

CREDIT OPINION

13 November 2024

Update



RATINGS

Deutsche Bank AG

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

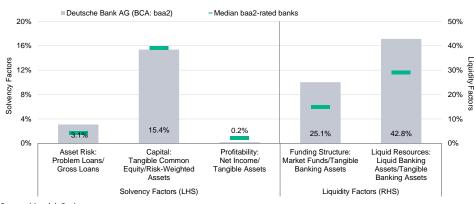
Update to credit analysis

Summary

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 reflects the bank's continued progress towards meeting its medium-term targets, set in 2022 and revised up in 2023, in particular by being able to sustain improving operating profitability through solid revenue growth and cost efficiency efforts. This trajectory, which has been supported by the rise in interest rates since 2022, should allow the bank to safeguard its net profits against the negative effects of the current subdued economic growth and higher rate environment on cost of risk, which we expect will remain above through-the-cycle average over the next eighteen months. The baa2 BCA also reflects the bank's stabilized capital ratios, albeit with relatively high leverage, the 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.

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



Source: Moody's Ratings

Credit strengths

- » The bank's continued solid capital and liquidity metrics
- » Diversified loan book and strong market position in Germany mitigate the prospects of asset quality deterioration and resulting earnings strain
- » Moderate reliance on confidence-sensitive wholesale market funding and stable deposit base

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
- » Litigation costs, albeit related to legacy disputes, remain high

Outlook

- » The stable outlook on the bank's long-term deposit, issuer 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 an 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 subdued economic growth and the negative impact that higher interest rates environment has on certain assets, such as commercial real estate.

Factors that could lead to an upgrade

- » DB's long-term ratings could be upgraded if the bank improved its capital metrics and its leverage ratio to 5% or above.
- » The ratings could also be upgraded if DB makes 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

- » DB's long-term ratings could be downgraded 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.
- » Although unlikely at present, a downgrade of long-term ratings 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 Loss Given Failure (LGF) analysis.

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

Deutsche Bank AG (Consolidated Financials) [1]

	06-24 ²	12-23 ²	12-22 ²	12-21 ²	12-20 ²	CAGR/Avg. ³
Total Assets (EUR Billion)	1,109.1	1,053.6	1,028.6	1,014.3	968.6	3.9 ⁴
Total Assets (USD Billion)	1,188.6	1,163.9	1,097.8	1,149.4	1,185.2	0.14
Tangible Common Equity (EUR Billion)	54.8	55.8	54.5	51.4	47.8	4.04
Tangible Common Equity (USD Billion)	58.7	61.6	58.2	58.2	58.4	0.14
Problem Loans / Gross Loans (%)	3.1	2.8	2.4	2.5	2.7	2.75
Tangible Common Equity / Risk Weighted Assets (%)	15.4	15.9	15.1	14.6	14.5	15.1 ⁶
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	24.7	22.0	19.7	21.2	22.5	22.0 ⁵
Net Interest Margin (%)	1.2	1.4	1.4	1.1	1.2	1.2 ⁵
PPI / Average RWA (%)	1.5	2.0	1.6	1.1	0.9	1.4 ⁶
Net Income / Tangible Assets (%)	0.1	0.5	0.2	0.2	0.1	0.25
Cost / Income Ratio (%)	81.6	74.9	77.8	85.2	88.1	81.5 ⁵
Market Funds / Tangible Banking Assets (%)	23.7	25.1	24.7	26.5	26.5	25.3 ⁵
Liquid Banking Assets / Tangible Banking Assets (%)	32.3	42.8	37.8	41.1	42.2	39.2 ⁵
Gross Loans / Due to Customers (%)	75.2	77.6	79.0	79.3	76.5	77.5 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 Ratings 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 September 2024, the bank reported total assets of €1.4 trillion and €963 billion of assets under management¹.

