MOODY'S INVESTORS SERVICE

CREDIT OPINION
11 May 2023

Update

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RATINGS

Deutsche Bank AG

Domicile	Frankfurt am Main, Germany
Long Term CRR	A1
Type	LT Counterparty Risk Rating - Fgn Curr
Outlook	Not Assigned
Long Term Debt	A1
Type	Senior Unsecured - Fgn Curr
Outlook	Stable
Long Term Deposit	A1
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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Deutsche Bank AG

Annual Update

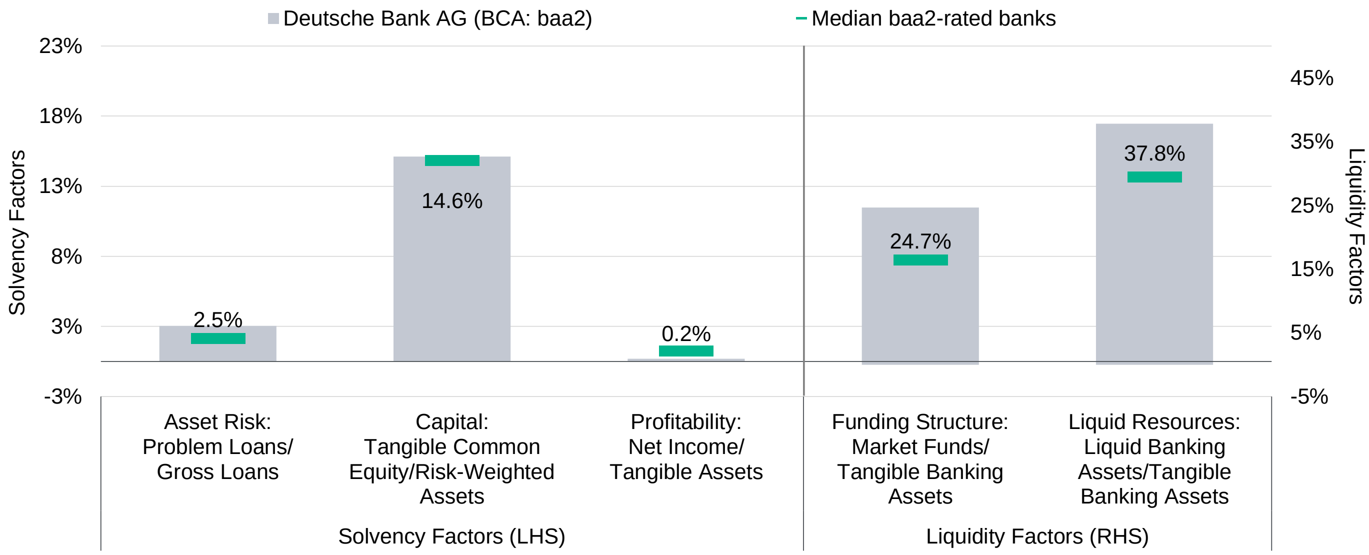
Summary

We assign A1/P-1 long- and short-term deposit ratings and A1 long-term senior unsecured debt ratings to Deutsche Bank AG (DB). The long-term ratings carry a stable outlook. We further assign Baa1 junior senior unsecured (non-preferred) debt ratings and A1/P-1 Counterparty Risk Ratings (CRRs) to DB. We also assign a baa2 Baseline Credit Assessment (BCA) to the bank.

The ratings reflect (1) DB's baa2 BCA and Adjusted BCA; (2) the results of our Advanced Loss-Given-Failure (LGF) analysis, providing three notches of rating uplift for deposits and senior unsecured debt, as well as one notch for its junior senior unsecured debt; and (3) a one-notch additional rating uplift for the bank's deposits and senior unsecured debt ratings, based on our assumption of a moderate level of government support for these debt classes.

The baa2 BCA takes account of DB successfully achieving its transformation plan between 2019 and 2022, allowing the bank to sustain improved, yet still relatively modest, profitability. We expect that the bank's meaningfully reduced expense base should allow DB to safeguard operating leverage in times of temporarily higher inflation and, thereby, defend its regained earnings strength in its new medium-term plan to 2025. The baa2 BCA also reflects the bank's reduced reliance on market funding and high quality deposit base as well as our assessment of the bank's prudent and well controlled risk appetite that is likely to result in a sound and relatively stable asset quality through the cycle. Further, DB has improved its leverage ratio and – throughout its years of business model repositioning – maintained solid capital and liquidity metrics, additionally supporting its improved credit profile.

Exhibit 1
Rating Scorecard - Deutsche Bank AG - Key financial ratios



Source: Moody's Investors Service

Credit strengths

» The bank's continued solid capital and liquidity metrics

» Diversified loan book and strong market position in Germany mitigate asset quality deterioration and resulting earnings strain

» Moderate reliance on confidence-sensitive wholesale market funding

Credit challenges

» To continue executing along its medium-term plan during volatile and uncertain macroeconomic conditions

» Retain and grow group-wide earnings in a context of volatile markets and slowing global economy

» Maintain robust capital markets revenues in a less favourable market environment, without increasing risk appetite

» Keep contained loan loss charges in a weaker operating environment

Outlook

» The stable outlook on the bank's long-term deposit and senior unsecured debt ratings reflects our expectation that DB will be able to maintain financial stability and, in particular, sustain its improved level of profitability as measured by our net income/tangible assets ratio, even in more uncertain operating environment. The resulting higher capital-generation capacity will allow DB to offset strain on earnings potentially resulting from cyclically lower capital market revenues or higher loan loss charges and provisioning.

» The stable outlook also reflects our assessment that the bank will maintain generally sound asset quality despite the slowdown in economic growth and the negative impact that high inflation and rising interest rates have on certain assets.

Factors that could lead to an upgrade

- We could upgrade the ratings if the bank improved its leverage ratio to 5% or above as well as increased its capital and liquidity metrics. The ratings could also be upgraded if DB meaningfully reduced its dependence on confidence-sensitive capital markets funding.
- Further, making visible progress towards exceeding its medium-term targets, in particular earning sustainably improved returns well above its 10% return on tangible equity target, while continuing to invest to strengthen its technology platform and control infrastructure, would support an upgrade. Any upgrade remains contingent on the bank maintaining a prudent and well controlled risk appetite resulting in a sound and stable asset quality and associated metrics through the cycle.

Factors that could lead to a downgrade

- We could downgrade the ratings if DB suffered a strategic setback, particularly with respect to achieving sustainable revenue generation or permanent cost savings supporting a stable operating expense base over time. In addition, the ratings could be downgraded should DB experience a material risk management failure or sustained deterioration in asset quality, liquidity or capital, or its franchise and reputation. The ratings could also be downgraded if additional litigation charges were required well in excess of existing reserves.
- A downgrade could also result from a sustained decrease in the volume of bail-in-able debt relative to the bank's tangible banking assets, leading to a higher loss severity of DB's junior senior unsecured debt or other liability classes at failure and potentially resulting in a lower rating uplift as a result of our Advanced LGF analysis.

Key indicators

Exhibit 2
Deutsche 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)	1,028.6	1,014.3	968.6	949.9	1,019.3	0.2[4]
Total Assets (USD Billion)	1,097.8	1,149.4	1,185.2	1,066.2	1,165.2	(1.5)[4]
Tangible Common Equity (EUR Billion)	54.5	51.4	47.8	47.5	51.2	1.6[4]
Tangible Common Equity (USD Billion)	58.2	58.2	58.4	53.3	58.5	(0.2)[4]
Problem Loans / Gross Loans (%)	2.4	2.5	2.7	2.2	2.3	2.4[5]
Tangible Common Equity / Risk Weighted Assets (%)	15.1	14.6	14.5	14.7	14.6	14.7[6]
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	19.7	21.2	22.5	18.8	17.0	19.9[5]
Net Interest Margin (%)	1.4	1.1	1.2	1.5	1.3	1.3[5]
PPI / Average RWA (%)	1.6	1.1	0.9	-0.1	0.5	0.8[6]
Net Income / Tangible Assets (%)	0.2	0.2	0.1	-0.4	0.0	0.0[5]
Cost / Income Ratio (%)	77.8	85.1	88.1	101.5	93.0	89.1[5]
Market Funds / Tangible Banking Assets (%)	24.7	26.5	26.5	25.4	29.6	26.6[5]
Liquid Banking Assets / Tangible Banking Assets (%)	37.8	39.6	40.9	39.4	47.8	41.1[5]
Gross Loans / Due to Customers (%)	79.0	79.3	76.5	76.9	72.8	76.9[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

Deutsche Bank AG (DB) is the largest German-domiciled private bank, operating through a European as well as a global network servicing retail and wealthy individuals as well as corporate and institutional clients. As of YE 2022, the bank reported total assets of €1.3 trillion and €821 billion of assets under management[1].

