6 June 2024

Deutsche Lufthansa AG Federal Republic of Germany, Airlines

BBB-

Key metrics

| | Scope estimates | | | |
|--|-----------------|------|-------|-------|
| Scope credit ratios | 2022 | 2023 | 2024E | 2025E |
| Scope-adjusted EBITDA/interest cover | 8.3x | >10x | >10x | >10x |
| Scope-adjusted debt/EBITDA | 2.1x | 1.5x | 2.0x | 1.3x |
| Scope-adjusted funds from operations/debt | 38% | 60% | 42% | 65% |
| Scope-adjusted free operating cash flow/debt | 32% | 23% | -11% | 7% |

Rating rationale

Lufthansa's business risk profile continues to be supported by the group's well-diversified portfolio and the individual business segments' strengths. The robust market positions of Lufthansa Cargo and Lufthansa Technik are key factors in our assessment of Lufthansa's strong market share and diversification. The group is making material moves towards improving profitability, which is the weakest factor in our assessment. Reducing unit cost is a challenge given the higher cost inflation, especially in terms of personnel.

We see some improvements in the financial risk profile as leverage has been steadily getting better over the past two years. Despite a challenging market environment, we expect Lufthansa to maintain its good credit metrics. The group will work on controlling rising costs and deleveraging in the medium term. At the same time, a significant level of cash will be maintained on the balance sheet each year as a security against any event risk that may interrupt operations and cash flow generation.

Outlook and rating-change drivers

The Outlook is Positive and incorporates our expectation of an improving financial risk profile, exemplified by Scope-adjusted debt/EBITDA moving below 2.0x.

A rating upgrade could be considered if our expectations materialise and Lufthansa's leverage (Scope-adjusted debt/EBITDA) solidifies at a level below 2.0x. This could be the consequence of successful efforts to lift profitability despite the increasing costs that were incurred in 2024.

We could revise the Outlook back to Stable if Scope-adjusted debt/EBITDA remains at or above 2.0x in 2025. This could be triggered by an inability to control increasing costs, or a sudden and unexpected negative change in discretionary travel (business and leisure).

Rating history

| Date | Rating action/monitoring review | Issuer rating & Outlook |
|--------------|---------------------------------|-------------------------|
| 23 May 2024 | Affirmation | BBB-/Positive |
| 24 May 2023 | Outlook change | BBB-/Positive |
| 16 Sep 2022 | Affirmation | BBB-/Stable |
| 11 July 2022 | Outlook change | BBB-/Stable |
| 8 July 2021 | Affirmation | BBB-/Negative |

Ratings & Outlook

| Issuer | BBB-/Positive |
|------------------------|----------------------|
| Short-term debt | S-2 |
| Senior unsecured debt | BBB- |
| Subordinated hybrid de | bt BB |

Analyst

SCOPE

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Related Methodology and Related Research

General Corporate Rating Methodology, October 2023

ESG considerations for the credit ratings of airlines, August 2022

European airlines: fuel prices, rising staff costs threaten profit margins despite traffic rebound, July 2022

Credit Talk: Europe's airline sector faces tough financing, operating conditions, May 2022

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| Positive rating drivers | Negative rating drivers |
|--|--|
| Globally diversified operations with strong market positions mitigating cyclicality risks in passenger and cargo traffic Scale of operations, including diversified worldwide route network and geographical reach, with strong positions at hubs in Frankfurt, Munich, Zurich, Brussels and Vienna Broad fleet of aircraft Co-founder of global aviation alliance Star Alliance, supporting increased flight frequencies Operational rebound and recovery following restructuring | Exposure to cyclical changes in discretionary travel (business and leisure) and event risks such as natural disasters, contagious diseases and labour strikes, which negatively affect passenger volumes Multi-hub strategy with low flexibility to adjust capacity without affecting the whole system Fierce competition, including yield pressure from low-cost and network airlines Relatively weak profitability due to operational costs Macroeconomic challenges impacting costs |
| Positive rating-change drivers | Negative rating-change drivers |
| Successful efforts to lift profitability despite the increasing costs that were incurred in 2024 | Inability to control increasing costs or a sudden and unexpected negative change in discretionary travel |
| Coope adjusted debt/EDITDA sustained below 2 0x | Seens adjusted debt/EDITDA remaining at an above 2.0v |