DB offers a wide range of investment, financial and related products and services to its clientele, served by 90,236 employees as of end-September 2024 in about 60 countries globally. The bank focuses on four main businesses: (1) The Corporate Bank (CB) offers cash management, trade finance and lending, as well as foreign exchange in support of corporates' needs for working capital and liquidity management, CB also serves financial institutions, SMEs and entrepreneurs; (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 <u>Germany</u> (Aaa stable) the <u>US</u> (Aaa negative) or the <u>UK</u> (Aa3 stable), and also incorporates exposures to other EU countries, such as <u>Spain</u> (Baa1 positive) and <u>Italy</u> (Baa3 stable).

As the largest private-sector bank in Germany, DB benefits from an environment with very high economic, institutional and government financial strength and a 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 low margins despite higher 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 by a CAGR of 5.5-6.5% between 2021 and 2025² 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 more normalised level in 2025 (25bps of gross loans in 2022, 31 bps in 2023 and slightly below 40 bps expected for 2024), 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 as inflationary pressures gradually recede in 2024 and 2025.

DB's 5.5-6.5% updated revenue CAGR target between 2021-2025 is expected to be generated through further volume growth in lower risk, stable businesses; additional strategic initiatives; and the continued positive effect of higher interest rates on net interest income, albeit declining in 2024 from 2023's peak, supported by a hedging strategy to lock-in part of the margin increase. DB's 2025 revenue guidance builds on enhancing DB's strengths in its Corporate Bank (cash management, trust and agency services, lending), its Private Bank (retail and wealth management) and capital-light investment banking services such as Origination & Advisory (O&A).

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, past interest-rate hikes, combined with a hedging strategy mitigating the effects of the most recent interest rate cuts, have improved the prospects for higher returns within the bank's core lending businesses conducted in its PB and CB, as well as the O&A segment, 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. We expect their contribution to overall revenue growth could moderate following strong outperformance of the latter against earlier projections in prior years and the challenging context of slowing economies and market uncertainty for the origination and advisory activities. The strong 32% IB contribution to group revenues in 2023 might not be sustained, and is already showing a declining trend from the 37% contribution in 2022. 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, even in a less favourable market environment.

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

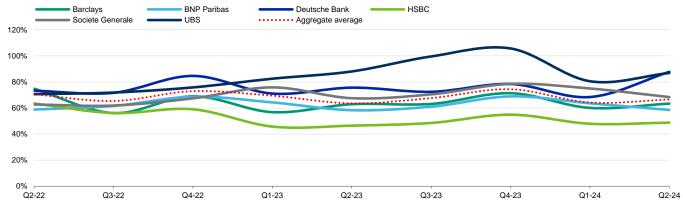
We assign a ba2 Profitability score to DB, taking account of DB trajectory towards meeting its medium-term targets, in particular by being able to sustain adequate, yet still relatively modest, profitability. The assigned score further reflects our anticipation of a net income/tangible asset ratio (our measure of return on assets) of around 0.3% over the next 12-18 months, considering the uncertainties regarding the sustainability of the IB's overall performance, the challenges posed by the operating environment to the growth ambition in the PB, CB and O&A segments, the expected normalization of deposit costs and reduction in interest margins from

2023 peak (DB's NII³ in the first nine months of 2024 was broadly stable with respect to the same period the prior year, and is expected to show a stable quarterly run rate in 2025, thanks to latest projections of deposit growth, and the dynamic hedging strategy put in place which reduces the margin sensitivity to interest rate declines), as well as higher risk charges than in previous years. Furthermore, DB has booked in Q2 2024 a €1.3 billion provision for all claims and related cumulative interests on its 2010 Postbank acquisition, which had roughly zeroed its Q2 profits⁴. With a full provisioning of this litigation risk, Deutsche Bank will not be hurt anymore by any negative court decisions related to the Postbank takeover case, but it might benefit in the quarters to come from partial releases. In Q3, the bank has released €440 million Postbank-related provisions achieving settlements on around 60% of the claims. As of end-September 2024, DB still has on balance around €550 million provisions on the remaining outstanding claims. 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 3

