



NEW NORMAL. NEW STRENGTH.






Annual Report 2021





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The Lufthansa Group

The Lufthansa Group is an aviation group with operations worldwide. It is composed of the business segments Network Airlines, Eurowings, Logistics, MRO and Catering as well as the Additional Businesses and Group Functions.

T001 KEY FIGURES LUFTHANSA GROUP

		2021	2020	Change in %
Revenue and result				
Total revenue	€m	16,811	13,589	24
of which traffic revenue	€m	11,876	9,078	31
Operating expenses	€m	20,773	20,846	0
Adjusted EBITDA ¹⁾	€m	-90	-2,890	97
Adjusted EBIT ¹⁾	€m	-2,349	-5,451	57
EBIT	€m	-2,316	-7,353	69
Net profit/loss	€m	-2,191	-6,725	67
Key balance sheet and cash flow statement figures				
Total assets	€m	42,538	39,484	8
Equity ratio	%	10.6	3.5	7.1 pts
Net indebtedness	€m	9,023	9,922	-9
Pension provisions	€m	6,676	9,531	-30
Cash flow from operating activities	€m	618	-2,328	
Capital expenditure (gross) ²⁾	€m	1,329	1,273	4
Adjusted free cash flow ¹⁾	€m	-855	-3,669	77
Key profitability and value creation figures				
Adjusted EBITDA margin ¹⁾	%	-0.5	-21.3	20.8 pts
Adjusted EBIT margin ¹⁾	%	-14.0	-40.1	26.1 pts
EBIT margin	%	-13.8	-54.1	40.3 pts
ROCE	%	-7.4	-22.7	15.3 pts
Adjusted ROCE ¹⁾	%	-7.5	-16.7	9.2 pts
Lufthansa share				
Share price at year-end ³⁾	€	6.18	7.72	-20
Earnings per share	€	-2.99	-12.51	76
Traffic figures and environmental data⁴⁾				
Flights	number	460,029	390,263	18
Passengers	thousands	46,949	36,354	29
Available seat-kilometres	millions	145,139	109,828	32
Revenue seat-kilometres	millions	89,397	69,462	29
Passenger load factor	%	61.6	63.2	-1.6 pts
Available cargo tonne-kilometres	millions	11,867	10,560	12
Revenue cargo tonne-kilometres	millions	8,477	7,373	15
Cargo load factor	%	71.4	69.8	1.6 pts
Specific CO ₂ emissions	grammes	101.6	105.2	-3
Employees				
Employees as of 31 Dec	number	105,290	110,065	-4
Average number of employees	number	107,643	125,207	-14

¹⁾ Derivation → Financial strategy and value-based management, p. 20ff., Earnings, assets and financial position, p. 40ff.

²⁾ Without acquisition of equity investments.

³⁾ Previous year's figures adjusted for the effects of the issue of new shares in connection with the capital increase in September 2021.

⁴⁾ Previous year's figures have been adjusted.

Business segments

Network Airlines

The Network Airlines segment comprises Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines. With their multi-hub strategy, the Network Airlines offer their customers a premium, high-quality product and service, and a comprehensive route network combined with the highest level of travel flexibility.

T002 NETWORK AIRLINES		2021	Change in %
Revenue	€m	8,376	26
of which traffic revenue	€m	6,802	24
Adjusted EBIT	€m	-3,486	25
Adjusted EBIT margin	%	-41.6	29.0 pts
Adjusted ROCE	%	-23.7	4.2 pts
Segment capital expenditure	€m	1,035	8
Employees as of 31 Dec	number	53,295	-7

Eurowings

The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

T003 EUROWINGS		2021	Change in %
Revenue	€m	822	37
of which traffic revenue	€m	820	42
Adjusted EBIT	€m	-230	67
Adjusted EBIT margin	%	-28.0	89.6 pts
Adjusted ROCE	%	-16.4	27.0 pts
Segment capital expenditure	€m	254	140
Employees as of 31 Dec	number	3,563	15

Logistics

In addition to Lufthansa Cargo AG, the Logistics segment includes the airfreight container management specialist Jettainer group and the time:matters subsidiary, which specialises in particularly urgent consignments. The Heyworld subsidiary, which specialises in customised e-commerce solutions, and the investment in the airfreight company AeroLogic are also part of the segment.

T004 LOGISTICS		2021	Change in %
Revenue	€m	3,800	38
of which traffic revenue	€m	3,644	40
Adjusted EBIT	€m	1,493	93
Adjusted EBIT margin	%	39.3	11.3 pts
Adjusted ROCE	%	47.2	21.0 pts
Segment capital expenditure	€m	164	-26
Employees as of 31 Dec	number	4,162	-5

MRO

Lufthansa Technik is the world's leading independent provider of maintenance, repair and overhaul services for civil commercial aircraft. Lufthansa Technik AG serves more than 800 customers worldwide, including OEMs, aircraft leasing companies and operators of VIP jets, as well as airlines.

T005 MRO		2021	Change in %
Revenue	€m	4,003	7
of which external revenue	€m	3,117	14
Adjusted EBIT	€m	210	
Adjusted EBIT margin	%	5.2	15.4 pts
Adjusted ROCE	%	4.2	10.5 pts
Segment capital expenditure	€m	95	-38
Employees as of 31 Dec	number	20,569	-10

Catering

The LSG group offers a comprehensive range of products, concepts and services related to in-flight service as well as for other areas, such as retail and food producers. LSG Sky Chefs is a global food specialist with the highest hygiene and quality standards for airlines, the home delivery market and retail.

T006 CATERING		2021	Change in %
Revenue	€m	1,113	-15
of which external revenue	€m	1,085	2
Adjusted EBIT	€m	27	
Adjusted EBIT margin	%	2.4	24.2 pts
Adjusted ROCE	%	2.1	19.4 pts
Segment capital expenditure	€m	23	-18
Employees as of 31 Dec	number	15,626	18

The Executive Board

Deutsche Lufthansa AG



From left:

Harry Hohmeister, Chief Commercial Officer

Born in 1964, diploma in commercial air transport, Executive Board member since 2013, with the Lufthansa Group since 1985

Michael Niggemann, Chief HR & Legal Officer

Born in 1974, lawyer, Executive Board member since 2020, with the Lufthansa Group since 2007

Christina Foerster, Chief Customer Officer

Born in 1971, MBA, Executive Board member since 2020, with the Lufthansa Group since 2002

Carsten Spohr, Chief Executive Officer

Born in 1966, industrial engineer, Chairman of the Executive Board and CEO since 1 May 2014, Executive Board member since 2011, with the Lufthansa Group since 1994

Remco Steenbergen, Chief Financial Officer

Born in 1968, MBA, RegisterAccountant, Executive Board member since 2021, with the Lufthansa Group since 2021

Detlef Kayser, Chief Operations Officer

Born in 1965, aerospace engineer, Executive Board member since 2019, with the Lufthansa Group since 2016

Ladies and gentlemen,

The Lufthansa Group made significant progress in overcoming the consequences of the corona crisis in 2021. Our Group and the whole aviation sector benefited from the successes in overcoming the pandemic. At the same time, we initiated and implemented deep changes in the Company to adjust to the structural changes in our markets. We are approaching a “new normal” with further recovery that we are expecting in 2022. We are intensively preparing for this – always with the goal of improving our competitive position and emerging stronger from this crisis. “NEW NORMAL. NEW STRENGTH.” is therefore the title of our current annual report. We want to justify this claim with the transformation of the Lufthansa Group.

In 2021, the demand for flights increased further, driven by the global progress on vaccination campaigns and relaxation of travel restrictions. This enabled us to significantly expand our capacities during the year. Many people were able to take the summer holidays they had been longing for. We benefited from this on our short-haul and medium-haul tourist routes in particular. Demand also increased for long-haul routes. Thus, after the USA opened to European travellers in November, the booking figures to North America increased sharply. There have also been significant signs of a recovery in business travel since the autumn. Overall, we welcomed 47 million passengers on board our airlines in the reporting year.

We were able to reduce operating losses by more than half as a result of the recovery. Adjusted EBIT, our leading performance indicator, came to EUR –2,349m in the 2021 financial year, including non-recurring restructuring expenses of nearly EUR 600m. The operating result was even positive again in the third quarter – a success that was mostly thanks to our consistent cost reductions. Already today we have achieved more than three-quarters of the targeted annual savings totaling around EUR 3.5bn. By transforming our Company, we are not only reducing our costs significantly and sustainably, but also making the Lufthansa Group more efficient and setting it up for a successful future.

The Aviation Services companies make an important contribution to the ongoing development of the Lufthansa Group. They benefited from an improved financial performance in the reporting year. Lufthansa Cargo reported another record result in 2021. We assume that the boom in demand from disrupted supply chains around the world and ongoing capacity bottlenecks will continue. Lufthansa Technik and the LSG group also achieved positive operating results again, supported by the recovery in global passenger figures.

In 2021, we also strengthened the balance sheet and brought the phase of government stabilisation in Germany to an end in less than 18 months. By issuing several bonds and executing a capital increase as well as other financing measures, we have raised a total of over EUR 8bn. We were therefore able to repay the funds drawn down in Germany from the stabilisation measures of the Economic Stabilisation Fund in full and earlier than originally planned.

This has cleared the way for the Economic Stabilisation Fund to dispose of its shareholding in the Lufthansa Group. This sale has to be completed by October 2023. The liquidity available to the Lufthansa Group amounted to EUR 9.4bn at the end of the reporting year. It was therefore around twice the level at the start of the crisis.

We expect a further recovery in air traffic for the 2022 financial year. In the first quarter of the year, the spread of the Omicron variant and the resulting rise in coronavirus cases will continue to adversely affect us. However, for the rest of the year we expect a significant relaxation in the pandemic situation allowing many people to catch up on holidays and business travel. At the same time, the political and economic consequences of the Ukraine conflict could affect our business performance in ways that cannot yet be estimated. In general, we are well prepared to continue our recovery in another challenging year.

Our customers will remain the focus of our activities in 2022, now more than ever. During the pandemic, their patience and loyalty were demanded to an extraordinary degree. This is why we are now doing everything we can to once again expand our services as quickly as possible and to match them more than ever to the individual needs of our passengers. We want to use innovation and digitalisation to increase the satisfaction of our guests further and offer them the best air travel experience in Europe.

Responsibility will continue to be the foundation of all business activity in the Lufthansa Group. We are therefore continuously expanding our environmental commitment. Firstly, by accelerating the modernisation of our fleet and replacing older, inefficient aircraft types by modern, more fuel-efficient aircraft faster than planned. We are also optimising the fuel consumption of our fleets with the help of innovative technologies like the sharkskin foil that improves the aerodynamics of our aircraft. Another aspect is the joint discussions with politicians and associations on how incentives to reduce emissions can be created without exposing European airlines to a competitive disadvantage compared with airlines from outside the EU. Finally, we are intensifying our activities in the research, development and production of sustainable fuels, in order to secure key capacities. We are pooling the many initiatives and projects by our Group companies for more sustainability in aviation in the new CleanTech Hub. We aspire to set the highest standards in our industry also when it comes to sustainability.

We are pleased that you are accompanying us on our path to a new normal and a new strength. We also look forward to welcoming you on board our aircraft again.

Frankfurt, February 2022



Carsten Spohr
Chief Executive Officer

Report of the Supervisory Board



Karl-Ludwig Kley,
Chairman of the Supervisory Board

Ladies and gentlemen, dear shareholders,

Corona and no end to it. The financial year 2021 was again dominated by the ongoing coronavirus pandemic. And still: the situation changed for the better in 2021 after the dramatic collapse in business and the near-insolvency in the summer of 2020. We can now look to the future with greater confidence.

As in the past, the Supervisory Board oversaw the work of the Executive Board members and advised them in the previous year. The Supervisory Board carried out the duties conferred on it by statute, the Company's Articles of Association and its internal regulations.

The Executive Board regularly provided the Supervisory Board with full, timely information on the course of business, the competitive environment, planned Company policy and all significant strategic and operating decisions. In particular it reported regularly on the Company's economic position, the use of stabilisation measures from the Economic Stabilisation Fund (ESF), refinancing scenarios, the level of liquidity and the restructuring in response to the pandemic. The Executive Board gave the Supervisory Board members an in-depth presentation on the details of the capital increase that was successfully completed in October 2021. In addition, the Executive Board informed us regularly of changes in the shareholder structure and the performance of the Lufthansa share. As Chairman of the Supervisory Board, I read the minutes of the Executive Board meetings and discussed the current situation and the course of business with the CEO and the other members of the Executive Board on an ongoing basis.

