

CREDIT OPINION

13 January 2023

Update



RATINGS

DZ BANK AG

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 - Fgn 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.

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DZ BANK AG

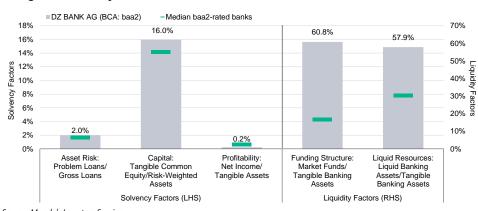
Update to credit analysis

Summary

DZ BANK AG's (DZ BANK) Aa2 deposit and senior unsecured debt ratings reflect its baa2 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 declining buffers over minimum requirements
- » Very sizeable liquidity which is further 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 could be challenged by weakening economic prospects for Germany, including higher cyclical exposures to 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 Moody's 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.

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

Key indicators

Exhibit 2
DZ BANK AG (Consolidated Financials) [1]

	06-22 ²	12-21 ²	12-20 ²	12-19 ²	12-18 ²	CAGR/Avg. ³
Total Assets (EUR Billion)	637.0	607.6	567.6	545.6	506.7	6.84
Total Assets (USD Billion)	666.0	688.5	694.5	612.5	579.3	4.1 ⁴
Tangible Common Equity (EUR Billion)	23.2	22.4	20.9	21.8	19.7	4.84
Tangible Common Equity (USD Billion)	24.2	25.4	25.6	24.4	22.5	2.1 ⁴
Problem Loans / Gross Loans (%)	1.6	1.8	2.2	2.4	2.6	2.1 ⁵
Tangible Common Equity / Risk Weighted Assets (%)	16.0	14.9	14.2	15.1	14.9	15.0 ⁶
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	12.6	14.2	18.2	18.3	20.8	16.8 ⁵
Net Interest Margin (%)	0.5	0.4	0.5	0.5	0.6	0.5 ⁵
PPI / Average RWA (%)	1.6	2.0	1.3	2.0	1.2	1.6 ⁶
Net Income / Tangible Assets (%)	0.2	0.4	0.2	0.3	0.2	0.35
Cost / Income Ratio (%)	65.8	58.3	66.7	58.8	71.4	64.2 ⁵
Market Funds / Tangible Banking Assets (%)	59.5	60.8	59.8	58.8	57.0	59.2 ⁵
Liquid Banking Assets / Tangible Banking Assets (%)	60.1	57.9	56.4	53.6	52.5	56.1 ⁵
Gross Loans / Due to Customers (%)	124.0	140.8	142.1	141.6	131.7	136.0 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.

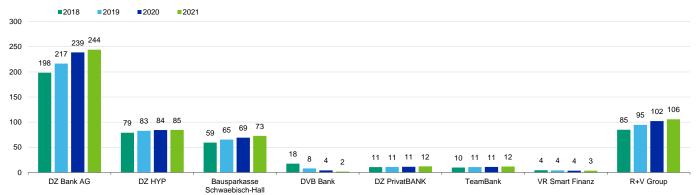
Sources: Moody's Investors Service and company filings

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 €659 billion at the end of June 2022, represents the second-largest financial institutions group in <u>Germany</u> (Aaa stable), accounting for around 6.3% 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 83% 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. Since 2018, DZ BANK has actively reduced the shipping exposures from its former subsidiary DVB Bank S.E. (DVB). This legal entity has been dissolved in August 2022 and the remaining portfolio integrated into DZ BANK AG.

Exhibit 3
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 80% 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 declining buffers over minimum requirements

We assign an a3 Capital score to DZ BANK, three 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 reductions of its ample excess capital, for example because of weakening economic prospects which could lead to rising risk-weighted assets (RWA) or temporary accounting differences from the valuation of assets and liabilities. DZ BANK's financial profile is strongly underpinned by solid capital with decent buffers to cover for unexpected risks. Our assessment further reflects the bank's sound earnings retention after dividends payments to its owners, Germany's primary cooperative banks (*Volks- und Raiffeisenbanken*).

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. Our Capital score reflects that the bank operates with sizeable excess capital above regulatory minimum requirements, as demonstrated at the year-end 2021, when the bank's Common Equity Tier 1 (CET1) was more than 630 basis points above its Pillar 2 minimum requirements.