DB offers a wide range of investment, financial and related products and services to its clientele, served by around 84,930 employees in about 60 countries globally. The bank focuses on four main businesses: (1) The Corporate Bank (CB) offers corporate finance, transaction banking and capital markets products; (2) the Private Bank (PB) offers retail banking and wealth management services in Germany and abroad, (3) the Investment Bank (IB) caters to the needs of corporate and institutional clients, including the trading and hedging of financial products; and (4) Asset Management (AM) has a broad range of product offerings surrounding investment funds and related products and services to both retail and institutional clients.

DB's BCA is supported by its Weighted Macro Profile of Strong (+)

DB's Strong (+) Weighted Macro Profile is mainly driven by its exposure to Germany (Aaa stable) the US (Aaa stable) or the UK (Aa3 negative), and also incorporates exposures to other EU countries, such as Spain (Baa1 stable) and Italy (Baa3 negative).

As the largest private-sector bank in Germany, DB benefits from an environment with very high economic, institutional and government financial strength and a very low susceptibility to event risk. However, operating conditions for the German banking system are constrained by overly high cost bases; high fragmentation in an oversaturated market; still relatively los margins despite rising rates; modest fee income generation; and strong competition for domestic business.

Detailed credit considerations

Continued execution remains key to solidifying DB's improved credit profile and higher ratings

Since DB announced its strategic overhaul in summer 2019, it has regained earnings strength; reduced capital and leverage exposure consumption; significantly lowered operating costs; maintained strong liquidity; and reduced dependence on confidence-sensitive market funding. All these items have allowed it to self-finance its strategic overhaul without a significant impact on its key capital ratios.

The achievement of DB's strategic revamp which concluded at the end of 2022 has placed DB on firmer ground than previous, less fundamental restructurings. At the same time, and even if DB reaches its 2025 RoE targets, its performance – although materially improved – will continue to lag that of its global investment bank (GIB) peers. Therefore, to sustain its improved credit strength, DB will need to keep a steady pace in reaching its key milestones and repositioning its business model as announced through its extended 2022-25 business plan.

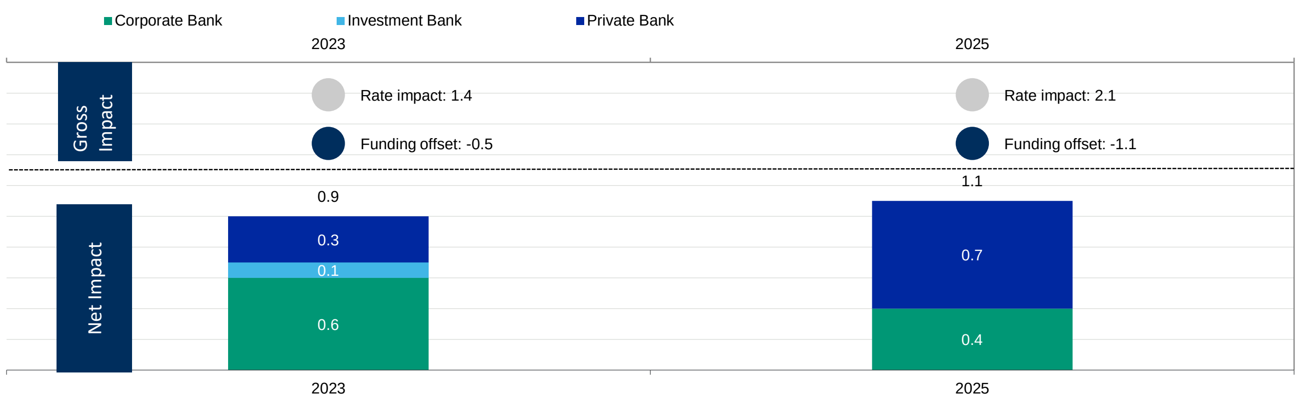
Under this revised three-year plan, DB aims to grow revenues to around €30 billion by 2025 from the 2021 level of €25.4 billion (€27.2 billion achieved in 2022) while keeping cost broadly flat from 2022 level in order to achieve a cost-to-income ratio of below 62.5%. Together with loan loss charges retreating to around 20 basis points of gross loans by 2025 (25bps in 2022 and likely comprised between 25 and 30 bps in 2023), DB aims to achieve a net return on tangible equity (ROTE) of 10% or higher at that point. The bank ultimately aims to achieve a 50% total payout ratio through a combination of dividends and more flexible share buybacks while maintaining its Common Equity Tier 1 (CET1) capital ratio around 13% or 200 basis points above the maximum distributable amount.

The updated medium-term targets represent a bondholder-friendly evolution of DB's strategic revamp, although success in execution increasingly relies on less predictable revenue growth rather than cost reductions. We nevertheless believe the outlined measures to be prudent and realistic assuming a gradually normalizing market environment until 2025. We would also expect DB to remain disciplined on total costs despite inflationary pressures continuing in 2023.

DB's €30 billion revenue target for 2025 represents a cumulative 18% or €4.6 billion increase over the 2021 level (€2.8 billion from 2022), expected to be generated through further volume growth in lower risk, stable businesses; additional strategic initiatives; and the bank expects the positive effect of rising interest rates on net interest income from 2022 level to amount to around €0.9 billion in 2023 and up to €1.1 billion in 2025 (based on forward rates as of end January 2023). DB's 2025 revenue guidance builds on enhancing DB's strengths in its Corporate Bank (cash management, trust and agency services, lending) and its Private Bank (retail and wealth management).

Exhibit 3

Evolution of interest-sensitivty revenues in USD billions



Source: Company reports

During the 2022-25 planning period, DB envisages a change in composition of underlying growth drivers, with franchise and efficiency improvements in the CB and PB segments targeted to bring in the bulk of the planned growth. Indeed, recent interest-rate hikes have improved the prospects for higher returns within the bank's core lending businesses conducted in its PB and CB segments, despite expectations of at least a normalization in the cost of risk.

DB's capital markets earnings streams in its Investment Bank (IB) and Asset Management (AM) segments remain vulnerable to market setbacks and tighter liquidity conditions, although the market volatility has supported some of DB's core IB franchises in fixed income and related client flow in recent years. But their contribution to overall revenue growth will diminish following strong outperformance of the latter against earlier projections in prior years and low origination and advisory revenues in the current context of slowing economies and high market uncertainty. The strong 37% IB contribution to group revenues in 2022 might not be sustained. However based on DB's recent market share gains and select growth investments into regions, products and technology, we believe the bank will be able to safeguard revenues and earnings and keep contained revenue or market share declines in its capital markets business, even in a less favourable market environment.