- Scope-adjusted debt/EBITDA sustained below 2.0x
- Scope-adjusted debt/EBITDA remaining at or above 2.0x

Corporate profile

Deutsche Lufthansa AG (Lufthansa or Lufthansa Group) is a global aviation group organised into the following business segments: Passengers Airlines (Lufthansa German Airlines, Swiss, Brussels Airlines, Austrian Airlines Eurowings as well as Air Dolomiti, Lufthansa City Airlines and Discover Airlines), and Aviation Services. Aviation Services comprises the segments Logistics (Lufthansa Cargo), maintenance, repair and overhaul (MRO), and Additional Businesses and Group Functions. The latter also includes Lufthansa AirPlus (which will be disposed of this summer), Lufthansa Aviation Training, and the IT companies. All segments occupy a leading position in their respective markets. Deutsche Lufthansa AG, commonly shortened to Lufthansa, is the flag carrier of Germany.



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Financial overview

| | | | | Scope estimates | | |
|--|----------|--------|--------|-----------------|--------|--------|
| Scope credit ratios | 2021 | 2022 | 2023 | 2024E | 2025E | 2026E |
| Scope-adjusted EBITDA/interest cover | Negative | 8.3x | >10x | >10x | >10x | >10x |
| Scope-adjusted debt/EBITDA | Negative | 2.1x | 1.5x | 2.0x | 1.3x | 1.0x |
| Scope-adjusted funds from operations/debt | -4% | 38% | 60% | 42% | 65% | 81% |
| Scope-adjusted free operating cash flow/debt | -7% | 32% | 23% | -11% | 7% | 15% |
| Scope-adjusted EBITDA in EUR m | | | | | | |
| EBITDA | 33 | 3,710 | 4,698 | 3,930 | 5,606 | 6,269 |
| add: dividends from associates | 27 | 70 | 107 | 30 | 30 | 30 |
| Changes in provisions | -210 | -351 | -360 | 0 | 0 | 0 |
| Scope-adjusted EBITDA | -150 | 3,429 | 4,445 | 3,960 | 5,636 | 6,299 |
| Funds from operations in EUR m | | | | | | |
| Scope-adjusted EBITDA | -150 | 3,429 | 4,445 | 3,960 | 5,636 | 6,299 |
| less: (net) cash interest paid | -275 | -342 | -343 | -333 | -270 | -241 |
| less: cash tax paid per cash flow statement | -101 | -288 | -92 | -294 | -654 | -752 |
| less: pension interest | -78 | -83 | -77 | -50 | -50 | -50 |
| add: interest hybrid debt | 13 | 13 | 13 | 13 | 13 | 13 |
| Funds from operations | -591 | 2,729 | 3,946 | 3,295 | 4,675 | 5,269 |
| Free operating cash flow in EUR m | | | | | | |
| Funds from operations | -591 | 2,729 | 3,946 | 3,295 | 4,675 | 5,269 |
| Working capital change | 1,347 | 1,694 | 278 | 642 | -250 | -100 |
| Non-operating cash flow | -177 | 580 | 634 | 0 | 0 | 0 |
| less: capital expenditure (net) | -1,107 | -2,354 | -3,021 | -4,200 | -3,500 | -3,700 |
| less: lease amortisation | -354 | -381 | -319 | -594 | -425 | -480 |
| Free operating cash flow | -882 | 2,268 | 1,518 | -857 | 500 | 989 |
| Net cash interest paid in EUR m | | | | | | |
| Net cash interest per cash flow statement | 275 | 342 | 343 | 333 | 270 | 241 |
| add: interest expense pension | 78 | 83 | 77 | 50 | 50 | 50 |
| less: interest hybrid debt | -13 | -13 | -13 | -13 | -13 | -13 |
| Net cash interest paid | 340 | 412 | 407 | 370 | 307 | 278 |
| Scope-adjusted debt in EUR m | | | | | | |
| Reported gross financial debt | 16,670 | 15,151 | 13,943 | 12,155 | 11,193 | 10,531 |
| less: subordinated (hybrid) debt | -250 | -250 | -250 | -250 | -250 | -250 |
| less: cash and cash equivalents | -4,666 | -8,301 | -8,265 | -5,825 | -5,510 | -5,715 |
| add: non-accessible cash | 100 | 100 | 275 | 275 | 275 | 275 |
| add: pension adjustment | 1,759 | 415 | 674 | 1,273 | 1,323 | 1,473 |
| add: other bank borrowing | 19 | 21 | 4 | 4 | 4 | 4 |
| Add/less: fair value hedges | -154 | 63 | 177 | 177 | 177 | 177 |
| Scope-adjusted debt | 13,478 | 7,199 | 6,558 | 7,809 | 7,212 | 6,495 |