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

Cost-to-income ratio (Moody's adjusted), Q2 2021 - Q2 2024



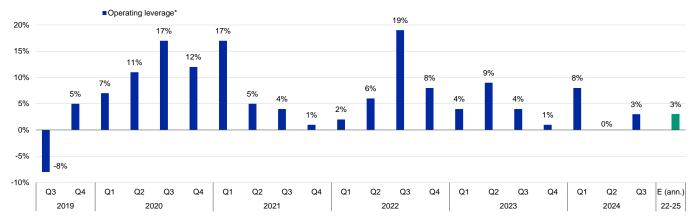
Data for UBS fully include Credit Suisse from Q3 2023 (one month only in Q2 2023). Source: Company reports, Moody's Ratings

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 4

DB has regained operating leverage

Revenue over cost growth, year-over-year, Q3 2019 - Q3 2024 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 Ratings

In 2023, DB's cost base was impacted by inflationary pressure on wages, business growth and investments in controls, technology and processes, which led to a 3% growth in adjusted costs. In 2023, the bank reported a cost-to-income ratio of 75%, broadly stable from 2022, which was lowered to 69% in 9M 2024 (4 percentage point decrease from the 73% recorded in the same period the prior year), also thanks to a significant decrease in contribution to the Single Resolution Fund. DB confirmed its cost-to-income target of below 62.5% by 2025 which would allow for a continuation of operating leverage to build (Exhibit 5). We expect the bank's operating leverage should partly benefit from 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 partially 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. As of end-September 2024, the bank has already completed a material portion of those measures.

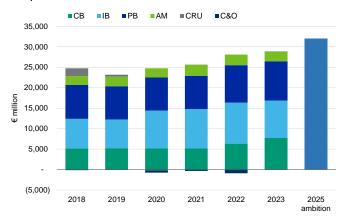
In addition, DB's 2025 costs should be freed of material business transformation-related adjustments.

Nevertheless, achieving the new target of maintaining operating expenses flat between 2022 and 2025 remains an ambitious target, even as inflationary pressures on wages abate, as the bank needs to keep investing in technology and business growth.

Exhibit 5

DB's revenue plan looks more ambitious...

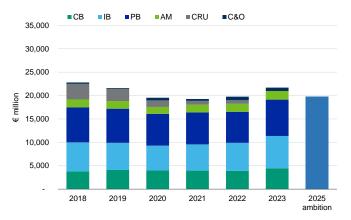
Group revenue, € million



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 Ratings

Exhibit 6 ...and the bank's cost base is expected to return to 2022 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. Source: Company reports, Moody's Ratings

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 revenues since 2021 support DB's trajectory to 2025 target

DB reported pre-tax income of €5.7 billion in 2023, up 2% from 2022, and 68% compared with 2021. The year-on-year growth in 2023 was supported by 6% of revenue growth, partially offset by a 6% increase in costs. In 2023 revenue growth was mainly supported by the Corporate bank division, benefiting from rising interest rates leading to a 22% revenue growth and 64% increase in profit before tax at the division. This was accompanied by a 5% increase in Private Banking revenues (10% when adjusted by DB), although more than offset by higher costs related to investments in Postbank service remediation and inflationary pressures, and resulting in a 41% decrease in profit before taxes. In contrast the Investment Bank and Asset Management revenues both decreased by 9% due to lower Fixed Income, Currency (FIC), Sales & trading income and lower management fees respectively.