In 2021, the Supervisory Board held a total of five meetings, three of which were conducted virtually. At its plenary sessions and committee meetings, the Supervisory Board had sufficient opportunity to discuss the reports and proposals for resolutions from the Executive Board. When doing so, the Supervisory Board also met regularly without the members of the Executive Board 📄 <https://investor-relations.lufthansagroup.com/en/corporate-governance/supervisory-board.html>.

Key topics discussed by the Supervisory Board

Our meetings focused on the economic development of Deutsche Lufthansa AG and its associated companies. Against the backdrop of the coronavirus pandemic, we regularly discussed the liquidity situation, the stabilisation and refinancing activities and the implementation of the necessary restructuring measures. The expansion of flight operations and the modernisation of the fleet were also dealt with repeatedly at our meetings.

At the meeting on 3 May 2021, the Supervisory Board approved the purchase of five Boeing 787-9 aircraft and five Airbus A350-900 aircraft. At the meeting on 21 September 2021, the Supervisory Board decided to upgrade the 747-8 fleet to the future product standard.

At an extraordinary meeting on 19 September 2021, the Supervisory Board approved a capital increase, which generated gross proceeds of EUR 2.2bn. I would like to take this opportunity to thank all the shareholders for their trust in our Company and their significant contributions to strengthening the Group's equity base. This created the conditions for the swift repayment of the stabilisation measures in Germany, which was completed in November 2021.

The meeting on 21 September 2021 was dedicated to the Group's ongoing strategic development, which was discussed in detail with the Executive Board. The corporate strategy was updated on this basis and then approved at the Supervisory Board meeting on 8 December 2021.

The Supervisory Board also approved the medium-term financial planning for 2022 to 2025 on 8 December 2021.

Jutta Dönges, managing director of Bundesrepublik Deutschland – Finanzagentur GmbH and her deputy Lutz Kaßmann made use of the agreement with the ESF to attend the meetings of the Supervisory Board of Deutsche Lufthansa AG as guests, with the exception of the meetings on 19 and 21 September 2021.

Executive Board remuneration

The Supervisory Board discussed the appropriateness of Executive Board remuneration at the meetings on 3 March 2021 and 21 September 2021. Executive Board remuneration was reviewed in light of the Company's position. It was confirmed as appropriate at the Supervisory Board meeting on 3 March 2021. At the meeting on 21 September 2021, the Supervisory Board took note of the latest horizontal comparison of Executive Board remuneration.

Also at the meeting on 3 March 2021, the Supervisory Board decided in view of the Company's economic position to cancel the commitment to pay Executive Board members an annual bonus and long-term variable remuneration for the 2021 financial year. Despite this, the Supervisory Board did set concrete targets for the Executive Board members, both for the financial year 2021 and for the current four-year period up to and including 2024. They include short-term targets for the individual Executive Board members, whereby the long-term objective in particular is to bring the stabilisation measures to an end quickly and return to profitability. ➤ **Remuneration report, p. 271ff.** This represents a divergence from the remuneration structure for 2021 approved by the Annual General Meeting. 📄 <https://investor-relations.lufthansagroup.com/en/corporate-governance/compensation.html>.

Reappointments to the Executive Board

At its meeting on 3 March 2021, the Supervisory Board reappointed Detlef Kayser as Member of the Executive Board of Deutsche Lufthansa AG as Chief Operating Officer with effect from 1 January 2022 for a term of three years, ending on 31 December 2024.

Changes in the Supervisory Board

Stephan Sturm stepped down from the Supervisory Board of Deutsche Lufthansa AG and so also as Chair of the Audit Committee as of the close of the Annual General Meeting on 4 May 2021. He had been a member of the Supervisory Board of Deutsche Lufthansa AG since 2015, chaired the Audit Committee since 2018 and brought his skills and experience as the long-standing CFO and CEO of Fresenius Management SE to the Supervisory Board. The Supervisory Board thanks Mr Sturm for assuming his responsibilities and for his constructive and dedicated work. At the recommendation of the Nomination Committee, Britta Seeger was elected to replace him on the Supervisory Board at the Annual General Meeting for a period of office of three years.

The terms of office of Michael Kerkloh and Angela Titzrath, the two members nominated by the ESF and appointed to the Supervisory Board by the court in 2020, also ended at the close of the Annual General Meeting on 4 May 2021. Michael Kerkloh was appointed to the Supervisory Board of Deutsche Lufthansa AG by the Annual General Meeting for a period of three years and Angela Titzrath for four years.

Attendance at meetings

Overall, the Supervisory Board members had an attendance rate of 98% for all meetings of the committees and the Supervisory Board in 2021. No member of the Supervisory Board was present at only half or fewer of the meetings of the Supervisory Board or the Supervisory Board committees they belong to.

T007 INDIVIDUAL ATTENDANCE RATES 2021

	Supervisory Board	Steering Committee	Audit Committee	Nomination Committee	Attendance rate in % (all meetings)
Karl-Ludwig Kley, Chairman	5/5	6/6		1/1	100%
Christine Behle, Deputy Chairwoman	5/5	6/6			100%
Alexander Behrens	5/5		6/6		100%
Jörg Cebulla	5/5		6/6		100%
Erich Clementi	5/5				100%
Thomas Enders	5/5	6/6		1/1	100%
Jürgen Jennerke	5/5				100%
Michael Kerkloh	5/5		5/6		91%
Carsten Knobel	4/5		5/6		82%
Holger Benjamin Koch	5/5				100%
Harald Krüger	5/5		4/4	1/1	100%
Birgit Rohleder	5/5				100%
Miriam Sapiro	5/5				100%
Ilja Schulz	4/5	6/6			91%
Britta Seeger (since 4 May 2021)	2/2				100%
Birgit Spineux	5/5				100%
Astrid Stange	5/5				100%
Olivia Stelz	5/5				100%
Stephan Sturm (until 4 May 2021)	3/3		2/2		100%
Angela Titzrath	5/5				100%
Klaus Winkler	5/5		6/6		100%

Corporate governance

The proportion of women on the Executive Board meets the minimum quota defined in the German Act Extending and Amending the Rules on Equal Participation of Men and Women in Executive Positions in the Public and Private Sectors (FüPoG II), which came into effect in August 2021. The diversity strategy for the Executive Board of Deutsche Lufthansa AG was adapted to the new legislation and adopted by the Supervisory Board at its meeting on 8 December 2021. www.lufthansagroup.com/corporate_governance_declaration.

The statutory quota requiring Supervisory Boards to consist of 30% women is met by the Supervisory Board as a whole as well as by both the shareholder and employee representative groups.

We again reviewed the efficiency of our working practices in the 2021 financial year on the basis of a detailed questionnaire and conversations between the Chair and individual members of the Supervisory Board. The work of the Supervisory Board was found to be carried out at a consistently high level overall. The members of the Supervisory Board and the Audit Committee in particular also attended several of the training courses offered by the Company in the financial year. Subjects included statutory requirements for the work of the Audit Committee and the German Act to Strengthen the Integrity of Financial Markets (FISG). This year, the training event and the Supervisory Board meeting on 20 and 21 September 2021 were dedicated to the topics of sustainability and climate protection.

In September 2021, the Supervisory Board and the Executive Board issued an updated declaration of compliance with the German Corporate Governance Code. We also adapted the requirements profile for the Supervisory Board and the internal regulations for the Supervisory Board and the Audit Committee in view of the new statutory provisions in the FISG. www.lufthansagroup.com/corporate_governance_declaration. No conflicts of interest were disclosed in the financial year 2021.

Work of the committees

The Supervisory Board has formed four committees, whose activities were each reported on at the beginning of the following Supervisory Board meeting. Further details on the composition of the committees can be found in [Supervisory Board and Executive Board, p. 143](#).

The Steering Committee met six times in 2021. In the period from 5 May 2021 to 20 September 2021, the Supervisory Board again delegated its responsibilities for urgent cases to the Steering Committee to the extent legally permissible in order to ensure that it was able to act quickly in times of crisis.

As in previous years, the Steering Committee also prepared the Supervisory Board meetings. It discussed in detail the course of business and the status of restructuring and refinancing activities. The Steering Committee also dealt with all matters relating to the remuneration of the Executive Board and made recommendations to the full Supervisory Board on all personnel decisions concerning the Executive Board. The capital increase that took place in October 2021 was also discussed several times by the Steering Committee.

In 2021, the Nomination Committee met once and the Audit Committee met six times, always in the presence of the auditors. The Supervisory Board appointed Harald Krüger as a member and Chair of the Audit Committee with effect from the close of the Annual General Meeting on 4 May 2021. As an independent financial expert in line with the requirements of the German Stock Corporation Act and the German Corporate Governance Code, the Chair has particular knowledge and experience in the application of financial reporting standards and international control procedures and is familiar with the auditing of financial statements. The Audit Committee discussed the financial statements for 2021 and the interim reports for 2021 with the CFO before their publication. The committee also dealt with the supervision of accounting processes and the effectiveness of the internal control system, risk management and internal auditing systems. Furthermore, the members received regular reports on the compliance management system. They also discussed in detail the Group operational planning for 2022 to 2025, the medium-term financial planning and the combined non-financial declaration, which was subject to a voluntary limited assurance engagement by Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Munich, Germany. ➔ **Combined non-financial declaration, p. 94ff., Remuneration report, p. 271ff.**

The Arbitration Committee was not convened in the reporting period.

Audit and adoption of the annual financial statements as of 31 December 2021, approval of the consolidated financial statements

The Supervisory Board appointed Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Eschborn, Germany, who were elected as auditors for the parent company and the Group at the Annual General Meeting 2021, to audit the financial statements and the consolidated financial statements, the combined management report and the system for the early identification of risks. The Audit Committee acknowledged the declaration of independence provided by Ernst & Young and discussed the main topics of the audit. No potential grounds for disqualifying the auditors or doubting their impartiality came to light during the course of the audit.

The consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB), taking account of interpretations by the IFRS Interpretations Committee as applicable in the European Union (EU). The auditors audited the annual financial statements and consolidated financial statements of Deutsche Lufthansa AG and the combined management report as of 31 December 2021 in accordance with the legal requirements, and had no reservations to make. They further confirmed that

the system for the early identification of risks established by the Executive Board is suitable for the early identification of developments that could endanger the Company's continued existence. During their audit, the auditors did not come across any facts that would run contrary to the declaration of compliance.

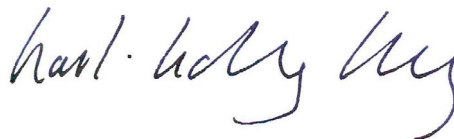
On 24 February 2022, the Audit Committee discussed the audit reports in detail with the CFO in the presence of the two auditors who had signed the auditors' report. At the Supervisory Board accounts meeting on 2 March 2022, the auditors reported on their audit findings and answered questions. We examined the financial statements and the consolidated financial statements of Deutsche Lufthansa AG, as well as the combined management report, including the combined non-financial declaration and the remuneration report pursuant to Section 162 AktG, and had no objections to make. The financial statements and the consolidated financial statements were approved. The 2021 annual financial statements of Deutsche Lufthansa AG as prepared by the Executive Board have thereby been adopted. No resolution on the use of distributable profit was required, because the financial statements prepared in accordance with German commercial law showed a loss, and the ESF conditions prohibit any dividend payments for the duration of the stabilisation measures.

The time of the pandemic was characterised by a continuous back and forth of various travel restrictions being imposed and lifted again. We anticipate that there will be repeated setbacks again in 2022, depending on the course of the pandemic. However, we are more optimistic than last year about the public health environment for flight travel. And we are increasingly finding that our customers have a greater desire to travel again. However, there is no denying that we still have to implement further restructuring measures despite these positive signals. And we still have a long way to go.

The Supervisory Board thanks the Executive Board and all the employees for their work.

We wish everybody here at Lufthansa continued good health, as well as the strength and perseverance to ensure the Lufthansa Group ultimately emerges stronger from this crisis.

Frankfurt, 2 March 2022



For the Supervisory Board
Karl-Ludwig Kley, Chairman

Lufthansa share

Airline shares still severely affected by coronavirus crisis. | Lufthansa share holds up better over the crisis period than shares of key competitors. | Capital increase met with strong investor interest. | Number of shareholders increases significantly.

Performance of the Lufthansa share still affected by the coronavirus pandemic

The coronavirus pandemic has had a severe impact on share prices in the airline industry and therefore also on the performance of the Lufthansa share since the beginning of the crisis in early 2020.

Based on a price of EUR 7.72 at year-end – after adjusting for the effects of the issue of new shares in connection with the capital increase – the share posted a positive performance in the first quarter of the reporting year. Driven by signs of a market recovery in summer, the share price rose to EUR 9.12 by early March. The share price subsequently declined however, partly due to the higher oil price and in expectation of a capital increase which was announced in mid-September. The once again worsening pandemic and the discovery of the Omicron variant also had a negative impact from the middle of the fourth quarter. The share price fell to its annual low of EUR 5.36 on 30 November 2021. As of year-end, the Lufthansa share traded at EUR 6.18. Over the course of the financial year 2021, the share therefore fell by 20%, adjusted for the effects of the capital increase. The MDAX index rose by 14% in 2021.