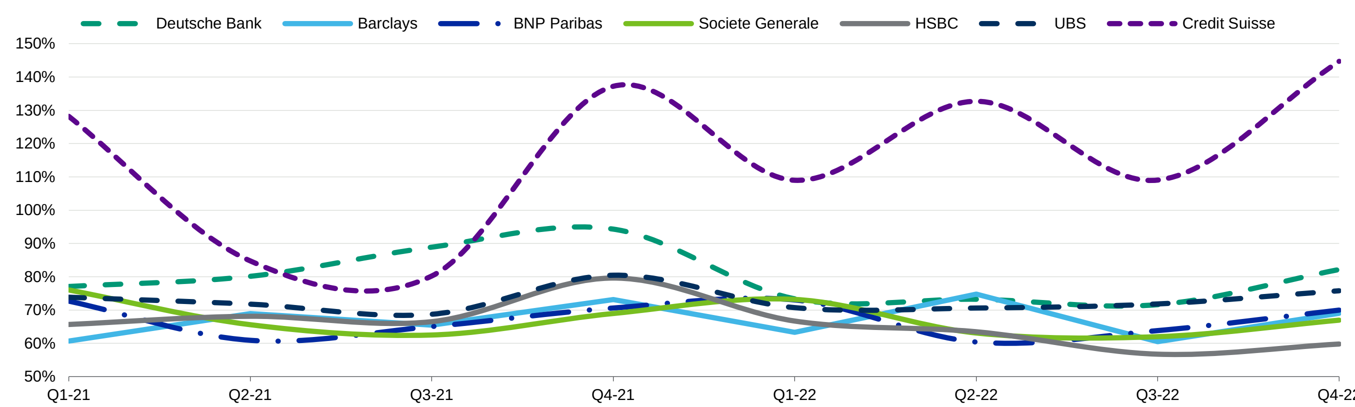
Profitability visibly improved, and DB is on track to reach its medium-term goals

We assign a ba3 Profitability score to DB, taking account of our assessment that DB is likely to make continued progress towards meeting its medium-term targets, in particular by being able to sustain adequate, yet still relatively modest, profitability. The assigned score further reflects our anticipation of a net income/tangible asset ratio (our measure of return on assets) of around 0.25% over the next 12-18 months, as uncertainties regarding the sustainability of the IB's performance and growth ambition in the PB and CB segments in a challenging operating environment, in part offset the positive net impact expected from interest rate hikes on the latter franchises' margins. Sustainably improving its profitability and efficiency metrics (see Exhibit 4) according to its revised strategic plan will support overcoming a key relative weakness for DB within its peer group.

Exhibit 4

DB's restructuring success moved it close to its GIB peers' efficiency ratios

Cost-to-income ratio (Moody's adjusted), Q1 2021 - Q4 2022



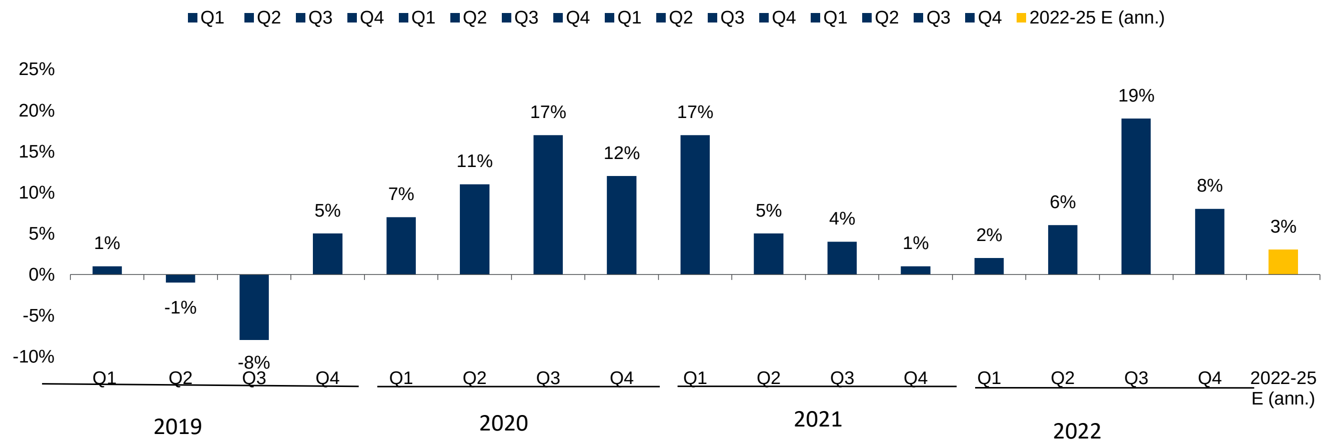
Source: Company reports, Moody's Investor

The swift rundown in the bank's operating cost base, as transformation plan generated around €3 billion of run-rate savings from year-end 2018 until the end of 2022, helped restore DB's operating leverage, making it more resilient to setbacks in its revenue performance. This was a major leap forward from DB's previous restructurings, in which it suffered greater revenue attrition and did not generate any additional operating leverage.

Exhibit 5

DB has regained operating leverage

Revenue over cost growth, year-over-year, Q1 2019 - Q4 2022 and forecast



*Revenue excluding specific items as reported by DB and annualised. ^Costs adjusted in accordance with DB definition and excluding transformation charges. Also annualised. 25F is annual according to DB guidance.

Source: Company reports, Moody's Investors Service

In 2022, the meaningfully higher cost base versus earlier projections (DB's cost target went as low as €16.7 billion for 2022 communicated at its December 2020 Investor Deep Dive) was in part driven by items outside of the bank's control, such as higher banking levies; valuation and timing differences; foreign currency moves; and Russia-related costs. However, cost inflation has also been caused by higher variable costs given the IB's strong performance as well as higher IT costs as projects were more costly or time-consuming than anticipated. DB has also invested greatly in controls, technology and processes, all of which will drive efficiencies going forward.

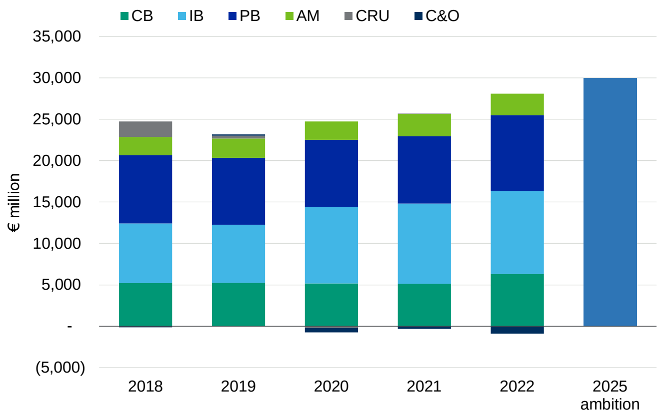
The new cost-to-income target of below 62.5% by 2025 would still allow for a continuation of operating leverage to build (Exhibit 5). We expect further improvement in DB's operating leverage should partly reflect continued efficiency measures, but mostly rely on achieving the bank's revenue goals.

To support its goal of a stable underlying operating cost base, DB has identified around €2.5 billion of additional cost saving opportunities that it aims to reinvest fully into the businesses. Key items include the optimization of the Germany platform through the full integration of former Postbank's IT platform onto the DB architecture; increased usage of cloud technology reducing server cost and maintenance; better lending processes and infrastructure; and ongoing rationalisation of real-estate footprints.

In addition, DB's 2025 costs should be freed of material transformation-related adjustments and benefit from a reduction in the bank's contribution to the Single Resolution Fund (SRF[2]; 'banking levy').

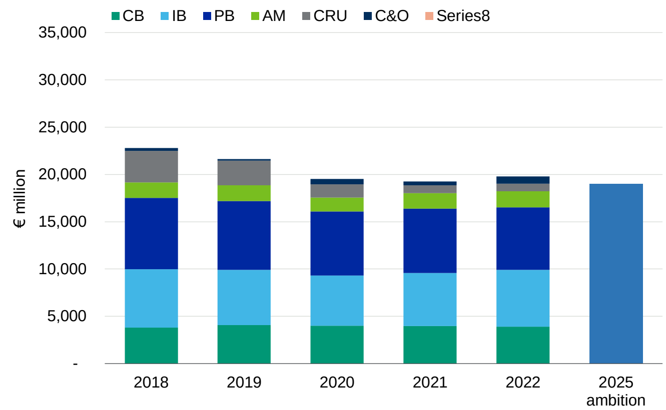
Nevertheless, achieving the new target would still represent a net €2.5- €3.0 billion reduction in total costs from the 2021 reported level, which remains an ambitious target in a context of high inflation in Europe.

Exhibit 6
DB's revenue plan looks more ambitious...
Group revenue, € million



Notes: 2025 ambition reflects DB group-level target (including the CRU and the Corporate Center or 'C&O') as implied by current guidance.
Source: Company reports, Moody's Investors Service

Exhibit 7
...and the bank's cost base will settle at higher levels
Group adjusted costs, € million



Notes: 2025 ambition reflects DB group-level target (including the CRU and the Corporate Center or 'C&O') as implied by current guidance. By 2025, we expect the €18.5-€19 billion guidance to display reported total costs, without any further adjustments.
Source: Company reports, Moody's Investors Service

In fact, we believe DB has little room to cut further on compensation given the recently conducted staff reduction program as well as the outperformance of its capital markets unit, the latter already displaying one of the lowest compensation ratios in the industry. As a result, staying competitive and retaining or attracting key talent remains vital for achieving the projected ambitious revenue goals. If sustained and strongly executed, the announced ambitions and measures will continue putting DB on track to improve key underlying performance metrics and – according to our estimates – move closer to achieving its ambition of a 10% post-tax ROTE by 2025. This would put the bank at par with the lower-end of the return levels of several of its higher-rated peers – provided it can put through larger parts of the targeted revenue growth.