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Environmental, social and governance (ESG) profile¹

| Environment | | Social | | Governance | | |
|---|---|---|---|---|---|--|
| Resource management (e.g. raw materials consumption, carbon emissions, fuel efficiency) | Ø | Labour management | Ø | Management and supervision (supervisory boards and key person risk) | 1 | |
| Efficiencies (e.g. in production) | | Health and safety (e.g. staff and customers) | | Clarity and transparency (clarity, quality and timeliness of financial disclosures, ability to communicate) | 1 | |
| Product innovation (e.g. transition costs, substitution of products and services, green buildings, clean technology, renewables) | | Clients and supply chain (geographical/product diversification) | | Corporate structure (complexity) | 1 | |
| Physical risks (e.g. business/asset vulnerability, diversification) | | Regulatory and reputational risks | | Stakeholder management (shareholder payouts and respect for creditor interests) | | |

Legend

Green leaf (ESG factor: credit positive) Red leaf (ESG factor: credit negative) Grey leaf (ESG factor: credit neutral)

ffecting theLike many airlines, Lufthansa Group has an ESG strategy addressing different challenges.The two key risks in the overall airline industry relate to:

- i) CO2 emissions: The EU is targeting net zero emissions by 2050 and airlines need to reduce their carbon footprint accordingly. Available means are fleet renewal (new technologies emit less), route optimisation with the help of airport operators and air traffic control, and the use of sustainable aviation fuel (similar to conventional jet fuel but smaller carbon footprint).
- ii) Labour management: Labour relations are challenging, with an increasing risk of strikes. These have been compounded by:
 - The need to navigate different labour laws across multiple countries although Lufthansa secured labour contracts until 2026 reducing strike probabilities
 - Labour taking up a large proportion of total costs. The low-margin airline industry will always seek to lower these costs and unions will always resist.
 - The tightening supply of pilots that has strengthened union bargaining power.
 - Labour unrest caused by the aftermath of the Covid-19 pandemic and rising inflation.

Two ESG factors affecting the airlines industry

¹ These evaluations are not mutually exclusive or exhaustive as ESG factors may overlap and evolve over time. We only consider ESG factors that are credit-relevant, i.e. those that have a discernible, material impact on the rated entity's cash flow and, by extension, its credit quality.