In the first nine months of 2024, DB reported a total adjusted pre-tax income of €5.6 billion⁶, up 13% from the same period the prior year. Group revenues were up 3% to €22.9 billion, underpinned by the recovery of fees and commissions, which grew 9% year-on-year, more than offsetting declining net interest income rates, which decreased by 9%, mainly for accounting asymmetries^Z. This trend was particularly visible in IB (revenue up 12%) and AM (revenue up 8%), which more than offset the weaker results recorded in divisions more dependant on NII performance, namely CB and PB, whose revenues were down 3% and 2% respectively. Adjusted costs decreased by 1% to €15.1 billion, which brings the bank in line with the €5 billion run rate quarterly guidance, resulting in around 4 percentage point positive operating leverage for the nine months, mainly due to savings from streamlining IT platform and lower cost rising from professional services, which offset higher compensation and benefits. The bank continues to deploy its plan to achieve incremental €2.5 billion operational efficiencies by 2025, and to invest in its business growth, technologies and controls.

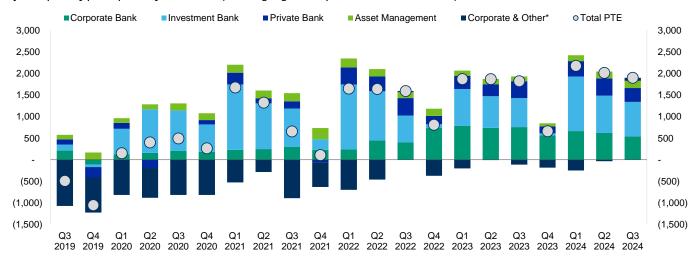
DB's cost-to-income ratio was stable year-on-year at 73%, but went down to 69% when adjusting for Postbank litigation provisions. The bank expects to book around €1.8 billion of loan loss charges in 2024 (around 38 basis points (bps) of gross loans as of September 2024), from €1.5 billion or 31 bps in 2023 and €1.2 billion, or 25 bps in 2022, reflecting more challenging macro economic environment, including some large corporate defaults, and the impact of higher interest rates mainly on the Commercial Real Estate

(CRE) portfolio in 2023 and 2024. At group level, DB reported for 9M 2024 a non-adjusted net income of €3.2 billion, down 8% year-on-year mainly due to postbank litigation provisions and higher provisions.

Exhibit 7

DB's profitability benefits from strong revenue performance by IB in 9M23

Adjusted quarterly pretax profits by business line (excluding litigation, impairments, DVA and one-offs), € million



Restatement for 2023 numbers are in line with the new bank's divisional reporting.

Q2 and Q3 2024 numbers adjustments include Postbank litigation provisions under Corporate & Other.

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.

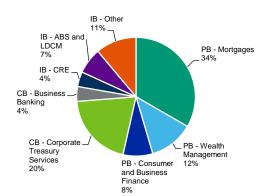
DB's €477 billion loan book remains well diversified by region, asset class and segment (Exhibits 9 and 10). The bank holds high collateral gagainst performing exposures and €5.5 billion of loan loss reserves in addition to various hedges that will help significantly reduce the bank's overall exposure 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 below 50% for 65% of the bookg and very low delinquency ratios, 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 25% 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.

^{*}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 Ratings

Exhibit 8

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

Gross loans by segment and loan type, as of Q3 2024*



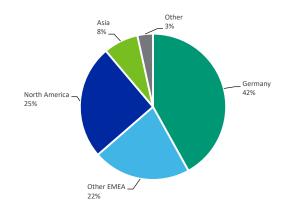
^{*}Moody's grouping. PB = Private Bank; CB = Corporate Bank; IB = Investment Bank; ABS = Asset-backed securities; LDCM = Leveraged debt capital markets.

Sources: Company reports, Moody's Ratings estimates

Exhibit 9

Focus on German home market will help contain loan losses

Gross loans by region, as of YE 2023



Sources: Company reports and presentations, Moody's Ratings

According to our estimates, DB's concentrations in utilities, chemicals, manufacturing, automotive and transportation totaled approximately €48 billion, or about 10% of the bank's loan book, as of YE 2023. These are the sectors likely to be hit hardest by the macroeconomic slowdown, as well as those most vulnerable to commodity price hikes whenever they occur.

