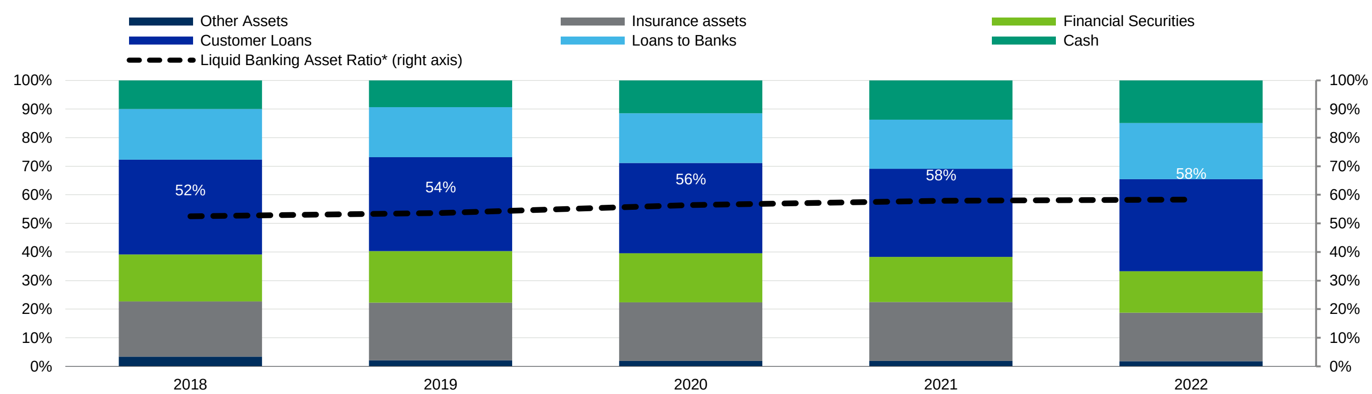
DZ BANK's assigned Liquid Resources score is a3, four notches below the initial score. Our assessment reflects the bank's sizeable liquidity, balanced by asset encumbrance and our view that its liquid assets are somewhat elevated due to participation in the ECB's refinancing operations.

Our favorable liquidity assessment for DZ BANK reflects its very high Liquid Banking Assets ratio of 58% in 2022, which has increased compared with end-2019 due to the bank's participation in the ECB tender programs (TLTRO). Our ratio considers DZ BANK's €94 billion cash (equivalent to 15% of assets), €123 billion loans to banks (20%), and combined €92 billion of financial securities and trading assets (15%) at the end of 2022. The bank's comfortable liquidity is also expressed by a high Liquidity Coverage Ratio (LCR) of 146% at the end of December 2022, compared with 148% in 2021.[9] In accordance with the regulatory LCR measurement, DZ BANK's total liquidity buffer of €122 billionincluded very high quality unencumbered assets at the end of 2022 (2021: €97 billion).

Exhibit 13

DZ BANK operates with very sizeable liquid resources

Asset breakdown



Note: *Liquid Banking Asset ratio = Liquid banking assets/tangible banking assets.

Source: Company reports and Moody's Investors Service

Asset encumbrance at DZ BANK primarily arises from the issuance of covered bonds and structured products. For these liabilities, the bank pledges financial assets which are not readily available to cover for unexpected deposit outflows. However, we believe that DZ BANK could create additional liquidity, if needed, from the high level of overcollateralization for the group's several covered bond issuance programs. At the end of December 2022, DZ BANK Briefe programme reported a nominal overcollateralization of 85% (cover pool assets as of December 2022: €25.5 billion). At the same time, overcollateralisation for DZ HYP's mortgage (€39.4 billion) and public-sector (€12.5 billion) covered bond programmes was 18% and 30%, respectively, and 40% for BSH's mortgage covered bonds.

ESG considerations

DZ BANK AG's ESG Credit Impact Score is CIS-2

Exhibit 14
ESG Credit Impact Score

CIS-2
Neutral-to-Low

NEGATIVE IMPACT POSITIVE IMPACT

For an issuer scored CIS-2 (Neutral-to-Low), its ESG attributes are overall considered as having a neutral-to-low impact on the current rating; i.e., the overall influence of these attributes on the rating is non-material.

Source: Moody's Investors Service

DZ BANK's CIS-2 indicates that ESG considerations do no have a material impact on the current rating. This reflects the mitigating rating impact of affiliate support from Genossenschaftliche FinanzGruppe (G-Finanzgruppe) over DZ BANK's ESG risk profile and the limited credit impact from environmental and social risk factors to date. The corporate governance risks mainly stem from the group's unambitious financial strategy, resulting in subdued operational efficiency.