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| | Business risk profile: BBB- |
|---|---|
| Industry risk profile: B | We classify the cyclicality for the airline industry as high due to its susceptibility to adverse economic changes and event risks. Market entry barriers are low, with many market players despite the complex regulatory and legal standards. Substitution risk is low as technological progress is unlikely to change air travel. |
| Global leader in different segments | Lufthansa is among the largest network carriers worldwide as measured by revenue passenger kilometres. The group has several companies that are global leaders in their respective sectors. To secure and build on its successful positioning, Lufthansa group has been adapting its business models to the changing markets and competitive environments. |
| Leading position at major hubs | The group's leading market position in its home markets has allowed passenger airlines revenues to gradually recover from the pandemic in line with the rising demand in both leisure and business travel. |
| | Lufthansa continues to play an active role in market consolidation, also through opportunistic transactions. Any capacity reduction from faster market consolidation would enable Lufthansa to expand market share and increase yields. In this context, the potential investment in ITA Airways will strengthen the group's position in Italy, its second most important foreign market after the United States. |
| | Lufthansa's restructuring and modernisation has allowed it to adapt to the increasing demand and take advantage of growth opportunities. However, the pace of a recovery in aviation still depends on alleviating capacity constraints in the value chain as well as the recovery of the Asian and premium markets. The post-pandemic recovery is still being led by intra-European and transatlantic traffic. The Star Alliance joint venture and network on transatlantic routes also continues to provide a vast network and product range. At the end of 2023, on average 84% of the pre-crisis capacity was reached. For 2024, Lufthansa is assuming it will recover to 92% of its 2019 capacity. |
| | The broad fleet of aircraft and good position in long-haul premium traffic further bolster Lufthansa's competitive position. |
| Cargo normalising at higher levels than 2019 | Lufthansa Cargo is among the top cargo airlines worldwide as measured by revenue tonne kilometres. Lufthansa Cargo continues to benefit from strong demand for airfreighting and is increasingly participating in the growth of international eCommerce shipments within Europe. As such, the division is expanding its freighter fleet to open new growth potential. The global market for airfreight returned to normal in the 2023 financial year, compared with the record levels reported during the coronavirus pandemic, but remained at a high level in historical terms. |
| Lufthansa Technik: a leading independent MRO provider for civil commercial aircraft | In a fragmented global market, Lufthansa Technik is one of the largest MRO providers for aircraft, engines and aircraft components. Lufthansa Technik's market strength is reflected in the large number of aircraft served under exclusive contracts. Lufthansa Technik has more than 800 customers worldwide, including OEMs, aircraft leasing companies, operators of VIP jets, governments and armed forces, as well as airlines. Around one third of its business comes from entities in the Lufthansa Group and two thirds from clients outside the Lufthansa Group. We also expect the MRO industry to continue to grow, supported by increases in commercial aircraft deliveries and air traffic. Lufthansa Technik will continue to perform strongly as more aircrafts are deployed to meet the rising demand. |
| | Lufthansa is increasing focus on the core airline business, with plans to exit the non-core businesses. In 2023, the remainder of LSG Group was sold to Aurelius as part of Lufthansa's strategic re-orientation. Lufthansa plans to divest the business travel management solution AirPlus this summer. |



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Diversification supports competitive position

Lufthansa's diversification supports its business risk profile. The network of destinations in Passenger Airlines is broad in addition to the complementary portfolio of companies. Diversification into other activities, especially cargo, has helped to offset the impact of reduced passenger traffic. Group revenues are naturally more skewed towards Europe, given the major hubs in the region, but business outside Europe adds to geographic diversification. In 2021 and 2022, the strong performance of Lufthansa Cargo and Lufthansa Technik counteracted the weaker performance in Passenger Airlines. Lufthansa is also aiming for internationalisation, targeting the acquisition of ITA Airways along with its long-haul network as well as expanding the premium offering of Lufthansa and Swiss airline.

However, the growth of the aviation sector remains highly dependent on the global political situation and correlates with the macroeconomic development. Structural changes in demand in connection with the coronavirus pandemic, the geopolitical situation and infrastructure limitations, the effect of the climate crisis and continued digitalisation mean that long-term market growth is expected to be lower than in the past.

Lufthansa's profitability remains a weakness in its business risk profile. The EBITDA margin was below peers' but this gap narrowed in 2019 following structural cost improvements. Along with most other airlines, Lufthansa's revenues took a hit in 2020-2021 due to the pandemic, leading to a net loss. The group quickly cut costs, specifically fixed costs, to stem the cash drain.