Over the entire crisis period of 2020 and 2021, the Lufthansa share sustained a loss of 47%, adjusted for the effects of the capital increase. However, this means the Lufthansa share performed significantly better than those of its main competitors IAG and Air France-KLM, which lost 66% and 61% respectively since the crisis started. The MDAX index rose by 24% over the same period. Shares in European low-cost carriers also outperformed the Lufthansa share. They profited from their focus on short-haul touristic routes, for which the market recovered much faster than for long-haul routes.

The long-term aim is a return to dividend payments

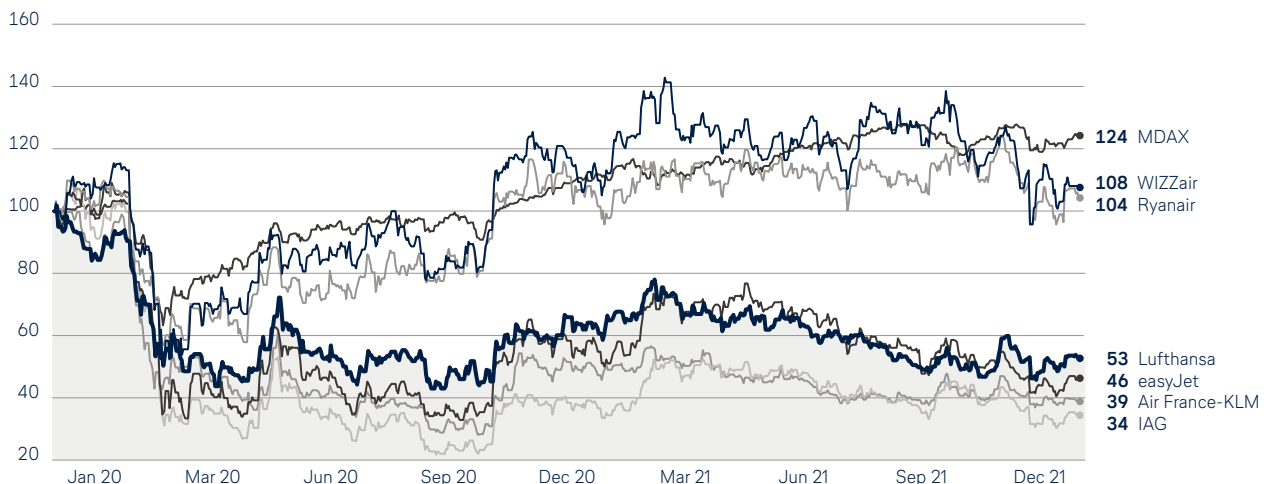
The stabilisation measures from the Economic Stabilisation Fund (ESF) prevent the payment of dividends until the ESF has sold all its shares in the Company, which has been agreed to be completed by October 2023. In the long term, however, shareholders are expected to once again participate directly in the Company's success. ➤ **Financial strategy and value-based management, p. 20ff.**

C01 PERFORMANCE OF THE LUFTHANSA SHARE

LUFTHANSA'S SHARE PRICE AS OF 31 DEC 2021

indexed as of 31 Dec 2019, compared with the MDAX and competitors, in %

6.18 €



T008 THE LUFTHANSA SHARE: KEY FIGURES

		2021	2020	2019	2018	2017
Year-end share price ¹⁾	€	6.18	7.72	11.71	14.06	21.92
Highest share price ¹⁾	€	9.12	11.90	16.78	22.05	22.21
Lowest share price ¹⁾	€	5.36	5.03	9.17	12.35	8.08
Number of shares	millions	1,195.5	597.7	478.2	475.2	471.3
Market capitalisation (at year-end) ¹⁾	€bn	7.4	4.6	5.6	6.7	10.3
Earnings per share	€	-4.56	-12.51	2.55	4.58	4.98
Dividend per share	€	-	-	-	0.80	0.80
Dividend yield (gross)	%	-	-	-	4.1	2.6
Dividend payout	€m	-	-	-	380	377
Total shareholder return	%	-20.0	-34.1	-12.6	-33.3	154.4

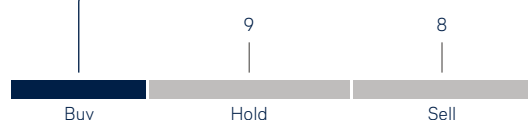
¹⁾ Adjusted for the effects of the issuance of new shares in connection with the capital increase in September 2021.

Balanced range of analyst recommendations

At year-end, of the 23 equity analysts tracking the Company, six recommended buying the share, nine recommended holding it, and eight selling it. While analysts positively underlined the operating recovery in the course of 2021, the ongoing strength of Lufthansa Cargo and the successful capital increase in particular, they see the higher debt level than before the crisis and the risk of new virus variants as potential risks for the share performance. The average target price at year-end 2021 was EUR 6.50 with a range of EUR 3.91 to EUR 8.55.

C02 ANALYSTS' RECOMMENDATIONS¹⁾

as of 31 Dec 2021

BUY
6

¹⁾ Average target price: EUR 6.50, average of 23 analysts.
Range: EUR 3.91 to EUR 8.55.

Capital increase met with strong investor interest

Deutsche Lufthansa AG successfully completed a capital increase with subscription rights in the reporting year in order to strengthen the balance sheet and repay the stabilisation measures in Germany. It doubled the share capital of Deutsche Lufthansa AG. A total of 597,742,822 new shares were issued. The subscription price was EUR 3.58 and 98.4% of the subscription rights were exercised. The remaining 1.6% were successfully placed with institutional investors. This brought the number of shares issued to 1,195,485,644. The capital increase generated gross proceeds of EUR 2,162m.

➤ **Financing, p. 46f.**

Changes in the shareholder structure increase the share of German investors in the Company

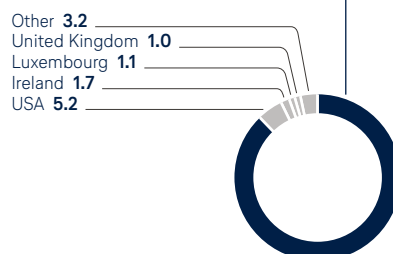
In order to protect international air traffic rights and its operating licence, the German Aviation Compliance Documentation Act (Luftverkehrsnachweissicherungsgesetz – LuftNaSiG) requires Lufthansa to provide evidence that a majority of its shares are held by German shareholders. For this reason, all Lufthansa shares are registered shares with transfer restrictions.

At the end of 2021, the shareholders' register showed that German investors held 87.8% of the shares (previous year: 83.8%). The second largest group, with 5.2%, was shareholders from the USA. Investors from Ireland accounted for 1.7% of share capital. They were followed by Luxembourg with 1.1% and the United Kingdom with 1.0%. This ensured that the conditions of the German Aviation Compliance Documentation Act (LuftNaSiG) were met.

The largest shareholder at year-end 2021 was the ESF with a stake of 14.09%, followed by BlackRock, Inc. with 3.18%.

C03 SHAREHOLDER STRUCTURE BY NATIONALITY

as of 31 Dec 2021 in %

GERMANY
87.8

Free float: 86%

According to the definition of Deutsche Börse, 86% of Lufthansa shares were in free float. As of the reporting date, 49% of the shares were held by institutional investors (previous year: 52%) and 51% were held by private shareholders (previous year: 48%). The number of shareholders increased from 565,357 at year-end 2020 to 638,659 at year-end 2021, mainly due to the high number of new private shareholders. The shareholder structure is updated quarterly and published on the website www.lufthansagroup.com/investor-relations. The notifications on voting rights received by the Company from shareholders and published during 2021 are also available there.

All Executive Board members buy Company shares

All the members of the Executive Board bought subscription rights and shares in Deutsche Lufthansa AG over the course of 2021, particularly as part of the capital increase. Carsten Spohr bought a total of 50,000 subscription rights and 179,980 shares for EUR 771,803 in the capital increase. Christina Foerster purchased a total of 1,000 subscription rights and 5,426 shares for EUR 22,033. Harry Hohmeister purchased 76,048 shares for EUR 272,252. Detlef Kayser bought 40,000 subscription rights and 42,320 shares for EUR 248,961. Michael Niggemann bought 57,460 subscription rights and 78,730 shares for EUR 428,038. Remco Steenbergen bought 25,000 shares for EUR 300,000 outside the capital increase and an additional 50,000 shares for EUR 179,000 in the course of the capital increase. These announcements can also be found on the website www.lufthansagroup.com/investor-relations.

Lufthansa share is included in the MDAX and other important indices

The Lufthansa share is part of the MDAX. At year-end, the share had an index weighting of 3.4%. With a market capitalisation of EUR 6.2bn, adjusted for the free float, the Lufthansa Group came in at position 48 (previous year: 52) in the ranking of DAX companies by market capitalisation (including DAX 40). In terms of stock market turnover, the Lufthansa share was at position 24 (previous year: 20) with a turnover of EUR 14.6bn (previous year: EUR 21.1bn). The average daily XETRA trading volume of the share in 2021 was 7,119,436 shares (previous year: 8,321,590 shares).

The Lufthansa share is also included in many classic international share indices. It is also represented in several sustainability indices, such as the MSCI EMU ESG, the EURO STOXX Sustainability Index and the FTSE4Good Europe Index.

T009 THE LUFTHANSA SHARE: DATA

ISIN International Security Identification Number	DE0008232125
Security identification number	823212
German stock exchange code	LHA
Stock market listing	Frankfurt
Prime sector	Transport & Logistics
Industry	Airlines
Indices (Selection)	MDAX, EURO STOXX, STOXX Global, Bloomberg EMEA Airlines Index, Bloomberg European Travel Index, DAX 50 ESG, MSCI EMU ESG, Vanguard ESG INTL STOCK ETF, STOXX Sustainability, EURO STOXX Sustainability, FTSE4Good Europe

American Depositary Receipts (ADRs) offer an alternative to equity investment

In addition to its stock market listings in Germany, investors who are only allowed to invest in securities denominated in US dollars can also gain exposure to the Lufthansa Group via the “Sponsored American Depositary Receipt Program” (ADR). The programme is managed by Deutsche Bank Trust Company Americas. Lufthansa ADRs are also registered on the standardised trading and information platform OTCQX. At year-end, 13,267,656 ADRs were in circulation (31 December 2020: 6,146,428). Based on the 1:1 ratio to the share, this corresponds to around 1% of the issued capital.

Lufthansa Group pursues intensive dialogue with investors despite restrictions imposed by the coronavirus pandemic

As in prior years, the Lufthansa Group again provided its shareholders with timely and comprehensive information in the 2021 financial year. In addition to the quarterly meetings, the Executive Board and Investor Relations team participated in many roadshows and investor conferences to inform institutional investors about current developments at the Group in 2021. Due to the restrictions imposed by the coronavirus pandemic, most events of this type took place virtually. Investors were informed by means of management webcasts and additional road shows as part of the presentation of the medium-term targets in June 2021 and the announcement of the capital increase in September. There were also intensive exchanges with debt investors, especially in the context of the issuance of three bonds. ➔ **Financing, p. 46f.**

In May 2021, the Group hosted more than 6,000 shareholders who attended the Annual General Meeting, which was held exclusively online.

All the publications, financial reports, presentations, the quarterly shareholder information letter and the latest news are available at www.lufthansagroup.com/investor-relations. The site also contains the financial calendar and the dates of all the conferences and shareholder events that the Lufthansa Group will be attending.

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Principles of the Group

Business activities and Group structure

Lufthansa Group is a leading European airline group. | Company portfolio consists of Network Airlines, Eurowings and Aviation Services. | Six-member Executive Board manages the Group.

Lufthansa Group is a leading European airline group

The Lufthansa Group is an aviation company with operations worldwide. It plays a leading role in its European home market. The Lufthansa Group is composed of the segments Network Airlines, Eurowings and the Aviation Services.

➤ **Business segments, p. 53ff.**

The Network Airlines segment comprises Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines. Lufthansa German Airlines also includes regional airlines Lufthansa CityLine and Air Dolomiti as well as Eurowings Discover, the new holiday airline from the Lufthansa Group which started operations in July 2021 and focuses on the touristic segment.

Eurowings focuses on short-haul traffic in European point-to-point traffic.

Aviation Services particularly includes the Logistics, MRO and Catering segments.

The Lufthansa Group also includes the Additional Businesses and Group Functions. This business segment includes in particular Lufthansa AirPlus, Lufthansa Aviation Training and Lufthansa Systems.