However, in Germany, the government extended in 2022 and 2023 support measures to mitigate the economic impact on households and businesses of high energy prices. Together with low levels of corporate and household debt in Germany of 46% and 51% of GDP, respectively, as of March 2023¹⁰, the bank's corporate and retail customers should be able to contend with continued inflationary pressures or 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 €37 billion as of the end of September 2024 (broadly stable from YE 2023), represents large absolute risk concentrations, they are mitigated by diversification across geographies and assets, tight lending criteria, low LTVs (66% in the investment bank and 55% in the corporate bank), exposure to strong sponsors, good underlying collateral mostly in prime locations and hedges. Around 25% of the CRE exposure was classified as stage 2 loans as of end-September 2024 (up from 20% at year-end 2023 and 14% at year-end 2022) and 9% as stage 3 (impaired, up from 4% at year-end 2022). As of September 2024, the group booked €683 million provisions on of the €13 billion US CRE loans that they modified or restructured in the past 27 months. The current declining trend in interest rate, is somewhat easing the refinancing risks in this portfolio, although they should continue to result in further provisions in upcoming quarters, albeit gradually slowing down.

The leveraged lending portfolio of around €4 billion as of end-September 2024, representing 1% of the loan book, is also well diversified across sectors, with limited borrower concentrations and a large majority 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 since 2022 as the decade-long benign credit cycle began to turn. During 2023, DB's loan loss charges totaled €1.5 billion (31 bps), up significantly from €1.2 billion (25 bps) in 2022. The increase was driven by significantly higher Stage 3 provisions (€1,538 million versus €1,022 million in 2022), reflecting weakening macroeconomic conditions. In 9M 2024, risk provisioning continued to increase to 39 bps of gross loans (€1.4 billion), due to US CRE risks and some larger corporate defaults.

DB expects its currently high level of provision to gradually fade from Q4 2024 and to reduce towards more normalized levels of provisions in 2025. The first nine months of 2024 were characterized by unexpected headwinds, such as the longer-than-expected transitional effects from the integration of Postbank, as well as defaults in their large corporate portfolio and high CRE-related

provisions, which lead the bank's risk charges above their 2024 target. The bank now estimates to conclude the year with €1.8 billion of provisions, which equals to around 38 bps of gross loans, against the target disclosed at the beginning of the year of 25-30 bps. The bank expects the headwinds to decrease in Q4 and normalize in 2025, whose target so far remains unchanged. We believe these assumptions are realistic in light of the bank's diversified and highly collateralised Germany-focused loan book, and €5.5 allowances for potential loan losses which would help stave off a sudden deterioration in DB's asset quality and a sharp and unexpected rise in loan loss charges.

Exhibit 10

Loan loss charges (LLC) are likely to normalise in 2025 (€ million)



Source: Company reports, Moody's Ratings

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 still account for around one-third of DB's total revenue in 2024 (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. The diversity of businesses across many operating environments, legislations and regulatory systems can also add complexity to the control framework and increase risks of litigations.

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 of 13.8% as of end-September 2024, up 30 bps sequentially, mainly because of internal capital generation and the adoption of the temporary favorable treatment of unrealised gains and losses on sovereign and sub-sovereign bonds measured at fair value through other comprehensive income¹¹, which accounted for a 22bps increase. This was accompanied by negative model impacts and higher market risk and credit risk RWAs. DB's CET1 ratio is 261 bps above minimum regulatory requirement of 11.2% in 2024, 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 has already achieved as of end-September 2024, €22 billion of its revised €25-30 billion RWA reduction target. Since DB is close to reaching the target already in 2024, the bank plans to pursue additional opportunities to go beyond the target in 2025. This ambition will continue being achieved mainly from lower-yielding portfolios, with limited revenue impact. In addition, the bank reduced its expected impact on RWA of the finalisation of Basel III requirements by €10-15 billion, which will provide an improved capacity (€3 billion additional capital compared to initial plan from capital efficiency measures and lower Basel III impact) to grow the business, distribute earnings and shield the operations against unexpected risk deterioration.