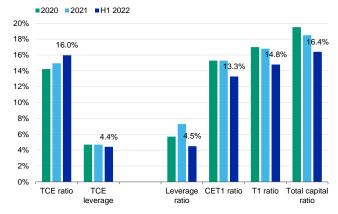
In the first six month of 2022, DZ BANK's CET1 ratio declined to 13.3% as of 30 June, compared with 15.3% at the end of 2021. The main driver for the reduction is a temporary accounting difference² in the valuation of consolidated insurance assets and liabilities at its subsidiary R+V, which triggered a reduction in other comprehensive income (OCI) to €426 million at June 2022, from €3.8 billion at year-end 2021. This was the main driver for the decline in DZ BANK's CET1 capital to €19.3 billion at June 2022, from €23.0 billion in 2021. Over the same period, the bank's risk-weighted assets declined slightly to €145.2 billion from €150.1 billion. As of year-end 2021, around 19% or €28.7 billion of DZ BANK's RWA derive from the €7.3 billion equity stake 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 16.0% at the end of June, 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 end June 2022, DZ BANK's banking group excess capital over its 8.98% Pillar 2 CET1 requirement was 430 basis points (2021: 633 basis points). DZ BANK's Pillar 2 requirements mainly include a 1.70% CET1 add-on, 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 4
DZ BANK's capital ratios for banking activities, Moody's versus regulatory view

Data in percent of risk-weighted assets*



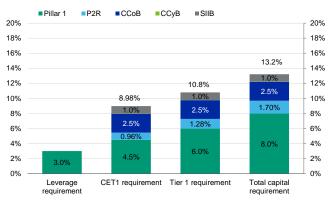
Note: *TCE leverage compares TCE to tangible banking assets. The regulatory Leverage ratio compares Tier 1 capital to Exposure at Default.

Sources: Company reports and Moody's Investors Service

Exhibit 5

DZ BANK exceeds its regulatory minimum capital requirements for banking activities

Data in percent of risk-weighted assets, as of 30 June 2022



Note: DZ BANK's total capital Pillar 2 add-on requirement of 1.70% 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 decreased moderately to 4.4% as of end June 2022, compared with 4.7% in 2021. However, over the same period, the bank's regulatory Tier 1 leverage ratio decreased more materially to 4.5% at 30 June 2022 from 7.3% in 2021. This reflects the lower regulatory capital from the accounting difference as described above, as well as the large increase in the group's exposure at default to €480 billion at 30 June 2022, up from €356 billion in 2021, which is mainly because of the end of the option to exclude central bank exposures from the calculation (around €94 billion as of end-June 2022), as well as the mentioned balance sheet growth. Since 28 June 2021, DZ BANK's leverage ratio benefits from the exclusion of intra-sector exposures, around €107 billion at the end of 2021, to other member institutions for the cooperative sector, in accordance with CRR II rules.

As a financial conglomerate, DZ BANK not only has to comply with minimum capital requirements for its banking activities but also with minimum solvency requirements for the insurance business. Under this consolidated view, DZ BANK's total capital of €33.7 billion translated into a solvency coverage ratio of around 136% at the end of June 2022 (2021: 153%), well above the 100% minimum requirement for conglomerates.

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

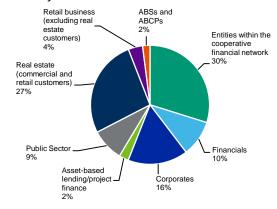
We assign a baa2 Asset Risk score to DZ BANK, four notches below its a1 initial score. The adjustment mainly captures the risks that an economic downturn may have on the bank's cyclical exposures, including commercial real estate and corporate lending. Our assessment also reflects a moderate level of 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 €450 billion (Exhibit 6) at the end of June 2022 (2021: €431 billion) and are complemented by additional €91 billion (Exhibit 7) credit exposure (2021: €106 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 primary banks, or which require at least joint lending of DZ BANK together with other cooperative banks. The bank's most cyclical exposure arises from around €120 billion real estate loans (27% of total), reflecting the consolidation of BSH and DZ HYP. These higher-risk loans are balanced by rather low-risk portfolio of €40 billion provided to the public sector, mainly in Germany.