The business segments and the airlines are each under their own management. Overall coordination takes place through the Executive Board of Deutsche Lufthansa AG or the Group Executive Committee, which essentially consists of the members of the Executive Board of Deutsche Lufthansa AG and the CEOs of the main companies.

Six-member Executive Board manages Deutsche Lufthansa AG

The distribution of tasks undertaken by the Executive Board of Deutsche Lufthansa AG remained unchanged in the 2021 financial year. The Executive Board comprises six functions. Chief Executive Officer of Deutsche Lufthansa AG is Carsten Spohr. Chief Customer Officer is Christina Foerster. She is also responsible for IT, Corporate Responsibility and the Lufthansa Innovation Hub. Chief Commercial Officer is Harry Hohmeister. Chief Operations Officer is Detlef Kayser. The contract with Detlef Kayser was extended on 3 March 2021 by three years to 31 December 2024. Chief HR & Legal Officer is Michael Niggemann. Chief Financial Officer is Remco Steenbergen.

The Executive Board functions of the Chief Customer Officer, Chief Commercial Officer and Chief Operations Officer have functional responsibility for certain cross-airline processes to realise synergies and coordinate the activities of Group airlines.

C04 LUFTHANSA GROUP STRUCTURE

Supervisory Board				
Carsten Spohr Chief Executive Officer				
Michael Niggemann Chief HR & Legal Officer				
Remco Steenbergen Chief Financial Officer				
	Christina Foerster Chief Customer Officer	Harry Hohmeister Chief Commercial Officer	Detlef Kayser Chief Operations Officer	
Lufthansa Frankfurt	●	●	●	Lufthansa Technik
Lufthansa Munich	●	●	●	
SWISS Zurich	●	●	●	Lufthansa Cargo
Austrian Vienna	●	●	●	
brussels Airlines	●	●	●	LSGgroup
Eurowings	●	●	●	

Goals and strategies

Faster transformation should strengthen Lufthansa Group’s market position as leading European airline. | Airlines form the core of the Lufthansa Group. | Focus is on restructuring, consistent attention to customer needs and long-term increases in profitability and cash flow. | Sustainability and corporate responsibility are an established part of the Group strategy.

GROUP STRATEGY

Position as leading European airline group

The Lufthansa Group positions itself among the largest airlines in the world and assumes the role as the leading European airline group. In this role, the Lufthansa Group aims to continue to play a part in actively shaping the global airline market. It strives to follow the mission statement: the Lufthansa Group connects people, cultures and economies in a sustainable way. In doing so, it aspires to set standards in terms of sustainability and customer-friendliness. It uses the potential of innovation and digitalisation to develop customer-focused products and increase efficiency. Corporate responsibility and identity are put into practice locally and supported by overarching functional processes that enable synergies and economies of scale. A strict focus on costs, operational stability and reliability in all areas are firmly established in the DNA of the Lufthansa Group. The safety of flight operations is and will always be the top priority.

Structuring the Group along the airline value chain helps to maximise synergies between segments and makes it possible to scale business from external markets at the same time. The airlines form the core of the Lufthansa Group, with their comprehensive networks in their home markets of Germany, Austria, Switzerland, Belgium and northern Italy. In two business models – network airlines and point-to-point airlines – they serve the relevant customers and market segments with dedicated brands and differentiated quality promises, connecting Europe with the world. The passenger airline business is supplemented by Aviation Services that have synergies with the airlines. The aim is to continue strengthening the role of the airlines in the portfolio of business segments over the long term. ➔ **Business segments, p. 53ff.**

Transformation of the Lufthansa Group is to secure long-term economic success

The aviation industry is defined by dynamic markets and competition, even when not facing a pandemic. The main drivers of this dynamic are exogenous uncertainty, changing customer demands and shifts in the value chain. These include new data-driven decision-making tools that have an increasing influence on airlines’ distribution and increased activity from aircraft and engine manufacturers in the maintenance business. To meet these challenges, continuous transformation and the modernisation of the Lufthansa Group are core principles of the corporate strategy. The aim is to safeguard the Lufthansa Group’s leading market position and economic success by developing it into an agile and flexible organisation that is even more competitive.

Coronavirus pandemic accelerates transformation

The coronavirus pandemic has had an unprecedented impact on the aviation industry. The Lufthansa Group has responded quickly and comprehensively to set up the “ReNew” restructuring programme as a reaction to the crisis-related market collapse and the changed financial situation. Liquidity outflow was successfully reduced or stopped, fixed costs were reduced in the short term by over 30% and capital expenditures reduced by around two-thirds compared with the original planning.

C05 MISSION STATEMENT OF LUFTHANSA GROUP



By 2024, annual costs should structurally be around EUR 3.5bn lower than before the crisis. In addition to reducing material expenses across the board, adapting the headcount in flight operations and administration to future demand is an important instrument for achieving this goal. For this purpose, voluntary programmes have already been successfully implemented in Deutsche Lufthansa AG and Lufthansa Technik AG in particular and staff surpluses reduced in a fair and socially responsible manner. The necessary job reductions are also taking place as part of restructuring programmes at other airlines and companies in the Group. ➤ **Employees, p. 27ff., Financial strategy and value-based management, p. 20ff.**

In addition, the Lufthansa Group has actively used the crisis to accelerate the Group's transformation and create a good starting position to be successful in the future competitive environment. For example, the complexity was reduced by simplifying the base and AOC structure – among others by ending the flight operations of SunExpress Deutschland and passenger flight operations at Germanwings. Economies of scale will be realised consistently and flight operations with competitive structures and a good operating performance will be scaled up.

Production flexibility was also improved by reactivating temporarily parked aircraft and the use of seasonal wet-lease capacities, for example, to better compensate for market volatility and seasonality. At the same time, operational efficiency was increased, for example through the increased harmonisation of plane maintenance and processes and the implementation of digitalisation measures. Accelerated phasing out of old plane models and the simplification of the fleet structure contributed to lowering emissions, increasing fuel efficiency and reducing maintenance and staff costs. ➤ **Fleet, p. 24ff.**

In addition, the focus on the customer was sharpened by the digitalisation of customer touchpoints. The customers of Lufthansa Group have also benefited from the inclusion of new destinations in the route network and expanding the tourist segment via Eurowings Discover.

The transformation will continue into the future. The focus here is on exploiting market opportunities, further increasing customer orientation, accelerating digitalisation, corporate responsibility and sustainability and modern forms of work organisation.

Consistent focus on critical success factors

The strategic objective of the Lufthansa Group is to continuously align its services, business models and organisational structures with the complex and dynamic market environment.

This will make it possible to systematically make use of the opportunities arising from trends and changes to the market. Key success factors are a strict focus on customer needs, close attention to costs and responsible, sustainable business practices. Flexibility and adaptability are increasingly important as the market becomes more dynamic. ➤ **Opportunities and risk report, p. 76ff.**

Strict orientation to customer needs increases the attractiveness of the offering

In view of changes to the structures of supply and demand, an even greater focus on the customer is a core element of the Group strategy. The aim is to put customers, with their individual wishes and needs, at centre stage and further increase customer loyalty by implementing holistic measures which offer direct and tangible customer benefits. At the same time, the intention is to make the travel experience as simple, flexible and individual as possible.

For this reason, all the products and services along the travel chain are continuously reviewed – even during the coronavirus pandemic – and new, innovative and sustainable in-flight and ground products and services are developed. The three most important aspects here are digitalisation, individualisation and sustainability. The aim is to offer tailor-made customer information and self-service elements through digitalisation and to make the travel experience even more comfortable through increasing personalisation of products and services along the whole travel chain. Sustainability plays an increasingly important role, for example to meet the customer's wishes for CO₂-optimised flying.

A particular focus of the further development of the offering is on a seamless digital travel experience for the customer, which is linked with personal appreciation. By concentrating on products and services with direct purchase decision relevance that the customer is willing to pay for, costs are simultaneously managed. An example of this is the introduction of the new short-haul catering concept by the Network Airlines for which a range of high-quality food and drink is offered for a fee.

The automation of customer services, such as rebooking and providing additional digital information through various challenges, will be further improved. Customer-facing employees will also have greater decision-making authority in order to offer passengers an even better, more solution-oriented and individual service. Products will continue to be aligned with the respective needs of the customers, as with the different types of seat in Business Class, for example.

Consistent use of the potential for innovation and digitalisation is the foundation for increasing customer satisfaction and boosting efficiency in an operating environment determined by higher customer expectations and pressure to be efficient. Modular solutions will increasingly feature in product and service development to limit investment risks. The products and services of partners will also be used in areas in which the Lufthansa Group cannot provide them cost-effectively itself.

Lufthansa Group to focus increasingly on sustainability and social responsibility

Responsibility is the basis for commercial activity in the Group. The Lufthansa Group aspires to lead the airline industry with high standards in this area too. It therefore builds continuously on its environmental commitment, is dedicated to many social issues and treats its employees responsibly and fairly.

➤ **Combined non-financial declaration, p. 94ff.**

In terms of environmental policy, the Lufthansa Group aims to cut its net carbon emissions in half by 2030 compared with 2019 and supports the objective of making aviation carbon neutral by 2050. Within the framework of these net goals, the Lufthansa Group will set even more specific efficiency targets for reducing carbon emissions in the core business segment that are in line with the Paris Agreement and the rules from the internationally reputable Science Based Targets Initiative (SBTi) supported by the UN. The official registration for an evaluation from the initiative was submitted in November 2021 and an evaluation is expected in the third quarter of 2022.

In order to achieve these objectives, the Lufthansa Group is investing continuously in fuel-efficient aircraft accompanied by operational efficiency measures at the airlines. The newly created “CleanTech Hub” platform also bundles innovative technological initiatives, supports efficient flying and enables systematic cooperation with internal and external stakeholders. The Lufthansa Group also works with policymakers and partners in industry, technology and research to promote the industrialisation and use of sustainable fuels. The expansion of intermodal transport, in which the Lufthansa Group is already a market leader, is also being driven forward systematically in all home markets.

In addition, the Lufthansa Group includes sustainability aspects as a key factor in the design of its products and services. The Lufthansa Group platform Compensaid offers passengers with the Group’s own airlines and those travelling with other airlines the option of reducing CO₂ emissions by purchasing sustainable fuels (SAF) or offsetting them with high-quality climate action projects. The Lufthansa Group’s own business trips are also compensated for by this method.

In its product and service development, the Lufthansa Group systematically applies the principles “reduce – recycle – reuse – replace” to avoid waste. Here the aim is to replace disposable plastic products with environmentally friendly products wherever possible and to reduce plastic packaging overall. The focus here is increasingly on avoiding food waste.

In terms of responsibility for its employees, the Lufthansa Group attaches great importance to offering its staff an attractive working environment with transparent structures, efficient processes and a wide range of social benefits. In terms of social responsibility, the Company promotes greater equality of opportunity for disadvantaged people worldwide via the financial and material support for educational establishments and training provided by help alliance, the Group’s own aid organisation.

The central importance of sustainability for the Lufthansa Group is reflected in the fact that it is represented at the Executive Board level. Implementation of the sustainability strategy is further supported by its embeddedness in the remuneration of the Boards and the management levels and by the audited disclosures in the combined non-financial declaration. The Lufthansa Group also actively supports the measurement by numerous international ESG ratings, such as MSCI, Sustainalytics, CDP and Ecovadis, to ensure transparency about activities and progress at all times. In 2021 the Group also reported for the first time in line with the TCFD and SASB standards.

Dialogue with the Company’s stakeholders is also a component of sustainable corporate governance. This continuous exchange gives the Lufthansa Group a better understanding of its different interest groups’ needs, expectations and wishes, which permits their inclusion in the Company’s business practices.

Multi-airline business model ensures the success of the Lufthansa Group

The airlines form the core of the Lufthansa Group. They are positioned in the relevant market segments as high-quality carriers. Their nationwide presence in their home markets enables them to offer an attractive range of flights and route networks. The Lufthansa Group aims to maintain the leading market position of its airlines going forward. To this end, the Lufthansa Group’s traffic system is being transformed into a multi-traffic system, consisting of hubs, point-to-point traffic and intermodal offerings.

Lufthansa German Airlines and SWISS will continue to set standards for quality and cost-effectiveness in future. With their wide range of destinations and frequent flights, they offer the greatest connectivity of all the European airlines.

Austrian Airlines and Brussels Airlines connect their home markets with Europe and the world. At the same time, they combine a high-quality and attractive product with a low cost base, which can hold its own against low-cost carriers at the bases in Vienna and Brussels.

With Eurowings, the Lufthansa Group has an innovative and competitive offering in point-to-point traffic, which addresses both price-sensitive and service-oriented customers with low-cost basic fares and additional service options that can be booked flexibly.