The bank announced at the beginning of the 2022-2025 strategic plan that the intended total payout ratio will get to 50% in 2025 and the management board authorized in 2023 share buybacks of up to 10% of the share capital before the end of April 2028. In respect of the 2021-2025 reference period, DB is confident they will increase total capital distributions well above the €8 billion initially announced During the 2021-2024 period, 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. The bank resumed its share buybacks completing in December 2023 with a first €450 million program, in July 2024 a €675 million program, and has now applied to the ECB for a further program to be carried out in 2025.

DB reported a pro-forma Tier 1 leverage ratio of 4.60% at the end of September 2024, stable quarter on quarter, which provide a €10 billion of tier capital buffer above the requirement. Despite a 2% sequential increase in leverage exposure to €1,284 billion, the bank's tier 1 capital increased by 5% to €59.1 billion, driven by the increase in CET1 capital. 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.

Median CET1 capital ratio (13.8%) CET1 capital ratio Tier 1 Leverage ratio • • • • • • Median Tier 1 leverage ratio (5.5%) 18% 15.5% 15.5% 15.0% 14.9% 14.9% 15% 13.8% 13.8% 13.5% 12.7% 12.2% 12% 9% 6.9% 6.0% 5.9% 5.9% 5 7% 5.5% 5.5% 5.8% 6% 4.9% 4.2% 4.4% 4.2% 3% 0% JPMorgan HSBC UBS Barclays **BNP** Paribas RBC Wells Fargo Goldman Morgan Deutsche Bank of Societe

Exhibit 11

Common Equity Tier 1 (CET1) ratio and Tier 1 Leverage Ratio for Global Investment Banks, as of end-September 2024

Notes: 1) Q3 2024 for Bank of America, Citi, Goldman Sachs, JPMorgan, Morgan Stanley, RBC, Wells Fargo, Deutsche Bank and Barclays; Q2 2024 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 Ratings

This capital distribution policy helps balance shareholders' and bondholders' interests and allows for sufficient flexibility by limiting the anticipated total dividends to half of the net income, a credit positive considering the uncertain market environment. In the challenging macroeconomic context, we expect loan growth to remain subdued in 2024 and in the beginning of 2025, but risk-weighted assets, which have been actively managed down and optimized, could be adversely impacted by negative risk migration, elevated market and counterparty risks and regulatory model reviews, which could create some volatility around the bank's CET1 ratio target of around 13% or 200bps above MDA.

Strong liquidity position and sound funding profile

We assign an a3 Funding Structure score to DB, two notches 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 generated from its sizable domestic corporate and retail banking franchise. Deposits constitute 60% of DB's net liabilities (including equity) and are raised mostly in Germany (around 69% as of September 2024). About 50% of total deposits were sourced from retail and wealth management clients and 31% of total deposits sourced from SMEs and corporates' operational or term deposits, which counterbalances the wholesale funding needs of the bank's remaining capital markets activities. As

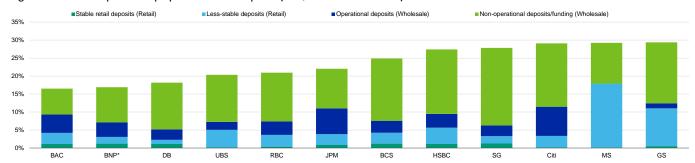
a result, DB displays one of the strongest deposit stability among global investment bank peers, based on a limited proportion of non-operational overnight deposits (16% as of Q3 2024).

Following a 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 of 2023 (to €592 billion at end of March 2023 from €621 billion at the end of December 2022) reflected a normalization from very high levels posted in 2022. Deposits have bounced back since then reaching again 2022 level already in December 2023, and beyond that in 2024, with the deposit base reaching €650 billion at the end of September 2024.