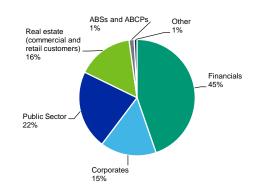
DZ BANK's insurance activities from R+V accounted for around €91 billion or 17% of the group's lending volume at end-June 2022. These create significant market risk for the group, which arise from the asset portfolios to cover for life insurance and property and casualty insurance risks and include different accounting treatments of assets and liabilities under international accounting rules (IFRS).

Exhibit 6
DZ BANK's credit exposures from banking activities
Data as of end June 2022



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

Exhibit 7
DZ BANK's credit exposures from insurance activities
Data as of end June 2022



Source: Company reports and Moody's Investors Service

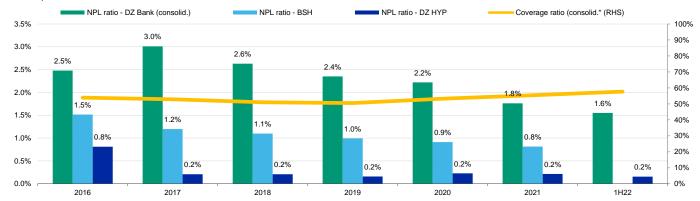
Market risks at DZ BANK also arise from exposures to euro area countries that are rated below single-A. As of end June 2022, DZ BANK's banking business-related public sector exposure to <u>Italy</u> (Baa3 negative), <u>Spain</u> (Baa1 stable) and <u>Portugal</u> (Baa2 stable) was €4.0 billion (2021: €5.0 billion) and mainly arise from DZ HYP but will mature over time. In addition, DZ BANK's insurance-related activities added a further €3.1 billion public-sector exposure to the same countries. (2021: €3.5 billion)

DZ BANK's solid asset quality is demonstrated by a problem loan ratio of 1.6% as of end June 2022, compared with 1.8% in 2021. The decrease reflects the decline in problem loans to €3.2 billion (2021: €3.4 billion), driven by the wind-down of DVB's shipping exposures, which still accounts for a moderate but declining share of DZ Bank's problem loans, as well as the 3.7% increase in gross loans to around €203 billion at end-June 2022 (2021: €196 billion). We believe that DZ BANK's standalone underlying asset quality, which mainly reflects its own corporate lending exposures, remained largely stable since the outbreak of the pandemic. The group's real estate activities, which are domiciled in BSH and DZ HYP, continue to report stable and very lowe problem loan ratios. At the end of June 2022, R+V insurance activities did not report any impaired exposures.

Exhibit 8

Long-term wind-down of shipping exposures drives DZ BANK's problem loan ratio improvement

Data in percent



Note: * The coverage ratio compares specific and generic loan-loss-reserves to problem loans. BSH does not disclose its NPL ratio at the half-year. Sources: Company reports and Moody's Investors Service

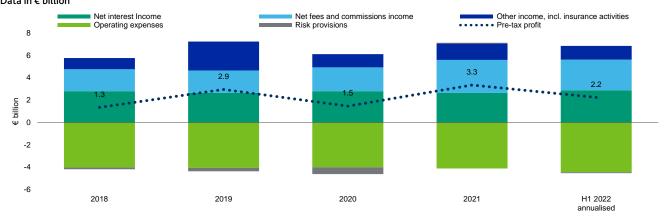
Sound and diversified profits, balanced by earnings volatility reflecting high dependence on capital markets trends

We assign a ba2 Profitability score to DZ BANK, two notches above its initial score. The assigned score reflects the bank's solid earnings derived from a broad range of financial products and services offered by different legal entities. DZ BANK's diversified earnings stream is balanced by a high dependence on capital markets, which can lead to earnings volatility, for example because of fair value changes in financial assets. This volatility primarily arises from the bank's insurance activities, while earnings from asset management (housed in Union Investment) have been less volatile since 2016.

For the first half of 2022, DZ BANK reported a net income of €0.8 billion, compared with €1.3 billion in the first half of 2021. 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 €1.1 billion (2021 H1: €1.8 billion). For 2022, we expect DZ BANK to achieve net income of around €1.5 billion.