The ongoing optimisation of the Group fleet has been accelerated as a result of the crisis. Key targets are the systematic renewal of the fleet to cut fuel consumption, reduce carbon emissions and trim the number of aircraft models by retiring and phasing out older, less efficient aircraft. Phasing out large aircraft, in particular the Airbus A380, also increases operational flexibility. In return, short-term opportunities were used to strengthen the Lufthansa Group fleet by additional new technology long-haul aircraft of the types A350-900 and Boeing 787-9. ➤ [Fleet, p. 24ff.](#)

In order to exploit opportunities in the long-distance leisure travel market, the range of long-haul connections from the hubs in Frankfurt and Munich targeting private travellers is being expanded. Eurowings Discover has supplemented and strengthened the touristic portfolio of the Lufthansa Group since July 2021 with a range of short-, medium- and long-haul routes. The passengers are thus able to benefit from the wide feeder network and the established ground processes of the Lufthansa Group Network Airlines. It also makes use of the global distribution strength of Lufthansa German Airlines.

It is precisely in the post-pandemic phase that cooperation with partner airlines is becoming more important, in order to strengthen market presence in key traffic regions. This is why the successful joint ventures in the Lufthansa Group are being developed and partnerships extended in all important markets. The range of intermodal transport solutions that are seamlessly integrated into the travel chain is also being extended. Although the pace of consolidation in the airline industry has slowed temporarily but significantly as a result of the coronavirus crisis, the Lufthansa Group still aims to drive the consolidation of the airline sector actively in line with strategic and financial objectives.

Aviation Services to be aligned with the needs of the airline group

With its Aviation Services, the Lufthansa Group includes several companies that are global leaders in their respective sectors. In order to secure and build on their successful positioning, the Aviation Services are permanently adapting their business models to changing markets and competitive environments. Lufthansa Cargo is increasingly participating in international eCommerce shipments through the planned use of the pure freight version of the medium-haul aircraft A321. Miles & More is the central programme for customer loyalty and is developed continuously by means of systematic alignment with customers' interests. This entails adapting the programme structure and making the Miles & More partnerships broader and deeper, for example.

In view of the fundamental impact of the coronavirus crisis, restructuring programmes are also being implemented at the Aviation Services companies to increase efficiency, cut costs and strengthen their competitiveness.

Consistent alignment of the Group as an Airline Group




The value contributed to the Lufthansa Group by every one of the Aviation Services is reviewed and refined continuously. In connection with its positioning as an airline group, the Lufthansa Group not only assesses the attractiveness of the individual market segments, it also determines whether it is the best owner for the respective company on the basis of existing or potential synergies. It may therefore make sense for certain Aviation Services companies to further develop outside the Lufthansa Group or together with partners.

Following the sale of LSG group's European business in 2020, the disposal of the LSG group's international business and AirPlus will be taken forward. The sale timing will depend on the recovery of the relevant markets that are key to achieving a fair valuation for the sale. (Partial) disposal and partnering options for Lufthansa Technik are also under review, taking into account the necessary capital expenditure, synergies and value creation potential.

In order to fully exploit potential synergies between the sub-areas and to minimise the coordination effort, the organisational structure of the Lufthansa Group is being developed further. The aim of the development is to achieve lean, flexible and efficient structures as well as quicker decision-making processes. This also aims to support cultural change and promote an agile and enterprise-based mentality. The airline management holding company being created will focus on maximising synergies in airline core processes.

FINANCIAL STRATEGY AND VALUE-BASED MANAGEMENT

C06 FINANCIAL STRATEGY

Sustainable increase of Company value			
			
	Return to value creation	Generation of strong free cash flows	Maintain financial stability
Focus	<ul style="list-style-type: none"> – Restructuring and transformation to adapt to changed market conditions – Improved return on capital – Continuous reduction of environmental impacts 	<ul style="list-style-type: none"> – Increase in operating result – Working capital management – Value-adding capital expenditure 	<ul style="list-style-type: none"> – Strategic liquidity reserve – Detachment of state stabilisation measures – Reduction in net indebtedness – Return to investment grade rating – Minimisation of financial risks
Targets	<ul style="list-style-type: none"> – Adjusted ROCE – Adjusted EBIT margin¹⁾ – Specific CO₂ emissions 	<ul style="list-style-type: none"> – Adjusted free cash flow¹⁾ 	<ul style="list-style-type: none"> – Adjusted net debt/Adjusted EBITDA

¹⁾ Derivation ↗ Earnings position, p. 40ff., Financial position, p. 44ff.

Financial strategy aims to increase Company value

The financial strategy of the Lufthansa Group seeks to increase its Company value in a sustainable manner. It will concentrate on three dimensions: returning to value creation, generating strong free cash flows and maintaining financial stability. The successful implementation of the financial strategy aims to contribute to reducing the debt built up during the coronavirus pandemic and strengthening the Lufthansa Group balance sheet so that the Group can successfully overcome future crises.

Returning to value creation

Sustainable value creation in the Company

The Lufthansa Group applies a value-based system of management. At its centre is the return on capital. This is measured by the Adjusted Return on Capital Employed (Adjusted ROCE). If Adjusted ROCE exceeds the weighted average cost of capital (WACC), the Company is creating value. The Lufthansa Group has set the objective of generating an adjusted ROCE of at least 10% from 2024, not including cash and cash equivalents.

The Company's profitability is measured by Adjusted EBIT. The adjustments eliminate non-recurring, non-operating effects and thus improve the presentation of the Company's operating performance. Circumstances that justify an adjustment are listed in a catalogue. This includes gains and losses on the disposal of assets, impairment losses and earnings attributable to other periods in connection with pension obli-

gations. Staff-related restructuring expenses and non-operating extraordinary expenses for legal procedures and company transactions not related to operating activities will also be included in the catalogue from 2022 onwards. From 2024, the Lufthansa Group aims to achieve an Adjusted EBIT margin of over 8%. ↗ Forecast, p. 136ff, T022 Reconciliation of results, p. 43.

The use of capital is also optimised by further improvements in working capital management and ensuring the value-creation of investments.

Finally the Lufthansa Group includes the specific CO₂ emissions in the control system in order to enable sustained value creation by reducing the environmental impacts. Information about the long-term goals for reducing carbon emissions can be found in the ↗ Combined non-financial declaration/Climate protection, p. 100ff.

The Company's value creation was negative in 2021 due to the crisis. The Adjusted ROCE margin after tax was -7.5% (previous year: -16.7%), whereas WACC was unchanged year-on-year at 4.2%. Adjusted EBIT came to EUR -2,349m in 2021 (previous year: EUR -5,451m). The Adjusted EBIT margin, i.e. the ratio of Adjusted EBIT to revenue, was therefore -14.0% (previous year: -40.1%). ↗ Earnings position, p. 40ff. Specific CO₂ emissions per passenger-kilometre were 101.6 grammes in 2021, 3% lower than the previous year (previous year: 105.2 grammes). ↗ Combined non-financial declaration/Climate protection, p. 100ff.

T010 CALCULATION OF ADJUSTED ROCE

	2021	2020	Change in %
in €m			
Revenue	16,811	13,589	24
Other operating income	1,711	2,072	-17
Operating income	18,522	15,661	18
Operating expenses	20,840	22,750	-8
Result from equity investments	2	-264	
EBIT	-2,316	-7,353	69
Adjusted EBIT	-2,349	-5,451	57
Interest on liquidity	-6	84	
Taxes (assumption 25% of EBIT + Interest on liquidity)	581	1,817	-68
ROCE¹⁾ in %	-7.4	-22.7	15.3 pts
Adjusted ROCE²⁾ in %	-7.5	-16.7	9.2 pts
Balance sheet total	42,538	39,484	8
Non-interest bearing liabilities			
of which liabilities from unused flight documents	3,340	2,064	62
of which trade payables, other financial liabilities, other provisions	5,136	3,856	33
of which advance payments, deferred income, other non-financial liabilities	3,287	4,305	-24
of which others	6,865	6,145	12
Capital employed	23,910	23,114	3
of which liquid funds	7,666	5,460	40
Average capital employed	23,491	24,068	-2
WACC in %	4.2	4.2	-

¹⁾ (EBIT + Interest on liquidity - 25% taxes) / Average capital employed.

²⁾ (Adjusted EBIT + Interest on liquidity - 25% taxes) / Average capital employed.

Restructuring forms basis for a return to profitable and sustainable growth

With a restructuring and transformation programme implemented throughout the Group, the Company has aligned itself with the modified market environment as a result of the crisis. The modifications it will make to the cost structures reflect the lower market volumes and create the conditions for a return to a positive operating result. Necessary measures to generate the planned structural cost savings of EUR 3.5bn annually by 2024 have been identified both in business segments and top-down. These include measures to reduce staff costs by a total of EUR 1.8bn. In addition to reducing headcounts, the focus is on permanently increasing productivity. Measures relating to the reduction in organisational and operational complexity as well as standardising and modernising the Group fleet should generate cost savings of around EUR 1.7bn. By the end of the 2021 financial year, over three quarters of the measures had been implemented, sustainably reducing annual costs by around EUR 2.7bn.

➤ **Business segments, p. 53ff.**

Generation of strong free cash flows

Generation of strong free cash flows is a principal goal of financial management

As a result of the coronavirus pandemic, the Company's net debt has increased. Thanks to strict liquidity management and successful financing measures, particularly the capital increase carried out in October 2021, the stabilisation measures in Germany could be repaid significantly earlier than originally planned. Nevertheless, indebtedness is significantly above the pre-crisis level. To further reduce debt, including the repayment of the additional state-guaranteed loans in Switzerland, Austria and Belgium drawn at the end of 2021, generating strong free cash flows is essential. In addition to increasing the operating result, the key levers for this are strict working capital management and disciplined investing activities. Through this, the Lufthansa Group plans to generate Adjusted free cash flow of around EUR 2bn each in 2023 and 2024.

Adjusted free cash flow in 2021 came to EUR -855m (previous year: EUR -3,669m). ➤ **Financial position, p. 44ff.**

Improvements in working capital management support cash flow generation

Working capital management will be intensified even beyond the acute crisis. This will include such measures as strict receivables management, improving payment terms with suppliers, process improvements in procurement and optimising inventories, in particular at Lufthansa Technik. In performance dialogues with business entities, cash flow plays an important role such that the organisation is continuously sensitised to its influence on company value.

Focused investing activities to maximise return on capital employed

Capital expenditure planned in all segments in 2020 and 2021 has been reviewed and postponed – whenever possible and economically viable – in order to minimise short-term cash outflows. In the coming years, the Group will increase its capital expenditure again in order to secure long-term profitable growth. As a matter of principle capital expenditure should not exceed the value of the depreciation and amortisation.

The Lufthansa Group will also invest further in the modernisation of the fleet, the on-board and ground product as well as infrastructure. Additional aircraft will mainly replace older, less efficient models. The allocation of new aircraft to the different airlines and bases is constantly optimised according to value-based criteria. This makes the investment profile more balanced and increases focus on the deployment of capital. The increased use of leasing will further limit capital usage. This will take the proportion of leasing above its current level of 12%.

The Lufthansa Group has reduced capital expenditure since the outbreak of the coronavirus crisis, in particular by delaying aircraft deliveries. In the reporting year, capital expenditure remains significantly below the pre-crisis level. Compared with the previous year, gross capital expenditure (excluding the purchase of shares) rose by 4% to EUR 1,329m (previous year: EUR 1,273m). Advance and final payments for aircraft and aircraft components along with aircraft and engine overhauls account for most of this. The increase compared with the previous year mainly resulted from higher advance payments for future aircraft deliveries. ➔ **C13 Primary, secondary and financial capital expenditure, p. 44**

Resumption of dividend payments targeted in the long-term

Shareholders are to again directly participate in the Company's success as soon as the Group's long-term financial stability has been restored. Before the coronavirus pandemic, the Lufthansa Group's dividend policy was to distribute to shareholders 20% to 40% of net profit, adjusted for non-recurring gains and losses.

However, the contractual terms of the Economic Stabilisation Fund's (ESF) stabilisation measures still rule out the payment of dividends. This applies until the complete sale of the shareholding of WSF (31 December 2021: 14.09%), which has been agreed to take place by October 2023.

On condition that the net profit for the year in the individual financial statements prepared in line with German commercial law for Deutsche Lufthansa AG permits a distribution of this amount, dividend payments would again be possible in the year following the end of the stabilisation measures. Until then, the Group will use its free cash flow primarily for repaying its financial liabilities, including the state stabilisation measures.

Maintaining financial stability

Liquidity should be permanently between EUR 6bn and EUR 8bn

The Lufthansa Group has decided to permanently hold liquidity of between EUR 6bn and EUR 8bn to protect against crises. This represents a significant increase compared to the pre-crisis level. For capital efficiency reasons, a material part of the strategic liquidity reserve will be held in the form of a revolving loan facility that will be financed by a consortium of banks.