Exhibit 15
ESG Issuer Profile Scores

ENVIRONMENTAL	SOCIAL	GOVERNANCE
E-3	S-4	G-3
Moderately Negative	Highly Negative	Moderately Negative

Source: Moody's Investors Service

Environmental

DZ BANK faces moderate exposure to environmental risks primarily because of its portfolio exposure to carbon transition risk as a diversified, universal banking group. In line with its peers, DZ BANK is facing mounting business risks and stakeholder pressure to meet broader carbon transition goals. In response, DZ Bank in engaging in integrating climate considerations in its credit risk assessment and supporting customers to facilitate their carbon transition.

Social

DZ BANK faces moderate exposure to social risks, mostly arising from customer relations risks, related to the marketing and distribution of financial products of its asset management and insurance subsidiaries. As a cooperative banking group, DZ BANK benefits from a strong alignment of shareholder and customer interests. High cyber and personal data risks are mitigated by technology solutions and organisational measures to prevent data breaches.

Governance

DZ BANK's governance risks are moderate, reflecting higher concentration risks inherent in its business model as the central institution of the German cooperative banks sector with dedicated specialist lending areas. Its strategy, risk management function and organisational structure are in line with industry practices. DZ BANK's board of directors' composition reflects the group's cooperative owners, with limited independent representation, but this does not result in incremental governance risks because of Germany's developed institutional framework.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click here to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Support and structural considerations

Affiliate support

DZ BANK's a3 Adjusted BCA benefits from the strong fundamentals of and our assessment of a very high probability of support from the German cooperative banking association, G-Finanzgruppe. G-Finanzgruppe provides support to all members through an institutional protection scheme.

As a direct member and the central bank of the cooperative network, DZ BANK is highly likely to receive affiliate support in case of need. This support significantly reduces the probability of default, because the support mechanism aims to stabilise any failing member by avoiding any form of loss participation by creditors or bail-in. Our affiliate support assumptions result in two notches of rating uplift from DZ BANK's baa2 BCA, benefitting its debt, deposit and subordinated instrument ratings.

Loss Given Failure (LGF) analysis

DZ BANK is subject to the EU's Bank Recovery and Resolution Directive, which we consider an operational resolution regime. Therefore, we 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.

In line with our standard assumptions, we assume a residual TCE of 3% and post-failure losses of 8% of tangible banking assets, a 25% run-off in junior wholesale deposits and a 5% run-off in preferred deposits. Because we use private data provided by the bank to determine current amounts of senior unsecured and junior senior debt, as well as our future new issuance expectations, we do not disclose the underlying volumes of the liability tranches included in our Advanced LGF analysis for DZ BANK.

» For DZ BANK's deposits and senior unsecured debt, our LGF analysis indicates an extremely low loss given failure, leading to three notches of uplift from the bank's a3 Adjusted BCA.

» For junior senior unsecured debt issued by DZ BANK, our LGF analysis indicates a moderate loss given failure, leading to a positioning of the rating in-line with the bank's a3 Adjusted BCA.

» For subordinated debt issued by DZ BANK, rated Baa1, our LGF analysis indicates a high loss given failure, positioning this rating one notch below the a3 Adjusted BCA.

Government support considerations

We assume one notch of rating uplift in our senior unsecured debt and deposit ratings for members of the cooperative banking group, reflecting our assumptions of a moderate support probability.

Our government support assumptions, included in DZ BANK's ratings, reflect the size and high systemic relevance, at the domestic level, of the group of cooperative banks. This support would probably not be provided to the bank directly, but to G-Finanzgruppe, in the unlikely event that the association cannot provide (or cannot provide quickly enough) the required support, based on the sector's combined financial strengths.

For junior senior unsecured debt, subordinated debt and hybrid instruments, the potential for government support is low. Therefore, these ratings do not benefit from any government support uplift.

Counterparty Risk Ratings (CRRs)

DZ BANK's CRRs are Aa2/P-1

The CRRs are four notches above the bank's a3 Adjusted BCA, based on the extremely low loss given failure from the high volume of instruments that are subordinated to CRR liabilities, reflected in three notches of uplift, and one notch of rating uplift based on government support, in line with our support assumptions on deposits and senior unsecured debt.

Counterparty Risk (CR) Assessment

DZ BANK's CR Assessments are Aa2(cr)/P-1(cr)

The bank's Aa2(cr) CR Assessment is four notches above the a3 Adjusted BCA, three notches of which are based on the buffer against default provided to the senior obligations represented by the CR Assessment by more subordinated instruments, primarily senior unsecured debt. Because the CR Assessment captures the probability of default on certain senior operational obligations, rather than expected loss, we focus purely on subordination and take no account of the volume of the instrument class.