In the first half of 2022, DZ BANK reported revenues of around €3.4 billion, compared with €3.9 billion in the first half of 2021. The main driver for the decrease were fee and commission income, which was down to €1.4 billion from €1.6 billion over the same period last year. DZ BANK's revenues from insurance activities decreased to €25 million from €522 million. DZ BANK's net interest income increased only moderately to €1.5 billion in the first half of 2022, compared with €1.4 billion in the same period 2021. This position includes interest income of €81 million from the ECB's TLTRO III program, reflecting the bank's participation amounting to around €32.4 billion in the first half of 2022 (2021: €32.4 billion). In the first half of 2022, DZ BANK reported loan loss provisions of €60 million, compared with a reversal of €114 million in the first half of 2021.

Exhibit 9
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



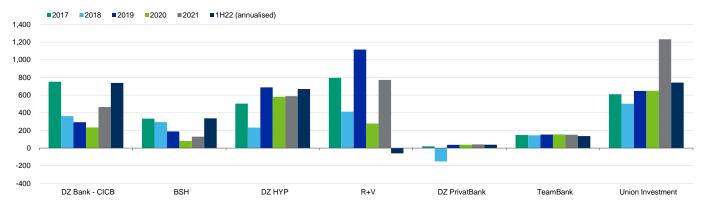
Source: Company reports and Moody's Investors Service estimates

Operating expenses³ at DZ BANK slightly increased to €2.2 billion in the first half of 2022 from €2.1 billion in the same period last year, reflecting somewhat higher personnel and administrative expenses, with the latter mainly driven by increased compulsory fees for regulation and deposit guarantee schemes.

Earnings diversification from the consolidation of different business models

DZ BANK group's earnings are predominantly driven by the consolidated activities from commercial real estate lender DZ HYP, insurance company R+V, asset manager Union Investment, and the central institution and corporate bank (CICB) function of DZ BANK itself. The performance of R+V and Union Investment is strongly geared to trends in capital markets, which drives some earnings volatility. The pretax profits from DZ BANK AG CICB mainly reflects intra-sector services, corporate lending, and capital markets activities.

Exhibit 10
DZ BANK's pretax profits by consolidated legal entities
Data in € million



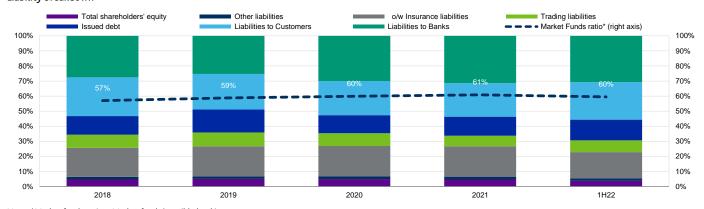
Source: Company reports and Moody's Investors Service

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, seven notches above the caa1 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 founding 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 around 60% at the end of June 2022, broadly unchanged since 2018.⁴ The high ratio reflects the bank's relatively low share of deposits, accounting for 25% of assets as of end-June 2022, a level which is also broadly unchanged since 2018. DZ BANK's market funding primarily reflects liabilities to banks, at €203 billion or 31% of assets as of 30 June 2022, €91 billion of issued debt (14%), and €35 billion trading liabilities (8%).

Exhibit 11
DZ BANK's very high wholesale funding dependence is balanced by exclusive access to 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 funds⁵ provided by development banks such as <u>Kreditanstalt fuer Wiederaufbau</u> (KfW, Aaa/Aaa stable)⁶, DZ BANK had around €72.7 billion promotional loans in liabilities to banks at year-end 2021 (latest available; 2020: around €65 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 around €64.2 billion intragroup funding from member banks of the cooperative sector at the end of June 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 drawdown from the ECB's tender programs (TLTRO III) of around €32.4 billion as of 30 June 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.

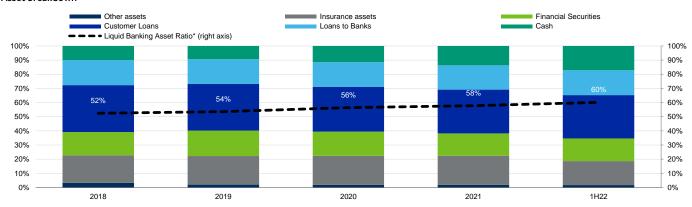
Very sizeable liquidity is further supported by the ECB's refinancing programs, balanced by moderate asset encumbrance

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 60.1% at the end of June 2022 (2021: 57.9%), which has increased since 2020 due to the bank's participation in the ECB tender programs (TLTRO). Our ratio considers DZ BANK's cash of €113 billion at the end of June 2022 (equivalent to 17% of assets), around €116 billion loans to banks (18%), and combined €105 billion of financial securities and trading assets (16%). The bank's comfortable liquidity is also expressed by a high Liquidity Coverage Ratio (LCR) of 141% at the end of June 2022, compared with 148% in 2021. In accordance with the regulatory LCR measurement, DZ BANK's total liquidity buffer of €129 billion at end June 2022 (year-end 2021: €97 billion) included unencumbered assets of very high quality.