Lufthansa returned to profitability in 2022 as all main business segments recorded profits. The group's first post-crisis objective is to improve EBIT. This will depend on air traffic recovery combined with an increase in structural profitability through lower unit costs, simpler processes and structures, and higher productivity. The reduction in the cost base will affect all group activities. However, controlling labour costs remains a challenge given their significant share of total costs. Therefore, ticket prices will have to rise.

Progress was made in 2023 to meet the medium-term profit target as showcased by a 7.6% adjusted EBIT margin for the full year 2023. Unit costs increased by 2% in 2023 despite much higher cost inflation, especially in the areas of fees and charges as well as personnel, and continued investments in operational stability.

The strikes in Q1 and the new labour agreement will weigh on Lufthansa's adjusted EBIT margin in 2024, which will be lower than 2023. Unit costs are expected to remain stable compared to the previous year excluding the impact of the strike. For 2025, Scope expects unit costs to decline, driven by capacity expansion, increasing crew and aircraft productivity, and efficiency gains from fleet renewals and the standardisation of operational processes and systems. The group is targeting an EBIT margin of at least 8% in the medium term, and achieving this will further support our profitability assessment.

Despite the resilient market share and improving profitability, the business risk profile is limited by the risks of cyclical changes to discretionary travel that may result from event risks (such as the pandemic) and the fiercely competitive environment.

Lufthansa's profitability to recover gradually

Improving unit costs following the restructuring



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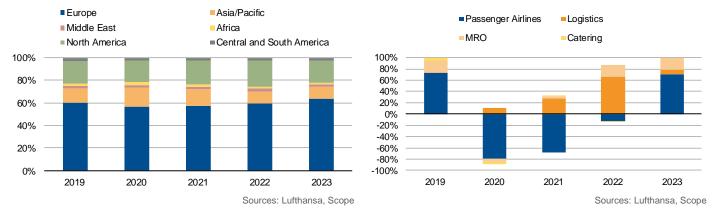


Figure 1: Lufthansa geographical split of revenues

Figure 2: Lufthansa share of business segment results (adjusted EBIT) over time

Financial risk profile: BBB

Credit metrics fully recovered from impact of Covid-19

Lufthansa's financial risk profile is unchanged at BBB, although we recognise that there has been some improvement in this category.

Lufthansa's results in the recent years have reflected the Covid-19 impact on global aviation traffic. In 2020, group revenue declined by more than 60% and EBITDA fell deep in the red. Net debt rose significantly during the pandemic due to lost revenues and the raised debts. The group introduced some countermeasures to lower indebtedness. Strict liquidity management and financing measures, particularly the capital increase in October 2021, led to state-guaranteed loans being repaid much earlier. In 2021, revenue was 24% more than in 2020 but 54% lower than in 2019 and EBITDA was breakeven. In 2022, revenues were 10% below 2019 levels while EBITDA surpassed EUR 3bn reflecting a recovery. By 2023, revenues were 15% more than in the previous year and 3% below the 2019 level, while EBITDA rose above EUR 4.5bn.

Global aviation traffic is unlikely to regain pre-Covid levels until 2025 due to several challenges in the aviation industry. Therefore, Lufthansa's financial outlook and cash generation will instead depend on adapting its overall capacity to the post-pandemic environment.

Credit metrics started normalising since 2022 and continue to improve towards pre-Covid levels. Increasing bookings and cash flow have allowed further deleveraging. Lufthansa achieved its net debt/EBITDA target of 3.5x earlier than expected. This was a result of a release of pent-up passenger demand that drove yields higher, disciplined capacity expansion and continued restructuring. The Scope-adjusted debt/EBITDA leverage ratio went below 2.5x in 2022 and below 2.0x in 2023. The same applies to Scope-adjusted debt funds from operations/debt, which improved to 38% in 2022 and 60% in 2023.

However, in 2024, leverage in terms of Scope-adjusted debt/EBITDA and funds from operations/Scope-adjusted debt will deteriorate to around 2.0x and below 45% respectively, as labour strikes weigh on H1 financial results. We expect leverage ratios to improve to around 2023 levels by FY 2025. This is because the group will strive to stabilise costs after concluding several long-term collective wage agreements this year and redefining strategic priorities.