Lufthansa Group benefits from good capital market access

In the 2021 financial year, the Lufthansa Group refinanced itself successfully and to a significant extent in the capital market. By placing several bonds, issuing borrower's note loans, aircraft financings and other external financing, a total of EUR 6.1bn of debt was raised. In addition, by means of a capital increase in October 2021 a further EUR 2.2bn was raised through the issuance of around 598 million new shares.

➔ **Financing, p. 46f.**

State stabilisation measures in Germany repaid ahead of time

The successful financial measures formed the basis for the early repayment of stabilisation measures in Germany.

After the successful issuance of a bond, the EUR 1bn loan from the Kreditanstalt für Wiederaufbau (KfW) was repaid as early as February 2021. After the completion of the capital increase, the Company was able to repay the funds obtained from the Silent Participation I from WSF totalling EUR 1.5bn in October 2021 and therefore significantly earlier than planned. The Silent Participation II totalling EUR 1.0bn was repaid in November 2021 and the unused part of the Silent Participation I was terminated. Therefore the Lufthansa Group repaid or terminated all loans and silent participations provided by the Federal Republic of Germany.

By the end of the 2021 financial year, the companies in the Lufthansa Group had received around EUR 5.0bn of the stabilisation measures out of an original total of EUR 9.0bn. EUR 3.6bn of the total has already been repaid or included as part of the capital increase. At the end of the 2021 financial year, loans totalling EUR 1.0bn were available for drawdown in Switzerland. Other unused funds in Germany were terminated.

As of year-end 2021, the Company therefore had around EUR 9.4bn of available liquidity. This includes the stabilisation measures in Switzerland that have not yet been drawn and available credit lines. ➔ **Financing, p. 46f.**

Reducing debt as the core goal of financial strategy

After repaying the stabilisation measures in Germany, the focus is now on the long-term reduction in the level of indebtedness. Cash inflows from the operating business and proceeds from the disposal of non-core business segments are to contribute to reducing net debt.

At the end of the 2021 financial year, net debt amounted to EUR 9,023m. It was therefore 9% lower than in the previous year (previous year: EUR 9,922m). Compared with the end of the 2019 financial year, net debt has increased by EUR 2.4bn.

➤ Net assets, p. 49f.

Use of diversified finance sources

A mix of different instruments is to be used for future borrowing, above all aircraft financing, bonds and borrower's note loans. Optimising the financing mix should reduce financing costs, maintain a balanced maturity profile and diversify the Lufthansa Group's portfolio of creditors.

➤ C16 Maturity profile of borrowings, p. 47.

Aim is to return to investment grade rating

Before the coronavirus crisis, the rating agencies Standard & Poor's and Moody's both rated the Lufthansa Group as investment grade (31 December 2019: Standard & Poor's: "BBB", Moody's: "Baa"3). As a result of the coronavirus crisis and its impact, both agencies downgraded their rating. At the end of the reporting year, Standard & Poor's rated the Lufthansa Group as "BB-" and Moody's as "Ba2". Scope Ratings rated the Lufthansa Group at "BBB-" and therefore again in the investment grade range. The outlook from Moody's ratings and Scope continues to be "negative" and Standard & Poor's raised its outlook to "stable" in November 2021.

T011 DEVELOPMENT OF RATINGS

Rating/outlook	2021	2020	2019	2018	2017
Standard & Poor's	BB-/stable	BB-/negative	BBB/stable	BBB-/positive	BBB-/stable
Moody's	Ba2/negative	Ba2/negative	Baa3/stable	Baa3/stable	Baa3/stable
Scope Ratings	BBB-/negative	BBB-/negative	BBB/stable	BBB-/positive	BBB-/positive

The Group aims to restore its investment grade rating with all of the significant rating agencies by 2024. Investment grade ratings for the Company's debt ensure low funding costs and financial flexibility as a result. The conditions for an investment grade rating are a return to a positive operating result and a further reduction in net indebtedness.

Gearing, measured by the ratio of Adjusted net debt to Adjusted EBITDA, should be reduced to a figure of less than 3.5. With Adjusted net debt, the ratio takes into account both traditional net debt (including the financial obligations arising from Group leases, primarily for property and aircraft) and pension provisions. The Group assumes that this will decrease in the long-term due to the ongoing strong income from pension assets. It therefore intends to keep the additions to pension assets as low as possible and to mainly limit them to the regular additions to ongoing defined benefit obligations (DBO).

At the end of 2021 the Adjusted net debt/Adjusted EBITDA indicator was not meaningful as a result of the negative EBITDA.

T012 ADJUSTED NET DEBT/ADJUSTED EBITDA

	2021 in €m	2020 in €m	Change in %
Net indebtedness ¹⁾	8,776	9,675	-9
Pension provisions	6,676	9,531	-30
Adjusted net debt	15,452	19,206	-20
Adjusted EBIT	-2,349	-5,451	57
Depreciation and amortisation	2,259	2,561	-12
Adjusted EBITDA	-90	-2,890	97
Adjusted net debt/ Adjusted EBITDA	not meaningful	not meaningful	-

¹⁾ In order to calculate net indebtedness, here 50% of the hybrid bond issued in 2015 (EUR 247m) has been discounted. Calculation of net indebtedness ➤ p. 50.

Structured risk management minimises finance risks

The Group's financial stability is also ensured by means of integrated risk management. Hedging fuel, exchange rate and interest rate risks minimises the short-term financial risks for the Lufthansa Group. The hedges smooth price fluctuations by means of rule-based processes. Changes in fuel costs could therefore be taken into account in pricing at an early stage.

At the start of the reporting year, fuel hedging for 2022 and the subsequent years was restarted after it had been paused temporarily due to the outbreak of the coronavirus pandemic. 65% of the planned fuel requirements were hedged over a period of 24 months. ➤ Opportunities and risk report, p. 76ff., Note 45 to the consolidated financial statements, p. 225ff.

Fleet and route network

Optimisation of the fleet structure using decommissioning and reduction. | Short-term opportunities drive modernisation. | Fleet strategy aims to standardise and reduce number of aircraft models. | Route network strongly influenced by coronavirus pandemic.

FLEET

T013 GROUP FLEET – NUMBER OF COMMERCIAL AIRCRAFT

Lufthansa German Airlines including regional airlines, Germanwings and Eurowings Discover (LH), SWISS including Edelweiss (LX), Austrian Airlines (OS), Eurowings (EW), Brussels Airlines (SN) and Lufthansa Cargo (LCAG) as of 31 Dec 2021

Manufacturer/type	LH	LX	OS	SN	EW	LCAG	Group fleet	of which lease	Change compared with 31 Dec 2020
Airbus A220		30					30		+1
Airbus A319	44			16	36		96	27	-10
Airbus A320	97	30	29	16	56		228	32	-7
Airbus A321	74	10	6		2		92	1	+1
Airbus A330	25	16		9			50	8	-2
Airbus A340	34	9					43		
Airbus A350	17						17	1	
Airbus A380	14						14		
Boeing 747	27						27		-2
Boeing 767			3				3		-3
Boeing 777		12	6				18	2	
Boeing 777F						15 ¹⁾	15	5	+2
Boeing MD-11F							0		-5
Bombardier CRJ	31						31		-4
Bombardier Q Series					6		6	6	-15
Embraer	26		17				43		
Total aircraft	389	107	61	41	100	15	713	82	-44

¹⁾ Partly operated by AeroLogic, of which two aircraft attributed pro rata.

Fleet to be adapted to modified market conditions and modernised

At the end of 2021, the Lufthansa Group fleet comprised 713 aircraft. The average age of the aircraft in the fleet was 12.7 years (previous year: 12.5 years).

In the 2021 financial year further important steps were undertaken to reduce the operational fleet in line with requirements. This will help adjust the flight offer and the capacity of the fleet to the reduced demand, which is expected to remain lower in the longer term as a result of the crisis. In particular, this entails the retirement of larger four-engine aircraft, which are less fuel-efficient. At the same time the Group is taking advantage of market opportunities to purchase modern aircraft at attractive conditions. Overall the speed of fleet modernisation is increasing.

Fleet reduced by 44 aircraft in the reporting year

The fleet shrank year-on-year by 44 aircraft. A total of eleven new aircraft were added to the fleet, compared with 55 retirements. The additions to the fleet covered ten new aircraft (one Boeing 777F, five Airbus A321neos, three A320neos and one A220-300) as well as one used leased 777F. In contrast, 36 older, comparatively inefficient aircraft were sold in 2021 (five Boeing MD-11Fs, two 747s, three 767s, three A321s, six A320s, five A319s, four Bombardier CRJ900s and eight Bombardier Q Series) and the leasing agreements for 19 aircraft were ended. Since the start of the coronavirus crisis, 83 aircraft have been retired. In the same period, i.e. since the end of 2019, 33 aircraft have been added.

In the long-haul fleet, six further A380s were decommissioned. They will be returned to Airbus between October 2022 and November 2023 as planned in 2019 to optimise the fleet. Further eight A380s are in so-called long-term storage mode. They are no longer included in flight planning. In addition to twelve A340-600s in long-term storage, another five aircraft of the same type were prepared for temporary flight operations from 2022 with a base in Munich to offer passengers a first-class product there.

In addition to the aircraft scheduled for permanent decommissioning, an additional around 130 aircraft from all Group airlines had been temporarily decommissioned by the end of year. Through the specific selection of the locations by terms of cost efficiency and technical capacity, prompt re-integration to the operational fleet can be ensured if required in order to retain flexibility. Further flexibility exists in moving aircraft between the Lufthansa Group airlines, for example from Lufthansa German Airlines to Eurowings or Eurowings Discover.

Ongoing fleet modernisation drives cost efficiency and supports reduced emissions

In spite of the difficult situation, the Lufthansa Group has made important decisions in 2021 to continue fleet modernisation.

In order to drive the fleet modernisation at the Lufthansa Group airlines forward more quickly, five additional 787-9 aircraft were ordered in the reporting year, which should enter operations with Lufthansa German Airlines in 2022. In addition, the order for A350-900 aircraft was effectively supplemented by two additional aircraft. Four additional A350-900s were obtained via leases and are being integrated into the Lufthansa German Airlines fleet from the start of 2022.

The procurement of 14 ultramodern A350-900 and 787-9 long-haul aircraft will sustainably increase the efficiency of the fleet. The aircraft have up to 30% lower fuel consumption and carbon emissions compared with their direct predecessor models. They therefore make an important contribution to the ongoing development of the long-haul fleet in order to achieve lower current costs, a reduced fleet range and more sustainable flying. Nine of these aircraft should be added to the fleet in 2022 and will therefore ensure a significant increase in efficiency in the short-term.

At year-end 2021, there were 175 aircraft on the Lufthansa Group's order list. There are also options to buy a further 74 aircraft.

T014 FLEET ORDERS LUFTHANSA GROUP

	Fixed orders ¹⁾	Deliveries	Additional options
Long-haul fleet			
Airbus A350	28	2023 to 2029	
Boeing 787	25	2022 to 2026	20
Boeing 777	20	2023 to 2027	24
Boeing 777F	1	2024	
Short-haul fleet			
Airbus A220			30
Airbus A320	66	2022 to 2026	
Airbus A321	35	2022 to 2027	
Total aircraft	175	2022 to 2029	74

¹⁾ Excluding contracted leases.

Flexible fleet planning enables adaptation to market developments

In the 2022 financial year, the Lufthansa Group expects to take delivery of up to 29 aircraft (four A350-900s, five 787-9s, two A321P2Fs, and 18 aircraft from the A320neo family). In line with the planning, around 45 aircraft are to be sold or their leases ended in 2022. This planning is reviewed continuously. The Group can modify the capacity on offer by extending temporary decommissioning and delaying planned retirements to match demand if it is stronger or weaker than planned.

Long-term fleet strategy aims to standardise and reduce aircraft models

Aircraft from Airbus and Boeing make up the majority of the Lufthansa Group fleet. Aircraft from Bombardier and Embraer are also deployed on short-haul routes.

As part of the long-term fleet strategy, the number of operated aircraft models is continuously being lowered to reduce complexity throughout the Group. The order placed in 2019 for 20 new A350-900s and 20 new 787-9s remains the basis for the structural modernisation and optimisation of the long-haul fleet. These orders were expanded in the 2021 financial year to include five A350-900s and five 787-9s. Through the use of short-term opportunities, the 787-9s are expected to already strengthen the Lufthansa Group fleet as additional new-generation long-haul aircraft in 2022. In addition, four A350-900s leased aircraft will also be added to the fleet in 2022. In the short term, the Group will deliberately deploy the most efficient aircraft to serve the current route network, in particular very new 777-300ERs, A350-900s and aircraft from the A320neo family. Lufthansa Cargo is to take over permanently modified A321P2F freighters in 2022 in order to offer additional freighter capacity within Europe and on medium-haul routes.