We believe that DZ BANK's ample liquid resources will partly revert once it repays the funds sourced under the ECB's TLTRO III.

Exhibit 12
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

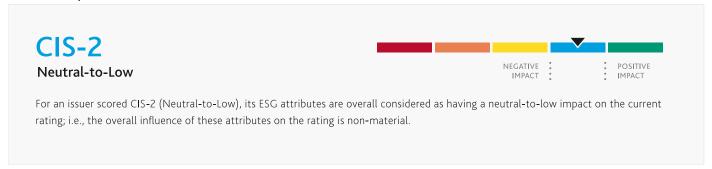
Asset encumbrance at DZ BANK primarily arises from the issuance of covered bonds and structured products. For these liabilities, the bank pledges financial assets which are not readily available to cover for unexpected deposit outflows. However, we believe that DZ BANK could create additional liquidity, if needed, from the high level of overcollateralization for the group's several covered bond issuance programs. At the end of June 2022, DZ BANK Briefe programme reported a nominal overcollateralization of 54.4% (cover pool assets as of June 2022: €22.1 billion). At the same time, overcollateralisation for DZ HYP's mortgage (€39.2 billion) and public-sector (€13.6 billion) covered bond programmes was 22% and 21%, respectively, and around 29% for BSH's mortgage covered bonds.

ESG considerations

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

Exhibit 13

ESG Credit Impact Score



Source: Moody's Investors Service

DZ BANK's ESG Credit Impact Score is neutral-to-low (**CIS-2**). 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 14
ESG Issuer Profile Scores



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, rated Aa2, our LGF analysis indicates an extremely low loss given failure, leading to a three-notch uplift from the bank's a3 Adjusted BCA.
- » For junior senior unsecured debt issued by DZ BANK, rated A3, our LGF analysis indicates a moderate loss given failure, leading to a rating that is at the level of 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 15

DZ BANK AG

Weighted Macro Profile Strong	F 100%					
Factor	Historic Ratio	Initial Score	Expected Trend	Assigned Score	Key driver #1	Key driver #2
Solvency	Katio	Score	Hend			
Asset Risk						
Problem Loans / Gross Loans	2.0%	a1	\leftrightarrow	baa2	Sector concentration	Single name concentration
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel III - transitional phase-in)	16.0%	aa3	\leftrightarrow	a3	Nominal leverage	Expected trend
Profitability						
Net Income / Tangible Assets	0.2%	b1	\leftrightarrow	ba2	Return on assets	Earnings quality
Combined Solvency Score		a3		baa2		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	60.8%	caa1	\leftrightarrow	baa3	Market funding quality	Extent of marke funding reliance
Liquid Resources					8 1 1 1 1	8
Liquid Banking Assets / Tangible Banking Assets	57.9%	aa2	\leftrightarrow	a3	Asset encumbrance	Expected trend
Combined Liquidity Score		ba1		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 wa	De Jure waterfall De Fa		acto waterfall		Notching		Assigned	Additional Preliminary	
	Instrument Sub- Instrument Sub- I volume + ordination				•		Notching Guidance	LGF notching	Notching	Rating Assessment
	subordination		subordination	1			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	-	-	-	-	-	-	-	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	
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 16

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 -Dom Curr	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

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- 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 Under operating expenses, we include personnel, administrative expenses, and depreciation and amortization. Compared to reported numbers, we excludes expenses for pension accounting, in line with our standard adjustments for financial statements.
- 4 Our Market Funds ratio excludes DZ BANK's consolidated liabilities from insurance activities and only focuses on Tangible Banking Assets.
- 5 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.
- **6** The ratings shown are KfW's long-term deposit and senior unsecured debt ratings and outlook.
- 7 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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