Solid revenue performance in 2022 supports strong start for DB's achievement of 2025 target

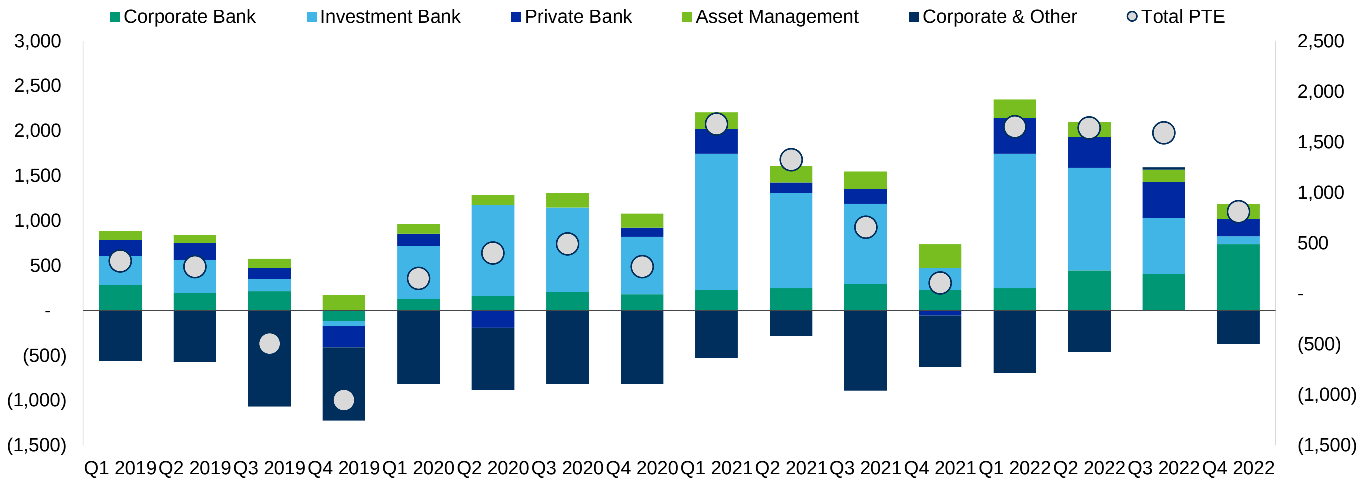
DB reported pre-tax income of €5.6 billion in 2022, up 65% from 2021 supported by 7% of revenue growth and 5% costs reduction. This solid performance was largely driven by revenue strength in the Corporate Bank division, displaying revenue growth of 23% due to higher interest rates, fee and commission income as well as deposit growth and favorable FX movements. This was accompanied by a 3% and 6% growth of adjusted revenues in Investment Bank and Private Bank, respectively. Asset Management revenues were down 4% as higher management fees were more than offset by lower performance fees and other revenues in a challenging market environment. The strong revenue performance helped a material improvement in DB's cost-to-income ratio to 75% down from 85% in 2021. Loan loss charges stood at €1.2 billion (2021: €515 million) or 25 basis points (bps) of gross loans, reflecting more challenging macro economic environment in 2022. At group level, DB reported a net income of €5.7 billion that included a positive impact of €1.4 billion deferred tax valuation adjustment.

In Q1 2023, DB reported total group revenues of €7.7 billion, up 5% year-over-year, reaching the highest level recorded since 2016. The solid performance, in a challenging operating environment was largely driver by revenue strength in the bank's CB and PB segments, displaying growth of 35% and 10% respectively. This was partly offset by lower IB revenues (-19%) and Asset Management performance (-14%). In Q1 2023 adjusted costs were broadly flat year-on-year, resulting in an improved cost-to-income ratio of 71% [3] down from 75% for the full-year 2022. The bank managed to offset inflation in fixed remuneration by lower variable compensation, and benefitted from lower bank levies amounting to €473 million down from €730 million a year before.

Considering the uncertain macroeconomic environment, our view that net margin uptick in CB has probably reached its maximum in early 2023, and the potential for rising loan loss charges in the next 18 months, it will become more important for DB to contain costs despite continuous investments in IT & Controls and strategic hires to maintain returns near target levels and - ultimately - sustainably earn its cost of capital.

Exhibit 8

DB's profitability benefits from solid revenue performance in all core segments, despite slowdown in IB primary revenues
Adjusted quarterly pretax profits by business line (excluding litigation, impairments, DVA and one-offs), € million



* CRU discontinued from 2023 and restated in 2022 (moved to C&O). Quarterly 2019-2021 figure for C&O reflects combined CRU and C&O.
Source: Company reports, Moody's Investors Service

Diversified loan book will help mitigate undue earnings strain from loan loss charges

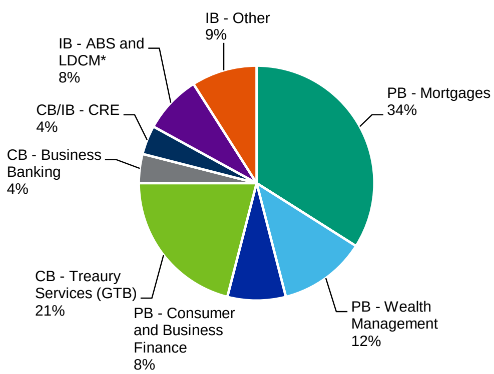
Our baa2 Asset Risk score reflects DB's well diversified loan book by asset class and segment, displaying manageable exposures to sectors most affected by effects of the economic slowdown as well as certain risk pockets, particularly sensitive to the rising interest rates environment, such as commercial real estate (CRE) and leveraged debt capital markets (LDCM). The assigned score also incorporates the market, credit and operational risks and periodic concentration risks inherent to DB's capital markets activities.

DB's €489 billion loan book remains well diversified by region, asset class and segment (Exhibits 9 and 10). The bank holds collateral of €269 billion against performing exposures and €5.0 billion of loan loss reserves[4] in addition to various hedges that will help significantly reduce the bank's overall exposure to potential more major loan losses. About half of the bank's lending is directed to German corporate and retail customers, with very low exposure to unsecured consumer lending and a clear focus on highly collateralised Germany-focused residential mortgages that are typically fixed long-term, display loan-to-value (LTV) ratios of around 66% and very low delinquency ratios of less than 20 basis points, supported by strong employment levels in Germany. More than half of the loans are to retail and wealth customers, the remaining part of the loan book is exposed to corporate and investment banking: about 30% of the loan portfolio sits in the Corporate Bank (CB) – about half of which is in lower-risk transaction banking balances – and the Investment Bank (IB) holds about 20% of the bank's loan balances, mainly in asset-backed loans and CRE.

Exhibit 9

DB's loan book remains well diversified, despite some higher-risk pockets

Gross loans by segment and loan type, as of YE 2022*



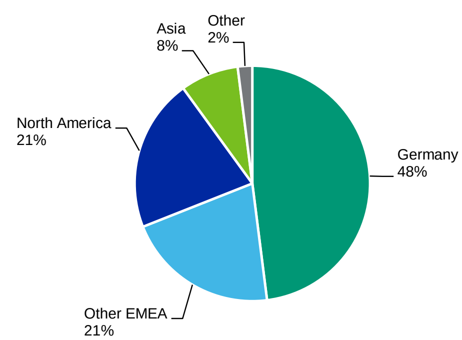
*Moody's grouping. PB = Private Bank; CB = Corporate Bank; IB = Investment Bank; ABS = Asset-backed securities; LDCM = Leveraged debt capital markets; CRU^ = Capital Release Unit.

Sources: Company reports, Moody's Investors Service estimates

Exhibit 10

Focus on German home market will help contain loan losses

Gross loans by region*



Sources: Company reports and presentations

According to our estimates, DB's concentrations in utilities, chemicals, manufacturing, automotive and transportation totaled approximately €50 billion, or about 11% of the bank's loan book, as of YE 2022. These are the sectors likely to be hit hardest by the macroeconomic slowdown, as well as those most vulnerable to commodity price hikes and potential gas supply shortages in Germany and other countries. At the same time, EU member states have been adopting national policy measures that will limit the extent of problem loan formation among corporate borrowers and households. Some borrowers may also be able to adapt their energy sources or pass higher costs on to their customers. Others have built up sufficient capital and liquidity to protect their cash flows.