By no later than the middle of the decade, the number of long-haul aircraft operated by the Group will be reduced to eight. In 2021 fleet diversity was reduced by a further type with the complete phase-out of the MD-11F. The complete retirement of the 747-400, 777-200, A340-600, A340-300, A330-200 and 767-300 will be compensated by the introduction of the new 787-9 and 777-9X. The Group expects significant cost savings from these measures, especially in the areas of crew training, maintenance and operations.

The Lufthansa Group continues to own a significant share of the fleet

Overall, around 88 % of the total fleet is owned by the Lufthansa Group, and about 12 % is leased. More than 84% of the owned fleet is unencumbered. This includes 38 aircraft in companies that were pledged as part of the state stabilization measures. These aircraft can only be pledged as collateral under financing arrangements whose proceeds are used to repay the state stabilisation measures.

The owned aircraft provide a high degree of operational flexibility. In order to respond flexibly to fluctuations in demand and adjust capacity at short notice, depreciated aircraft can at short notice remain in service for longer or be retired before their planned phase-out. The aircraft can also be used as collateral in financing activities. In contrast, leases enable a quicker response to market and technological changes. They also reduce capital usage when compared with purchasing new aircraft. The Group therefore intends to expand the leasing share of the fleet in the medium to long-term.

➤ **Financial strategy and value-based management, p. 20ff.**

ROUTE NETWORK

Lufthansa Group route network remains adversely affected by the coronavirus crisis

As part of their multi-hub strategy, the Network Airlines offer their passengers a wide range of flights via the Group's global hubs in Frankfurt, Munich and Zurich as well as the national hubs in Vienna and Brussels. It is complemented by the route networks of the alliance and joint venture partners, which offer extensive transfer connections. Eurowings provides a comprehensive range of point-to-point connections for European short-haul destinations, in particular from German-speaking countries. Eurowings Discover, the new holiday airline from the Lufthansa Group which started operations in Frankfurt in July 2021, and Edelweiss in Zurich focus on touristic destinations for short-, medium- and long-haul and thus supplement the capacity from the hubs.

The coronavirus pandemic has had a severe impact on the Lufthansa Group airline's route network during the course of the 2021 financial year. In particular in the first half of the year, the number of routes and frequencies offered was significantly below the level before the crisis due to travel restrictions. At the start of the summer months, the route network was expanded successively with a special focus on tourist destinations inside Europe. Over the course of the year, the frequencies to North American destinations were increased, in particular after the USA opened to vaccinated travellers from Europe in November. At the end of the reporting year, over 90% of the destinations offered in the year before the crisis were being offered again.

Flexible restoration of the route network with a focus on touristic

The Lufthansa Group aims to provide its passengers with its usual broad range of flights again as quickly as possible. Since the Group was again able to offer most destinations at the end of 2021 in comparison to the period before the crisis, the frequencies will be increased to achieve the best possible connections. The further development of the coronavirus pandemic will remain crucial to the pace of capacity recovery.

The touristic segment continued to gain importance in the reporting year. Most of all, the airlines Eurowings and Edelweiss as well as the offer of Eurowings Discover ensure that the Lufthansa Group is well positioned to expand its market share in this segment. The Group expects to benefit from the expected quicker recovery of this customer segment.

Employees

Company is adapting to new market conditions and helping employees to cope with the crisis. | Voluntary redundancy programmes are making a significant contribution to the socially responsible reduction of some 10,000 jobs in Germany. | Numerous agreements with labour union partners put the Company on a viable and flexible footing. | Negotiations are ongoing for follow-on agreements with cockpit and ground staff at Deutsche Lufthansa AG.

HR management sets the Company up for new market conditions

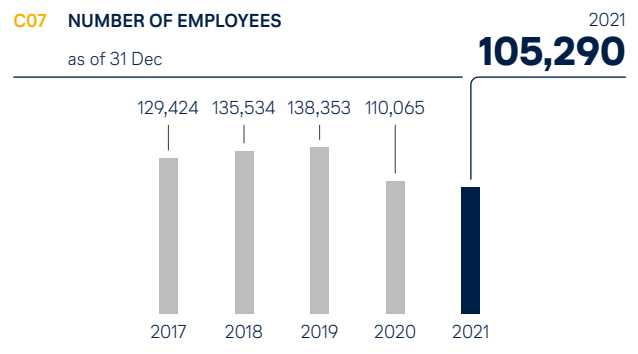
Despite the improvements made in the course of 2021, the Lufthansa Group assumes that the effects of the coronavirus pandemic will continue to weigh on the Company for several years.

The Lufthansa Group is responding to this situation by adapting its fleet and number of employees to the structural market changes and by ensuring improvements in productivity. In the reporting year, the Lufthansa Group made great progress in this regard.

With their know-how and wide-ranging talents, the employees of the Lufthansa Group are a key factor in its commercial success. They embody the Lufthansa Group's ambition to be considered premium airlines by passengers and shape the passenger experience. Moreover, they ensure reliable and productive operations and efficient administrative processes. The Lufthansa Group therefore attaches great importance to accompanying and supporting them in this transformation and restructuring phase.

Reduction of 33,000 jobs in the crisis period

At year-end 2021, the Lufthansa Group had 105,290 employees worldwide (previous year: 110,065). This meant that the number of employees decreased by 4,775, or 4%. The number of employees was 33,063 or 24% lower than before the crisis (31 December 2019: 138,353). Translated into full-time positions, employment was 89,607 at the end of 2021 (previous year: 92,502). This represents a decline of 2,895, or 3% against the previous year.



In Germany, there were 60,517 employees: this is 3,541, or 6%, fewer than in the previous year (previous year: 64,058). This represents 58% of the total workforce (previous year: 58%). The number of employees outside Germany decreased by 1,234 or 3% to 44,773 (previous year: 46,007).

As of the reporting date, the average age of the workforce was 43.2 years (previous year: 42.4 years). Average seniority was 14.3 years (previous year: 13.9 years). 32% of employees worked part-time in the reporting year (previous year: 34%). Fluctuation came to 15% (previous year: 19%).

At year-end, 1,046 apprentices were in training for around 30 occupations and various combined degree courses offered by the Lufthansa Group worldwide (previous year: 1,320).

Voluntary programmes and short-time work help to avoid redundancies

The number of employees declined in the reporting year, mainly due to the broad take-up of voluntary redundancy programmes, which were offered to all professional groups at Deutsche Lufthansa AG, to the employees of Lufthansa Technik AG and other Lufthansa Group companies in Germany. These helped to reduce the workforce in a socially responsible way and to avoid compulsory redundancies.

A total of around 4,500 employees (1,800 ground staff, 400 cockpit staff, 900 cabin crew and 1,400 employees at Lufthansa Technik) decided to leave the Group in the context of voluntary redundancy programmes. 800 employees already left the Lufthansa Group in the course of the reporting year. The programme for the cabin crew will still run until the end of March 2022.

Short-time work helped to reduce redundancies and mitigate the impact of the crisis. Up to 45,000 employees in Germany were on short-time work for all or part of the reporting year. Up to 18,000 employees were on schemes similar to Germany's short-time work in the Group's other home markets Switzerland, Austria and Belgium. The support payments made it possible to reduce the Group's staff costs significantly.

➤ Earnings position, p. 40ff.

In contrast to most of the other companies in the Group, the number of employees was increased at Eurowings and Eurowings Discover in order to make the best possible use of the growth opportunities in their respective market segments. The lower cost structures there compared with other Group companies made it possible to achieve structural improvements to productivity. These are necessary in order to operate profitably on a sustainable basis, especially in the touristic segment.

Reduction of 10,000 jobs agreed in Germany

In Germany, the reduction of 10,000 jobs compared with the figure at year-end 2020 has either already taken place or is

contractually agreed for 2022 and beyond. This also includes age-related departures. New recruitment at Eurowings and Eurowings Discover is not included. In addition to the departures in 2021, roughly another 2,500 employees will leave the Lufthansa Group in 2022 as part of the aforementioned voluntary redundancy programmes. Around 250 employees will follow in 2023 and 2024.

Outside Germany, all job reduction targets in the "ReNew" restructuring programme were also met by year-end 2021.

In addition to the voluntary redundancy programmes, severance agreements and early retirement schemes helped to reduce the workforce in a socially responsible way.

Further utilisation of short-time work helps bridge the crisis period

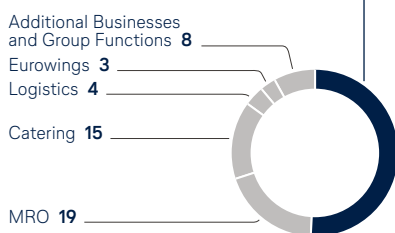
The Group will continue to use short-time work in 2022 for as long as this legal instrument remains available. This safeguards jobs while business operations remain significantly below the precrisis level. Vacancies continue to be filled internally and recruitment from outside the Company remains limited to isolated cases. ➤ Earnings position, p. 40ff.

Crisis agreements in all Group companies support recovery from the crisis

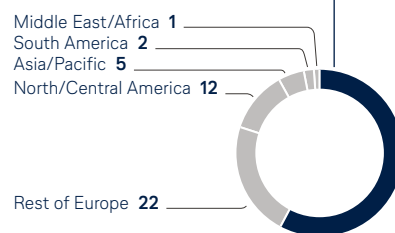
In addition to job reductions and short-time work, steps to reduce staff costs particularly included crisis agreements, which were signed for almost all groups of employees at all the main Group companies in 2020 and 2021.

Crisis agreements were concluded with the Vereinigung Cockpit pilots' union in August and December 2020 for the pilots at Lufthansa German Airlines, Lufthansa Cargo, Lufthansa Aviation Training and a subgroup of the Germanwings pilots. The measures mainly cover a reduction in working hours with an equivalent salary adjustment and the reduction in employer contributions to the pension fund. This is intended to achieve savings of more than half a billion euros in the period August 2020 to March 2022.

C08 EMPLOYEES BY BUSINESS SEGMENTS NETWORK AIRLINES 51 in %



C09 EMPLOYEES BY REGION GERMANY 58 in %



A package of measures to overcome the economic impact of the crisis was signed on 24 June 2020 with UFO, the independent flight attendants' union, on behalf of the cabin crew of Deutsche Lufthansa AG. This comprised cost savings of around half a billion euros by the end of 2023. The package of measures includes the suspension of pay increases, a reduction in flight hours with a corresponding decrease in pay, and a temporary reduction in contributions to Company pension plans. Both parties also agreed on a package of voluntary measures and redundancy programmes. These measures include unpaid leave, voluntary measures to reduce working hours further and assisted early retirement. As a result of the crisis package and the ongoing supplementary voluntary programme, the Company assumes that it can avoid redundancies for operational reasons for Deutsche Lufthansa AG cabin crew for the duration of the crisis.

Lufthansa agreed on a crisis package with the ver.di trade union on 10 November 2020. It applies to the ground staff of Deutsche Lufthansa AG, Lufthansa Technik AG and Lufthansa Cargo AG, as well as to other subsidiaries. Core elements included the cancellation of holiday and Christmas bonuses including supplements in 2020 and 2021, the reduction of supplementary payments for short-time work and the cancellation of the salary round originally planned. In exchange, redundancies were ruled out until 31 March 2022 and a new wage agreement was signed which creates temporary incentives for a change to full retirement.

Wide-ranging crisis agreements were reached with the unions representing cabin and ground staff at SWISS. The current agreement for cabin crew includes the conditions for redundancies, cost reductions for 2021 to 2023 and other measures. On the ground, the crisis package that will follow the end of short-time work includes a reduction of the 13th monthly pay and the cancellation of performance-related bonuses for 2021 to 2023. A reduction in employer's risk contributions to the pension scheme was also agreed for the period January 2021 to December 2022.

In addition to the temporary measures mentioned, (early) retirement and natural fluctuation without replacement hires are being used to reduce structural staff costs. 500 SWISS employees' contracts were terminated as part of the restructuring.

Crisis agreements at Austrian Airlines include the declaration of intent that short-time work will be used for as long as possible, the agreement on a salary waiver of up to a year after short-time work comes to an end, and various other rules to adapt productivity to the demands of the crisis. Various schemes were also drawn up for employees in 2021 (termination of employment, voluntary reduction of working

hours and early retirement for employees approaching retirement age), which will also be applied in 2022 if they remain cost-effective. Twelve Dash-8/400 captains received redundancy notices when the entire fleet was grounded.