Exhibit 12

Deposits are also significantly more stable than in the past

Weighted outflow of deposits as a proportion of total deposits (in %, from LCR disclosures)

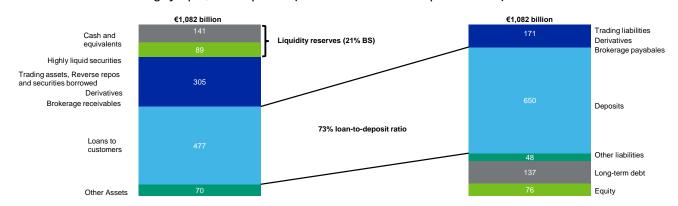


*BNP outflows exclude a proportion of short-term wholesale funding the bank immediately places in central bank cash as part of its 'sterilization' strategy. Source: Company reports, Moody's Ratings

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; Q3 2024 excess was €21 billion). However, DB will continue replacing partially some maturing junior senior unsecured debt with less costly preferred senior unsecured debt. Further, the group's total loss-absorbing capacity (available TLAC) amounting to €117 billion as of the end of Q3 2024 was well in excess of DB's €87 billion requirement¹³. Long-term debt (capital market) funds outstanding totaled €137 billion, equal to around 13% of net liabilities (Exhibit 14). As of end-September 2024 DB had issued €16 billion, already in line with the 2024 funding plan range of €13-€18 billion, including the issuance of a €1.5 billion AT1 bond completed in June. The bank only needs to issue €1 billion of covered bonds in Q4 to complete its yearly funding plan.

Exhibit 13

DB's balance sheet remains highly liquid, a credit positive (Balance sheet as of end-September 2024)



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 Q3 2024, Moody's Ratings

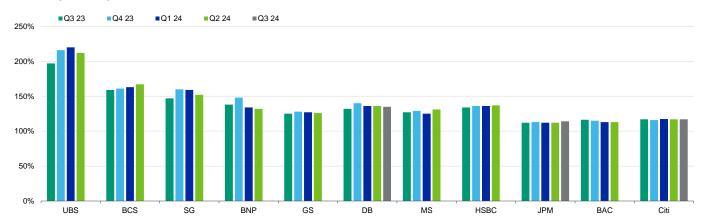
Liquidity remains a credit strength

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, one notch below DB's initial score. The assigned score contains a two-notches 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 (52% of LCR's stock of High Quality Liquid Assets - HQLA) and other highly liquid securities (non-cash Level 1 assets represented 43% of HQLA as of Q3 2024), substantially mitigating the refinancing risks associated with its more confidence-sensitive wholesale market funding (€82 billion MREL-eligible debt outstanding as of end-September 2024¹⁴). The bank's Liquidity Coverage Ratio (LCR) stood at 135% as of end-September 2024. Some of DB's excess liquidity is likely to be consumed by planned business growth, reducing the liquidity buffer (and LCR, see Exhibit 15). In Q1 2024, the bank has repaid the remaining €15 billion of the TLTRO tranches, which explains the relative drop in LCR in Q1 2024. The ratio remained fairly stable since then.

Exhibit 14

DB's LCR is well in-line with its peer group
GIBs' LCR, Q3 2023 - Q3 2024



Q1 2023 LCR for UBS does not include Credit Suisse. Source: Company reports, Moody's Ratings

ESG considerations

Deutsche Bank AG's ESG credit impact score is CIS-3

Exhibit 15
ESG credit impact score



Source: Moody's Ratings

DB's **CIS-3** indicates no impact of ESG considerations on the rating to date with potential greater negative impact over time. 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, even if some legacy litigations have recently resulted in material provision charges.

Exhibit 16
ESG issuer profile scores



Source: Moody's Ratings

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 30% of group revenue, exposes the group to tail risks. If litigation, regulatory and restructuring costs have materially declined in the past decade, some material additional provisions booked in 2024 indicate that impacts from legacy litigations are not over yet.

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 <u>here</u> 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. Our analysis assumes our standard assumptions under our Advanced LGF.

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 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.

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Methodology and scorecard

Methodology

The principal methodology we use in rating Deutsche Bank AG is the Banks Methodology, published in March 2024.