In Germany, a third round of support measures presented in September included an extension of liquidity support for energy-intensive businesses. The government also announced plans to introduce new energy policy measures, including an emergency price brake and sales tax reduction on gas as well as an electricity price brake. These measures will provide relief to households and corporates currently struggling with high energy prices. Together with low levels of corporate and household debt in Germany of 94% and 57% of GDP, respectively, as of the end of 2021[5], the bank's corporate and retail customers should be able to contend with energy market dislocations or a more severe macroeconomic slowdown without quickly becoming over-indebted.

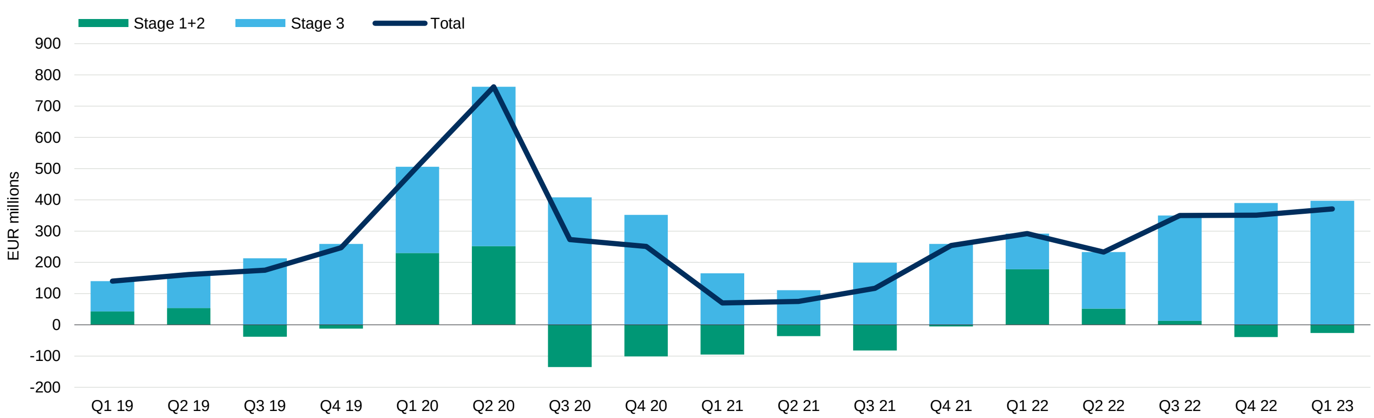
Larger risk exposures to commercial real estate (CRE) and leveraged debt capital markets that are particularly vulnerable to interest rate hikes, market volatility as well as the impact of post-Covid trends, account together for about 8% of DB's total gross loans. Although

CRE portfolio of €33 billion as of the end of March 2023 (stable from YE 2022), or 7% of DB's loan book, represents large absolute risk concentrations, they are mitigated by diversification across geographies and assets, tight lending criteria, low LTVs, exposure to strong sponsors, good underlying collateral mostly in prime locations and hedges. The leveraged lending portfolio of €4 billion at year-end 2022, representing 1% of the loan book, is also well diversified across sectors, with limited borrower concentrations and around 79% of the exposure in the form of first lien secured credit facilities, mostly of revolving nature, the remaining being asset-based lending with low loss history. DB has actively de-risked its underwriting pipeline in 2022.

DB's loan-loss charges rose sharply in 2022 as the decade-long benign credit cycle began to turn. During 2022, DB's loan loss charges totaled €1.2 billion (25 bps), up significantly from €515 million (12 bps) in 2021. The increase was partly driven by significantly higher Stage 3 provisions (€1,022 million versus €734 million in 2021), reflecting a weakening macroeconomic outlook. In Q1 2023, risk provisioning continued to increase to 30bps of gross loans, due to additional provisions booked on idiosyncratic legacy impaired loans in International Private Banking, without pointing to any particular deteriorating trends in the quality of the asset portfolios.

For full year 2023, DB now expects loan loss charges to come in at around 25-30 basis points (bps) of gross loans. We believe these assumptions are realistic in light of the bank's diversified and highly collateralised Germany-focused loan book, which will help stave off a sudden deterioration in DB's asset quality and a sharp and unexpected rise in loan loss charges. Further, as of YE 2022, DB had reserved €5.0 billion in allowances for potential loan losses, which we consider adequate for its diversified loan book; and reserve levels are broadly in-line with those of peers (coverage ratio on Stage 3 problem loans is 32%). This cushion will help DB withstand the anticipated asset quality deterioration over the next quarters, the scale of which will depend on the depth of the economic downturn in the bank's core markets, in particular in Germany.

Exhibit 11
Loan loss charges (LLC) are likely to further gradually increase (€ million)



Source: Company reports, Moody's Investors Service

Qualitative adjustment captures remaining reliance on capital markets activities

Despite the proposed downsizing and its progress in recalibrating the bank's business model, DB will retain a significant reliance on capital markets activities for income generation: capital markets-related revenue will account for around one-third of DB's total revenue in 2023/24 (Moody's estimate). We generally consider capital markets activities to be both opaque and potentially volatile, posing significant challenges for the management of such activities, in particular because these businesses carry significant risk management and risk governance challenges; opaque risk taking; and intrinsic market, counterparty and operational risks; and display a high confidence sensitivity of the customer and funding franchises. These structural challenges continue to result in a one-notch negative qualitative adjustment to DB's BCA in respect of remaining 'Opacity and Complexity', an adjustment currently shared with all large GIBs.

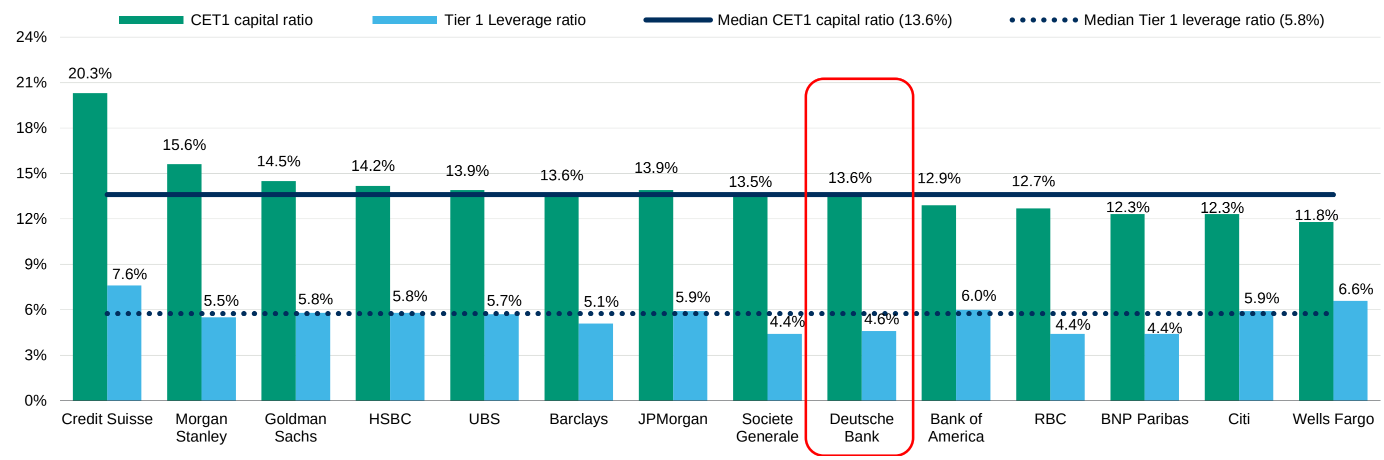
Sound capital and strong liquidity continue protecting bondholders

DB's Common Equity Tier 1 (CET1) capital ratio improved to 13.6% at the end of March 2023, from 13.4% at the end of 2022 and 13.2% at the end of 2021, driven mainly by solid earnings and a contained increase in risk-weighted assets of 2% only in 2022 and broadly flat in Q1 2023. DB's CET1 ratio was around 250 bps above minimum regulatory requirement in 2023 of around 11.1% which includes a 0.75% countercyclical buffer in Germany and a sectoral systemic risk buffer of 2% for German residential real estate exposures. The bank announced that the intended dividend payout ratio will gradually increase to 50% by 2025 and, unlike many of their peers, they are not resuming share repurchase programs yet. DB announced that capital efficiency efforts should drive a €15-20 billion reduction in risk-weighted assets by 2025, from lower-yielding portfolios with limited revenue impact, and concurrently indicated that they have started discussions with regulators to enable share buybacks in the second half of 2023.