Methodology and scorecard

Rating methodology

The principal methodology used in rating DZ BANK was the Banks Methodology, published in July 2021.

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 16

DZ BANK AG

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	1.8%	a1	↔	baa2	Sector concentration	Single name concentration
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel III - transitional phase-in)	16.3%	aa2	↔	a3	Nominal leverage	Expected trend
Profitability						
Net Income / Tangible Assets	0.1%	b3	↔	ba2	Return on assets	Earnings quality
Combined Solvency Score		a3		baa2		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	58.1%	b3	↔	baa3	Market funding quality	Extent of market funding reliance
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	58.3%	aa2	↔	a3	Asset encumbrance	Expected trend
Combined Liquidity Score		baa3		baa2		
Financial Profile				baa2		
Qualitative Adjustments				Adjustment		
Business Diversification				0		
Opacity and Complexity				0		
Corporate Behavior				0		
Total Qualitative Adjustments				0		
Sovereign or Affiliate constraint				Aaa		
BCA Scorecard-indicated Outcome - Range				baa1 - baa3		
Assigned BCA				baa2		
Affiliate Support notching				-		
Adjusted BCA				a3		

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	aa3
Counterparty Risk Assessment	-	-	-	-	-	-	-	3	0	aa3 (cr)
Deposits	-	-	-	-	-	-	-	3	0	aa3
Senior unsecured bank debt	-	-	-	-	-	-	-	3	0	aa3
Junior senior unsecured bank debt	-	-	-	-	-	-	-	0	0	a3
Dated subordinated bank debt	-	-	-	-	-	-	-	-1	0	baa1

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	Aa2
Junior senior unsecured bank debt	0	0	a3	0	A3	A3
Dated subordinated bank debt	-1	0	baa1	0	Baa1	Baa1

[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 17

Category	Moody's Rating
DZ BANK AG	
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)
Issuer Rating	Aa2
Senior Unsecured	Aa2
Junior Senior Unsecured	A3
Junior Senior Unsecured MTN -Dom Curr	(P)A3
Subordinate	Baa1
Commercial Paper	P-1
Other Short Term -Dom Curr	(P)P-1
DZ BANK AG, NEW YORK BRANCH	
Commercial Paper	P-1
DZ HYP AG	
Outlook	Stable
Counterparty Risk Rating	Aa2/P-1
Bank Deposits	Aa2/P-1
Baseline Credit Assessment	ba1
Adjusted Baseline Credit Assessment	a3
Counterparty Risk Assessment	Aa2(cr)/P-1(cr)
Issuer Rating	Aa2
Senior Unsecured -Dom Curr	Aa2
Junior Senior Unsecured -Dom Curr	A3
Junior Senior Unsecured MTN	(P)A3
ST Issuer Rating	P-1
BAUSPARKASSE SCHWAEBISCH HALL AG	
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)
Issuer Rating	Aa2
ST Issuer Rating	P-1

Source: Moody's Investors Service

Endnotes

1 The ratings shown in this report are the banks' deposits ratings, the issuer rating (in the case of BSH) and the senior unsecured debt rating (for DZ HYP) and outlook as well as the BCA.

2 Under IFRS 9, assets are valued at fair value, while liabilities are accounted for under the at cost method. The implementation of IFRS 17 starting from 2023 will then also measure liabilities at fair value and thus eliminate the temporary accounting difference.

3 As per 1 January 2023, the total P2R requirement has increased to 1.82%; Source: ECB.

4 At the end of 2022, DZ BANK's exposure to Portugal was €0.2 billion (2021: €0.9 billion), €1.4 billion to Italy (2021: €3.0 billion), and €2.1 billion to Spain (2021: €2.5 billion), mostly related to public sector debtors.

5 Total operating expenses include personnel and administrative expenses, as well as depreciation and amortization.

6 Our Market Funds ratio excludes DZ BANK's consolidated liabilities from insurance activities and only focuses on Tangible Banking Assets.

7 DZ BANK passes on promotional funds to its sector's primary banks, which lend them to households and corporates. The credit risk for DZ BANK is limited by multiple recourses to borrowers, collateral and, ultimately, the primary bank of the customer.

8 The ratings shown are KfW's long-term deposit and senior unsecured debt ratings and outlook.

9 The LCR ratio reflects the bank's average liquidity buffers for the last 6 or 12 months divided by its average net liquidity outflow.

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