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 17

Rating Factors

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	3.1%	a3	\leftrightarrow	baa2	Expected trend	Market risk
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel III - fully loaded)	15.4%	aa3	\leftrightarrow	a3	Nominal leverage	Expected trend
Profitability						
Net Income / Tangible Assets	0.1%	Ь1	\uparrow	ba2	Return on assets	Expected trend
Combined Solvency Score		a3		baa2		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	25.1%	baa2	1	a3	Deposit quality	Extent of market funding reliance
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	42.8%	aa3	\leftrightarrow	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	
Out It Little		25.00/		44.40/	
Other liabilities	366,958	35.9%	420,075	41.1%	
Deposits	520,750	51.0%	467,633	45.8%	
Preferred deposits	385,355	37.7%	366,087	35.9%	
Junior deposits	135,395	13.3%	101,546	9.9%	
Senior unsecured bank debt	29,393	2.9%	29,393	2.9%	
Junior senior unsecured bank debt	52,889	5.2%	52,889	5.2%	
Dated subordinated bank debt	11,500	1.1%	11,500	1.1%	
Preference shares (bank)	8,871	0.9%	8,871	0.9%	
Equity	30,630	3.0%	30,630	3.0%	
Total Tangible Banking Assets	1,020,991	100.0%	1,020,991	100.0%	

Debt Class	De Jure w	aterfall	De Facto v	waterfall	Not	Notching		Notching		Notching		Assigned	Additiona	l Preliminary
	Instrument volume + o		Instrument on volume + o		De Jure	De Facto	Notching Guidance		Notching	Rating Assessment				
	subordination	1	subordination	n			vs. Adjusted BCA							
Counterparty Risk Rating	23.0%	23.0%	23.0%	23.0%	3	3	3	3	0	a2				
Counterparty Risk Assessment	23.0%	23.0%	23.0%	23.0%	3	3	3	3	0	a2 (cr)				
Deposits	23.0%	10.2%	23.0%	13.1%	3	3	3	3	0	a2				
Senior unsecured bank debt	23.0%	10.2%	13.1%	10.2%	3	2	3	3	0	a2				
Junior senior unsecured bank debt	10.2%	5.0%	10.2%	5.0%	1	1	1	1	0	baa1				
Dated subordinated bank debt	5.0%	3.9%	5.0%	3.9%	-1	-1	-1	-1	0	baa3				
Non-cumulative bank preference share:	s 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)
Non-cumulative bank preference shares		-2	Daz		Daz (Hyb)	Daz (i

^[1] Where dashes are shown for a particular factor (or sub-factor), the score is based on non-public information.

Source: Moody's Ratings

Ratings

Exhibit 18

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
EUTSCHE 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
ource: Moody's Ratings	

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Endnotes

1 Assets under management shown in Asset Management segment. The Private Bank further holds €625 billion of assets under management as of the same date.

- 2 Up from the initial target set at 3.5-4.5% for the period
- 3 Net interest income in key banking book segments and other funding as disclosed by the bank.
- 4 Deutsche Bank's €1.3 billion provision for Postbank litigation will reduce Q2 profit, 29 April 2024
- 5 adjusted for Postbank litigation-related impacts
- 6 excluding €900 million impact from postbank-related litigation
- 7 NII in key banking book segments and other funding, as disclosed by the bank, grew by 1% year-on-year.
- 8 €260 billion as of December 2023, last available.
- 9 Data as of December 2023, last available.
- 10 Data source is the Banque de France report on Indebtedness levels of non-financial entities international comparisons Q1 2024.
- 11 as per Article 468 CRR3.
- 12 including dividends paid in 2026 in respect of 2025
- 13 DB's TLAC requirement is equivalent to 6.75% of its leverage exposures as of the end of Q3 2024.
- 14 This includes senior preferred and senior non-preferred issuances, as well as AT1 and Tier 2 instruments.
- 15 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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REPORT NUMBER

1427078