DB reported a Tier 1 leverage ratio of 4.6% at the end of March 2023, broadly stable from year-end 2022 and 10 bps lower than at the end of 2021[6], mainly owing to business growth leading to a 10% increase in leverage exposure to €1,238 billion (Q4 2022: €1240 billion; Q4 2021: €1,125 billion). We expect the bank to manage towards a leverage ratio of 4.5% or higher going forward in an effort to close the gap to its peer group.

Exhibit 12

Common Equity Tier 1 (CET1) ratio and Tier 1 Leverage Ratio for Global Investment Banks, as of end-March 2023



1) As of Q4 2022 for BNP, HSBC, and Societe Generale; Q1 2023 for all others. 2) The Tier 1 leverage ratios of UK and European banks are calculated as per the Capital Requirement Regulations, and they exclude certain central bank balances as temporarily allowed; for US banks we show the supplemental leverage ratio (SLR). 3) The CET1 ratio for US banks is calculated under the advanced approach.

Source: Company reports, Moody's Investors Service

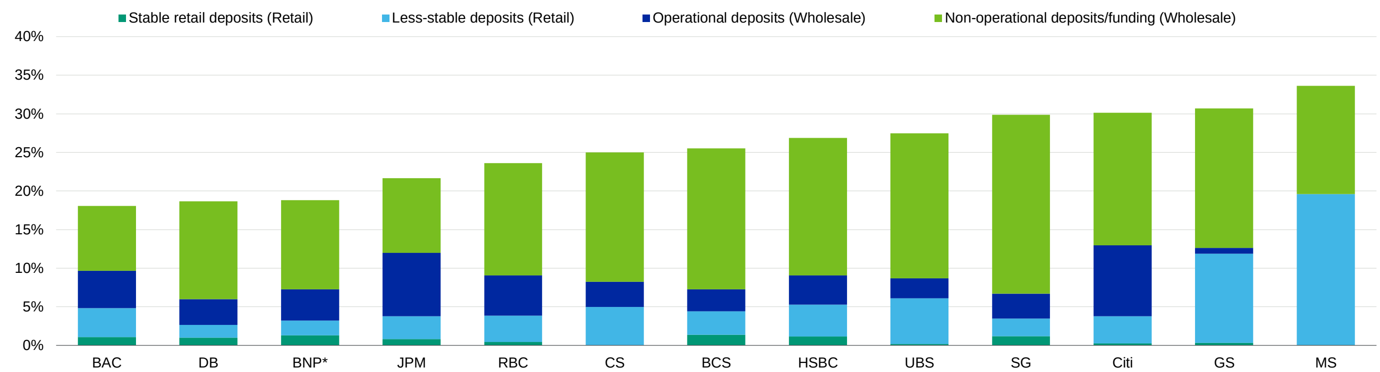
In respect of the 2021-2025 reference period, DB expects a total capital distribution of around €8 billion. During the 2021-2024, DB expects to grow dividends by around 50% per year, achieving a total of €3.3 billion with the remainder expected to be executed via share buybacks. This capital distribution policy helps balance shareholders' and bondholders' interests and allows for sufficient flexibility by limiting the anticipated total dividends to less than half of the target payout, a credit positive considering the uncertain market environment. It will also help stabilising the bank's CET1 capital ratio during the 2022-2025 period. In the challenging macroeconomic context, we expect loan growth to remain subdued in 2023, but risk-weighted assets could be adversely impacted by negative risk migration, elevated market and counterparty risks and regulatory model reviews, which will create some volatility around the bank's CET1 ratio target of around 13%.

Strong liquidity position and sound funding profile

We assign an a3 Funding Structure score to DB, one notch above the bank's initial score. The positive adjustment reflects DB's extended and now more stable tenure for a larger part of its confidence-sensitive wholesale funding and further captures our expectation that DB will remain less dependent on such funding sources, adding flexibility to managing refinancing costs and executing on the announced plans over the next 12-18 months. The adjustment also takes account of the benefits provided by the bank's stable and diversified deposit base of €621 billion as of YE 2022, generated from its sizable domestic corporate and retail banking franchise (close to 90% of deposits are from retail and SME depositors), around 70% raised in its German domestic market, which counterbalances the wholesale funding needs of the bank's remaining capital markets activities. Deposits constitute 60% of DB's net liabilities (including equity) and about half are granular retail deposits. As a result, DB displays a lower weighted outflow of deposits as a proportion of total deposits under a significant stress scenario than several of its peers (Exhibit 13). We expect these developments to be sustainable, contributing to significantly lower funding needs (and costs) and supporting the stability of the bank's liquid balance sheet.

In the context of very volatile markets in Q1 2023, and the confidence crisis that followed the failure of several US regional banks and the measures taken by the Swiss National bank to ensure stability for Credit Suisse's customers, DB confirmed that the change in deposit balances experienced in the first quarter (to €592 billion at end of March from €621 billion at the end of December) reflected a normalization from very high levels posted in 2022. Indeed the March level is broadly in line with levels of Q1 2022. The deposit base remains very diversified by business and product segments, 73% in its German domestic market. We view the deposit stability of Deutsche Bank as one of the strongest among global investment bank peers, based on a limited proportion of non-operational overnight deposits (12% as of Q1 2023) and around 52% from retail and SME customers in Private Bank.

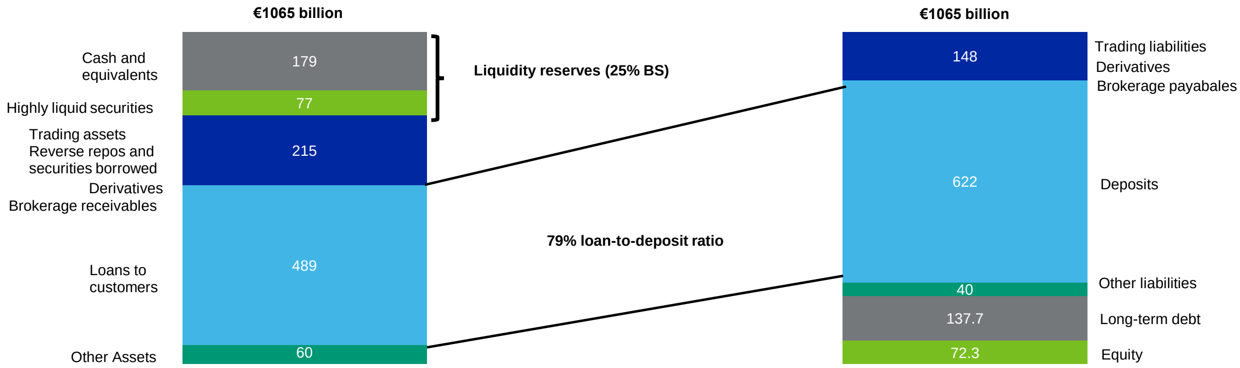
Exhibit 13
Deposits are also significantly more stable than in the past
Weighted outflow of deposits as a proportion of total deposits (in %, from LCR disclosures)



*BNP outflows exclude a proportion of short-term wholesale funding the bank immediately places in central bank cash as part of its 'sterilization' strategy.
Source: Company reports, Moody's Investors Service

DB's stock of loss-absorbing debt is likely to remain above the minimum stipulated under the EU's minimum requirement for own funds and eligible liabilities (MREL; Q1 2023 fully-loaded excess was €19 billion). However, DB will continue replacing some maturing junior senior unsecured debt with less costly preferred senior unsecured debt or issue less junior senior unsecured debt. Further, the group's total loss-absorbing capacity (available TLAC) amounting to €127 billion as of the end of Q1 2023 was well in excess of DB's increased €84 billion requirement[7]. Long-term debt (capital market) funds outstanding totaled €138 billion, equal to around 13% of net liabilities (Exhibit 14). In 2022, DB issued around €24 billion of debt, including €4.3 billion of structured notes that were not part of the original issuance plan of €15-20 billion, taking advantage of good market conditions. At the same time, €11 billion of ECB's TLTRO facility were prepaid. The bank expects lower funding requirements in 2023, with a guided range of €12-15 billion, mainly senior non-preferred and covered bond. As of end-March 2023, more than half of the funding plan (€8 billion) has been completed, with a €1.5 billion Tier 2 issuance replacing a Tier 2 instrument of the same size called in March. The bank also prepaid another €8 billion of TLTRO Q1 2023. This early execution of the funding plan is positive considering the market volatility experience by banks in recent weeks, in particular for deeply subordinated instruments.