Likewise, debt protection as measured by Scope-adjusted EBITDA/interest cover will likely remain strong at around 10x, supported by Lufthansa's increased use of cheaper financing in the high interest rate environment (such as the use of JOLCO aircraft financing instead of bonds). The interest rates rise experienced in recent years is also causing the pension



deficit to reduce, thanks to the higher discount rate for pension liabilities. The Group also implemented a liability-driven investment strategy to protect against falling interest rates. This, combined with strong cash flow, will help to strengthen the balance sheet even further.

free operating cash flows are constrained by considerable capital expenditure related to new aircraft, which will be partly offset by inflows from sale and leaseback transactions. In 2022, free operating cash flow benefited in particular from the strong increase in bookings and related advance payments as well as improvements to working capital.

However, free operating cash flow may remain weaker (free operating cash flow/Scopeadjusted debt was already weaker in 2023 than in 2022) as capital expenditure will be around EUR 3bn annually due to fleet renewal and operational ramp-up. As such, cash flow cover as measured by Scope-adjusted free operating cash flow/debt is forecasted in the range of 5%-15% in the medium term.

The rating case assumes no material impact from the divestment of non-core assets (AirPlus) and the potential takeover of ITA Airways, which may take place in 2024.

Adequate liquidity Lufthansa's liquidity is adequate. Strong operating cash flow led to an increased liquidity position. As of 31 December 2023, Deutsche Lufthansa AG had available liquidity of around EUR 8.3bn. Liquidity benefits from EUR 2.5bn in undrawn revolving credit lines and a more than 85% unencumbered fleet. Altogether, available liquidity can more than cover the EUR 2.5bn in outstanding short-term debt as of YE 2024. The group's long-term liquidity target is around EUR 8bn-10bn to better protect itself against future crises.

| Balance in EUR m | 2023 | 2024E | 2025E |
|-----------------------------------|-------|-------|-------|
| Unrestricted cash (t-1) | 8,201 | 7,990 | 5,550 |
| Open committed credit lines (t-1) | 2,100 | 2,500 | 2,500 |
| Free operating cash flow | 1,518 | -857 | 500 |
| Short-term debt (t-1) | 1,881 | 2,888 | 2,062 |
| Coverage | >200% | >200% | >200% |

Figure 3: Key credit metrics

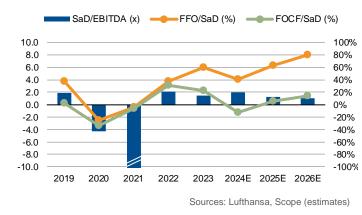
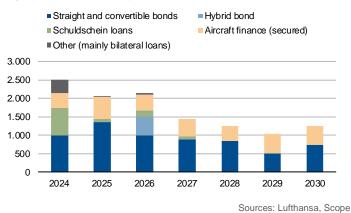


Figure 4: Debt maturity schedule as of March 2024 in EUR m



Supplementary rating drivers: no impact

Financial policy continues to be neutral for the rating. Management shows a disciplined strategy as well as a commitment to deleveraging and maintaining the investment grade level. Dividend payments were resumed in 2024.



Federal Republic of Germany, Airlines

Senior unsecured debt rating: BBB-

Subordinated unsecured (hybrid) debt rating: BB

Short-term rating: S-2

Senior unsecured debt has been rated BBB-, which is in line with the issuer rating.

Long-term and short-term debt ratings

Outstanding subordinated (hybrid) debt remains two notches below the issuer credit rating, at BB. This is due to the features of the hybrid debt placed by the rated entity, primarily its deep contractual subordination (ranking ahead only of ordinary share capital), perpetual tenor and optional deferral (in whole or in part) on every coupon payment date at the discretion of the issuer.

The affirmation of the S-2 short-term rating is based on the BBB-/Positive issuer rating and backed by the strong short-term liquidity cover and conservative liquidity management. The rating is further supported by the well-established bank relationships and good standing in the capital markets, evidenced by the revolving credit line



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