Exhibit 14
DB's balance sheet remains highly liquid, a credit positive



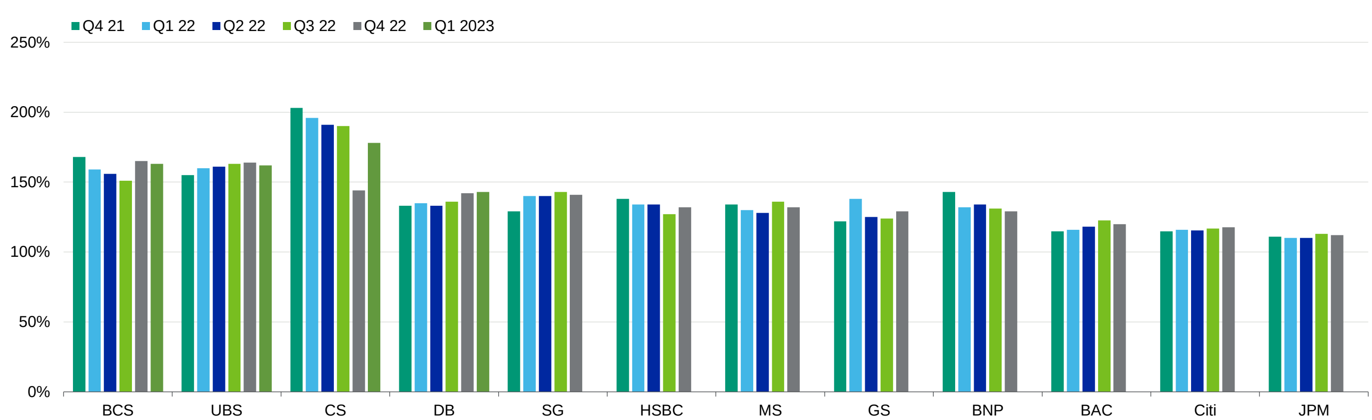
Trading and related assets along with similar liabilities, include debt and equity securities (excluding highly liquid securities); derivatives; repos; securities borrowed and lent; brokerage receivables and payables and; loans measured at fair value.
Source: DB's Fixed Income Investor Presentation Q4 2022, Moody's Investors Service

Liquidity remains a credit strength

Liquidity remains a comparative and credit-positive strength of DB and has significantly reduced the bank's refinancing risk. This is reflected in our a1 Liquid Resources score, in line with DB's initial score. The assigned score contains a one-notch downward adjustment to the initial score to reflect asset encumbrance on a sizeable portion of assets that are designated as liquid in our initial ratio and score. At the same time, we make an offsetting one-notch upward adjustment based on our consideration of the group's conservative management of liquidity across its various branches and subsidiaries, as well as its high stock of high-quality liquid assets which we expect to remain virtually unchanged from here.

The bank's reported liquidity reserves largely comprised central bank cash (70% of LCR's stock of High Quality Liquid Assets - HQLA) and other highly liquid securities (non-cash Level 1 assets represented 26% of HQLA at YE 2022), substantially mitigating the refinancing risks associated with its more confidence-sensitive wholesale market funding (€76 billion MREL-eligible debt outstanding as of the same date[8]). The bank's strong €241 billion liquidity reserve also continued to stand well above regulatory requirements as stipulated by the Liquidity Coverage Ratio (LCR), the latter standing at 143% as of the end March 2023. Some of DB's excess liquidity is likely to be consumed by planned business growth, reducing the liquidity buffer (and LCR, see Exhibit 15). We also expect DB to gradually repay its remaining €26 billion of the TLTRO in 2023 and 2024.

Exhibit 15
DB's LCR is well in-line with its peer group
GIBs' LCR, Q4 2021 - Q1 2023

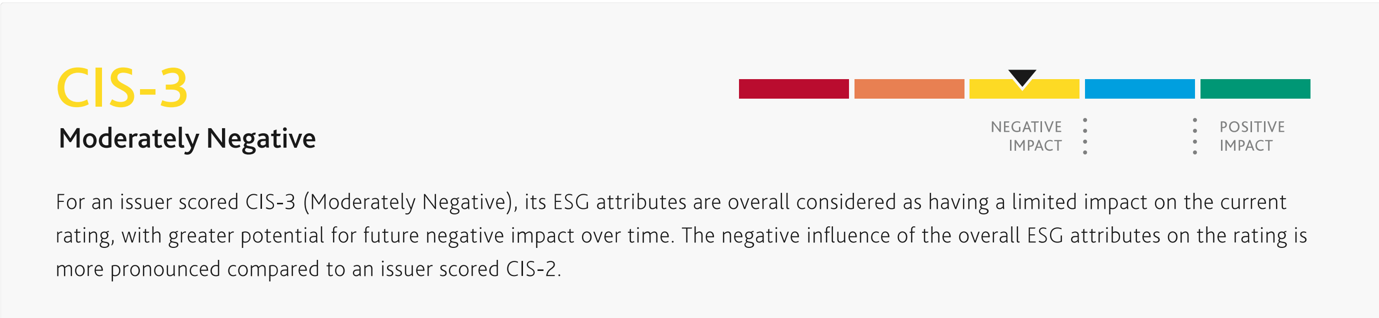


Source: Company reports, Moody's Investors Service

ESG considerations

Deutsche Bank AG's ESG Credit Impact Score is Moderately Negative CIS-3

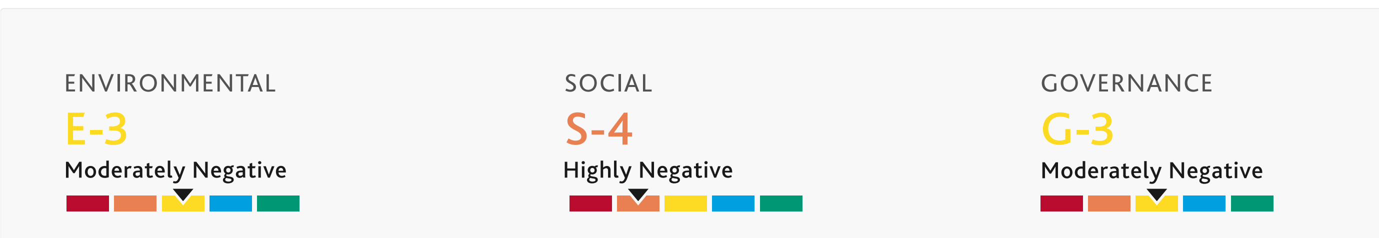
Exhibit 16
ESG Credit Impact Score



Source: Moody's Investors Service

DB's ESG Credit Impact Score is moderately negative (**CIS-3**), reflecting the limited credit impact of environmental and social risk factors on the bank's ratings to date. However, like its closest peers, DB's score reflects our industry view of the opacity, complexity and tail risks associated with running a global capital markets business, which are captured under our governance assessment. The bank's significantly improved track record in managing these risks and executing on its strategic overhaul are important mitigating factors, supported by the bank's improved financial fundamentals.

Exhibit 17
ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

DB faces moderate exposure to environmental risks mainly because of its portfolio exposure to carbon transition risk as a diversified, universal banking group, consistent with its global peers. DB is facing mounting business risks and stakeholder pressure to meet broader carbon transition goals. In response, the bank recently set clearly articulated targets for sustainable finance for its corporate and asset management businesses and is actively engaging in further developing its comprehensive risk management and climate risk reporting frameworks.

Social

DB faces high industry-wide social risks related to regulatory risk, litigation exposure, reputational risk and high compliance standards. These risks are largely mitigated by well-developed policies and procedures. However, the design of complex, opaque or speculative financial products for institutional clients increases the bank's exposure to the potential for reputational risk and litigation. High cybersecurity and personal data risks are increasingly mitigated by the bank's improved IT framework, which includes sharing information with regulators and government cybersecurity entities.

Governance

DB has improved its management track record since the announcement of its strategic overhaul in summer 2019. It has embedded more conservative, risk-focused and risk-aware financial policies, and has much stronger overall corporate governance practices.

However, the opacity and complexity of capital market activities, which account for around 40%-50% of group revenue, exposes the group to tail risks.

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

Loss Given Failure (LGF) analysis

DB is subject to the 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 tangible common equity of 3%, as well as asset losses of 8% of tangible banking assets in a failure scenario. We also assume a 25% runoff of junior wholesale deposits and a 5% runoff of preferred deposits. Moreover, we assign a 25% probability to junior deposits being preferred to senior unsecured debt. We apply a standard assumption for European banks that 26% of deposits are junior.

The results of our Advanced LGF analysis are as follows:

» For deposits and senior unsecured debt, our LGF analysis indicates an extremely low loss given failure, leading to three notches of rating uplift from the bank's baa2 Adjusted BCA.

» For junior senior unsecured debt, our LGF analysis indicates a low loss given failure, leading to one notch of rating uplift from the bank's baa2 Adjusted BCA.

» For subordinated debt and junior securities issued by DB, our LGF analysis indicates a high loss given failure, given the small volume of debt and limited protection from more subordinated instruments and residual equity, leading to a one-notch deduction from the bank's baa2Adjusted BCA. We also incorporate additional notching from the Adjusted BCA for junior subordinated and preference share instruments, reflecting the coupon suspension risk ahead of potential failure.

Government support considerations

We assume a moderate probability of government support for both deposits and senior unsecured debt of DB, which we consider a domestic systemically important financial institution, resulting in a one-notch additional rating uplift. For junior senior unsecured debt[9], subordinated debt and hybrid instruments, we believe the potential for government support is low, and these ratings, therefore, do not benefit from any government support uplift.

A1/P-1 Counterparty Risk Ratings (CRRs)

The bank's CRRs are positioned four notches above the baa3 Adjusted BCA, reflecting the extremely low loss-given-failure provided by subordinated instruments, primarily junior senior unsecured debt, to the more senior CRR liabilities and one additional notch of government support uplift assuming a 'Moderate' level of support, in-line with our support assumptions on deposits and senior unsecured debt.

A1(cr)/P-1(cr) Counterparty Risk (CR) Assessment

The bank's CR Assessment is positioned four notches above the baa3 Adjusted BCA, based on the buffer against default provided by more subordinated instruments, primarily junior senior unsecured debt, to the senior obligations represented by the CR Assessment and one additional notch of government support uplift assuming a 'Moderate' level of support. 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

Methodology

The principal methodology we use in rating Deutsche Bank AG is the Banks Methodology, published in July 2021.

About Moody's Bank Scorecard

Our bank 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 18

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	2.5%	a2	↔	baa2	Operational risk	Market risk	
Capital							
Tangible Common Equity / Risk Weighted Assets (Basel III - fully loaded)	14.6%	a1	↔	a3	Nominal leverage	Expected trend	
Profitability							
Net Income / Tangible Assets	0.2%	b1	↑	ba3	Return on assets	Expected trend	
Combined Solvency Score		a3		baa2			
Liquidity							
Funding Structure							
Market Funds / Tangible Banking Assets	24.7%	baa1	↔	a3	Term structure	Extent of market funding reliance	
Liquid Resources							
Liquid Banking Assets / Tangible Banking Assets	37.8%	a1	↔	a1	Stock of liquid assets	Expected trend	
Combined Liquidity Score		a3		a2			
Financial Profile				baa1			
Qualitative Adjustments				Adjustment			
Business Diversification				0			
Opacity and Complexity				-1			
Corporate Behavior				0			
Total Qualitative Adjustments				-1			
Sovereign or Affiliate constraint				Aaa			
BCA Scorecard-indicated Outcome - Range				baa1 - baa3			
Assigned BCA				baa2			
Affiliate Support notching				0			
Adjusted BCA				baa2			

BALANCE SHEET	IN-SCOPE (EUR MILLION)	% IN-SCOPE	AT-FAILURE (EUR MILLION)	% AT-FAILURE
Other liabilities	261,658	26.3%	326,255	32.7%
Deposits	607,546	61.0%	545,576	54.7%
Preferred deposits	449,584	45.1%	427,105	42.9%
Junior deposits	157,962	15.8%	118,472	11.9%
Senior unsecured bank debt	24,767	2.5%	23,439	2.4%
Junior senior unsecured bank debt	52,061	5.2%	50,762	5.1%
Dated subordinated bank debt	11,700	1.2%	11,700	1.2%
Preference shares (bank)	8,981	0.9%	8,981	0.9%
Equity	29,898	3.0%	29,898	3.0%
Total Tangible Banking Assets	996,611	100.0%	996,611	100.0%

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	24.4%	24.4%	24.4%	24.4%	3	3	3	3	0	a2
Counterparty Risk Assessment	24.4%	24.4%	24.4%	24.4%	3	3	3	3	0	a2 (cr)
Deposits	24.4%	10.2%	24.4%	12.5%	3	3	3	3	0	a2
Senior unsecured bank debt	24.4%	10.2%	12.5%	10.2%	3	2	3	3	0	a2
Junior senior unsecured bank debt	10.2%	5.1%	10.2%	5.1%	1	1	1	1	0	baa1
Dated subordinated bank debt	5.1%	3.9%	5.1%	3.9%	-1	-1	-1	-1	0	baa3
Non-cumulative bank preference shares	3.9%	3.0%	3.9%	3.0%	-1	-1	-1	-1	-2	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	a2	1	A1	A1
Counterparty Risk Assessment	3	0	a2 (cr)	1	A1(cr)	
Deposits	3	0	a2	1	A1	A1
Senior unsecured bank debt	3	0	a2	1	A1	A1
Junior senior unsecured bank debt	1	0	baa1	0	Baa1	Baa1
Dated subordinated bank debt	-1	0	baa3	0	Baa3	Baa3
Non-cumulative bank preference shares	-1	-2	ba2	0	Ba2 (hyb)	Ba2 (hyb)

[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 19

Category	Moody's Rating
DEUTSCHE BANK AG	
Outlook	Stable
Counterparty Risk Rating	A1/P-1
Bank Deposits	A1/P-1
Baseline Credit Assessment	baa2
Adjusted Baseline Credit Assessment	baa2
Counterparty Risk Assessment	A1(cr)/P-1(cr)
Issuer Rating	A1
Senior Unsecured	A1
Junior Senior Unsecured	Baa1
Junior Senior Unsecured MTN	(P)Baa1
Subordinate	Baa3
Pref. Stock Non-cumulative	Ba2 (hyb)
Commercial Paper -Dom Curr	P-1
Other Short Term -Dom Curr	(P)P-1
DEUTSCHE BANK TRUST COMPANY AMERICAS	
Outlook	Stable
Counterparty Risk Rating	A1/P-1
Bank Deposits	A1/P-1
Baseline Credit Assessment	baa1
Adjusted Baseline Credit Assessment	baa1
Counterparty Risk Assessment	A1(cr)/P-1(cr)
Issuer Rating	A1

Source: Moody's Investors Service

Endnotes

1 Assets under management shown in Asset Management segment. The Private Bank further holds €518 billion of assets under management as of the same date.

2 The SRF is being built up over a period of eight years (2016-23) and will reach at least 1% of the amount of covered deposits of credit institutions in all twenty-one Banking Union countries. As of July 2022, the SRF stands at approximately €66 billion.

3 67% with pro-rata annualized bank levies

4 Includes incremental charges reflecting changes in expected credit losses on purchased or original credit impaired (POCI) financial assets of €180 million.

5 Data source is the Deutsche Bundesbank's Statistical Data Warehouse – Financial Soundness Indicators Germany.

6 Q4 2021 leverage ratio restated without the effect of the temporary exclusion of central banks exposures from the ratio.

7 DB's TLAC requirement is equivalent to 6.75% of its leverage exposures as of the end of Q4 2022.

8 This includes senior preferred and senior non-preferred issuances, as well as AT1 and Tier 2 instruments.

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

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INVESTORS SERVICE