Brussels Airlines signed new collective bargaining agreements for all professional groups, which enable the airline to offer competitive staff costs. In addition, almost 700 full-time jobs were cut compared with 2019 on the basis of a socially responsible programme of redundancies, some of which were due to operational reasons. In addition, the Dusseldorf station base was closed as of 30 October 2021. New collective wage agreements were signed for existing staff at Brussels Airlines and a new collective agreement on flight/service times for the flight staff. An agreement on part-time work was also reached with cockpit staff, which is intended to come into effect in 2022.

Eurowings and the Vereinigung Cockpit pilots' union agreed in March 2021 on a wage agreement to cope with the coronavirus crisis that runs until 30 September 2022, as well as an outline paper for the recruitment of cockpit crew at Eurowings Germany. In the wage agreement "crisis", the parties agreed on a contribution to overcoming the crisis from the cockpit staff at Eurowings Germany (consisting of reductions in working hours and a corresponding salary waiver, as well as reductions in holiday and Christmas bonuses).

Eurowings and the trade union ver.di signed a crisis agreement for the cabin crews at Eurowings Germany in January 2021. Under the agreement, employees were protected against dismissal until 31 December 2021. In exchange, reductions in Christmas and holiday bonuses were agreed, among other things. Eurowings and ver.di agreed on a new wage settlement for cabin crew on 25 January 2022 which will apply until 31 December 2023. The new wage agreement contains changes to the pay for overtime flying hours, a productivity bonus depending on the number of hours flown, a special coronavirus bonus, an inflation-linked payment and other payments dependent on production. Other elements of the new collective agreement include an end to profit-sharing, the conversion of temporary contracts into permanent employment, promotions to the position of purser and the obligation to negotiate a future-proof model for work rosters.

Lufthansa Cargo had already launched the ProFlex restructuring and cost-cutting project in 2019 in response to the global airfreight crisis at the time. Sustainable capacity reductions for ground operations were decided on in this context and a decision was taken to retire the Boeing MD-11F ahead of schedule. The job cuts for ground staff agreed as one of the restructuring goals for Germany were largely completed by the end of 2021 in Germany and achieved in full elsewhere.

In 2021, Lufthansa Technik implemented the crisis agreements signed the year before. These include dismissals during the trial period, short-time work, voluntary redundancies and the termination of contracts with contract workers. Six decentralised line maintenance stations were also closed, which resulted in 700 jobs being cut. The governance structure of Lufthansa Technik was streamlined and the number of managers reduced by 20% as part of the reorganisation. Moreover, agreements were reached on the sale of several subsidiaries. ➤ **MRO business segment, p. 68ff.**

Additional agreements with the labour union partners and other voluntary programmes will safeguard future viability

The Lufthansa Group intends to convert expiring agreements into follow-on and long-term agreements in 2022. The aim is to achieve improvements in costs and productivity by means of long-term, economically viable agreements with the collective bargaining partners. These enable sustainable success, as well as predictability and security for both the Company and its employees.

This particularly concerns the short-term crisis agreements signed in 2020 for the cockpit and ground staff of Deutsche Lufthansa AG in Germany. The crisis agreements signed with the Vereinigung Cockpit pilots' union expire on 31 March 2022. Deutsche Lufthansa AG is currently in constructive talks with the Vereinigung Cockpit pilots' union about short-term crisis contributions and long-term structural measures. Negotiations on a new wage agreement for cockpit staff are ongoing at SWISS too.

The Group is also reviewing additional voluntary redundancy programmes to reduce possible remaining staff surpluses.

Human resources management provides crisis-management support for employees

Coping with the coronavirus crisis places high demands on employees and leads to enormous stress. In this respect, in the 2021 financial year as well, the Group's human resources management aimed to provide employees with the best possible support in coping with the crisis. An important aspect of achieving this was to create a high level of transparency about upcoming restructuring measures and to ensure timely and continuous communication.

The results of the Company-wide employee survey conducted once again in the reporting year served as a point of reference in overcoming the crisis. The strategic fields of action identified in previous years will be pursued further. A satisfying work-life balance, a holistic approach regarding equal opportunities and all dimensions of diversity, and intensive talent management remain key action areas for realising the Lufthansa Group's aim of a fair partnership with its employees so that it remains an attractive employer. The planned recruitment of nearly 500 young people who will start an apprenticeship or degree course with the Group in 2022 underlines the importance the Lufthansa Group places on training and developing young talents. ➤ **Combined non-financial declaration/Employee concerns, p. 116ff.**

Research and development

The Lufthansa Group and its companies work continuously – both individually and across segments – on innovative services and products. Most of these activities are run separately in the individual segments since they focus on different areas.

➤ **Business segments, p. 53ff.**

The Lufthansa Group passenger airlines are focusing on further improvements to the customer's travel experience along the entire travel chain. For this reason, a new catering concept focusing on high-quality food and sustainable packaging was introduced in the first half-year of 2021 at Lufthansa German Airlines, SWISS and Austrian Airlines. The concept was developed in cooperation with Retail inMotion, an LSG group subsidiary.

The customer experience is improved further, particularly by the expansion of digital communication channels and services. By creating a central interface in which customers can access all offerings relevant to them from the Group airlines and which bundles all information to offer the best possible service, the Group has simplified booking processes and can offer customised products and services.

In September 2021, Lufthansa German Airlines introduced a new innovative cabin in the new aircraft from the Airbus A320 family. Travel comfort has been noticeably improved for passengers by elements like larger compartments and a modern lighting concept. The new cabin will in future be deployed with SWISS, Brussels Airlines and Eurowings.

Eurowings implemented the verification of additional documents required because of the coronavirus pandemic, such as the vaccination certificate or negative test result, directly in its online check-in process at an early stage. This increases customer convenience because long queues for document checks before departure can be avoided. Similar concepts were introduced shortly afterwards by other Group airlines.

Lufthansa Cargo is involved in researching and using alternative, sustainable fuels and in April 2021 undertook the first carbon neutral freight flight. In addition, since October 2021, Lufthansa Cargo has been one of the first customers of the world's first power-to-liquid (PtL) fuel system in Emsland, Lower Saxony. PtL is considered to be a key technology for carbon neutral flying using synthetic fuel. ➤ **Combined non-financial declaration/Climate protection, p. 100ff.**

In addition, Lufthansa Cargo is further expanding its digital services. The implementation of the Lufthansa Cargo "mobile digital handling" initiative is an important step towards replacing paper-based processes with digital solutions.

The independent platform AVIATAR developed in-house by Lufthansa Technik supports their customers with managing their complex fleet operations and progresses the digital transformation of aviation.

In addition, Lufthansa Technik, alongside BASF, is starting the regular use of the innovative fuel-saving surface technology "AeroSHARK". All Lufthansa Cargo Boeing 777 freighters will be equipped with the new surface from 2022.

In the reporting year, Lufthansa Technik also launched a pilot project to test maintenance and ground processes for hydrogen aircraft in cooperation with Hamburg Airport, the German Aerospace Center and the Center of Applied Aeronautical Research. An Airbus A320 previously in service with Lufthansa German Airlines is to be converted into a stationary field laboratory in 2022 for this purpose.

In addition to new catering concepts for its airline customers, the LSG group is also developing very special products, like the premium meals for ESA astronaut Matthias Maurer on board the International Space Station (ISS). Thanks to innovative food technology, these can be stored for two years at room temperature – a sustainable and attractive solution also for airline catering, retail and home delivery business.

Innovation and digitalisation are being advanced by the Lufthansa Group as well as in close collaboration with the Lufthansa Innovation Hub. It works on new digital business models, partnerships and strategic investments along the entire travel and mobility chain.

For example, the Lufthansa Group airlines offer Compensaid, a project developed in the Innovation Hub that enables passengers to offset their CO₂ emissions by means of high-quality climate action projects or reduce them by purchasing sustainable aviation fuel (SAF). Lufthansa Cargo customers have also been able to transport their freight in a carbon-neutral manner since September 2021.

Legal and regulatory factors

The Lufthansa Group is subject to numerous national and European regulations. These regulations have an impact on costs and – if they do not cover non-European competitors – the international competitiveness of the Company.

Future climate protection policy in Germany and Europe is particularly relevant in this respect, but also laws on data and consumer protection, air traffic taxes, aviation security fees, take-off and landing rights or night-flight bans affect the Lufthansa Group and the whole aviation sector.

There are also still many national and international regulations related to the coronavirus pandemic that impose restrictions on global air traffic. Travel restrictions, quarantine requirements and the frequently changing administrative barriers for arrivals and departures make the use of existing travel rights more difficult.

In summer 2021, the European Commission presented regulatory proposals for how European climate protection objectives are to be achieved with its “Fit for 55” legislative package. Out of a total of 13 legal initiatives, three are particularly relevant for aviation: the reform of emissions trading (EU-ETS), the mixing quota for sustainable aircraft fuel (ReFuelEU Aviation) and the proposal to introduce a kerosene tax (energy tax directive). In the proposed form, all three measures would be negative in competition terms and lead to rapid increases in costs for European airlines. The implementation of these proposals is expected to significantly worsen the recovery of Network Airlines based in the EU and to weaken their creditworthiness. In the further legislative process, the Lufthansa Group believes improvements are required to maintain the competitiveness of the airlines based in the EU and to avoid the shifting of traffic and emissions that is known as the carbon leakage effect. ➔ **Combined non-financial declaration/Climate protection, p. 100ff.**

In this context, the new “traffic light” coalition in Germany has agreed to create a fair international competition framework in aviation in its government programme. According to the coalition partners’ agreement, an EU-wide regulation should will be introduced so that flight tickets cannot be sold at a price below the taxes, supplements, fees and charges. There are also efforts to introduce an air traffic tax across Europe like the one collected in Germany. These intentions and plans are considered positive overall from the Group’s perspective because they are aimed equally at sustainability and competitiveness.

However, one-sided tightening of consumer protection as mentioned in the coalition agreement can in contrast lead to rising costs. These include efforts to introduce insolvency protection for flights, automating compensation payments, changing payment terms and banning no-show clauses in general terms and conditions.

The draft of a new regulation for the Single European Sky that was published by the European Commission in September 2020 aims to increase the efficiency of air traffic control and thus offers the potential for reducing not only carbon emissions and saving fuel but also avoiding delayed flights.

The basic rule on the use of take-off and landing rights (slots) is that slots can be reallocated if they have been used less than 80% of the time in a flight period. This rule was initially suspended by authorities worldwide due to the slump in air traffic caused by the coronavirus. It was made more flexible over the course of the crisis by reducing the slot use ratio, to avoid making airlines operate unprofitable flights in order not to lose their slot rights. The European Commission has set a 64% slot usage rate for summer 2022. ➔ **Opportunities and risk report, p. 76ff.**

Economic report

Macroeconomic situation

The global economy grows in 2021. | Recovery in Germany less strong than in other regions. | No clear trend in exchange rate developments. | Long-term interest rates rise again. | Oil price up significantly.

World economy grows in the 2021 fiscal year

The global economy expanded by 5.6% in the reporting year, thanks to the successes in containing the coronavirus pandemic (previous year: decline of 3.4%). Following the collapse in 2020, this recovery was apparent in all regions of the world. In Europe, the economy also grew by 5.6% (previous year: decline of 5.9%). The German economy recovered comparatively slowly at 2.7% (previous year: decline of 4.9%).

T015 GDP DEVELOPMENT

in %	2021 ¹⁾	2020	2019	2018	2017
World	5.6	-3.4	2.7	3.3	3.4
Europe	5.6	-5.9	1.7	2.1	3.0
Germany	2.7	-4.9	1.1	1.1	3.0
North America	5.6	-3.5	2.3	2.9	2.3
South America ²⁾	6.4	-6.7	0.8	1.6	2.0
Asia/Pacific	6.0	-1.0	4.0	4.9	5.1
China	8.1	2.3	6.0	6.7	6.9
Middle East	3.5	-5.5	2.1	1.2	0.7
Africa	4.0	-2.4	3.1	3.3	3.4

Source: Global Insight World Overview as of 18 Jan 2022.

¹⁾ Forecast.

²⁾ Excluding Venezuela.

No clear trend in exchange rate developments

The euro showed a mixed performance against the major currencies in 2021. The average exchange rate rose year-on-year by 7% against the Japanese yen, by 4% against the US dollar and by 1% against the Swiss franc. By contrast, the euro declined by 3% against both the British pound sterling and the Chinese renminbi.

T016 CURRENCY DEVELOPMENT EUR 1 in foreign currency

	2021	2020	2019	2018	2017
USD	1.1821	1.1402	1.1192	1.1800	1.1194
JPY	129.84	121.77	122.01	130.33	125.46
CHF	1.0807	1.0704	1.1122	1.1548	1.1022
CNY	7.6243	7.8688	7.7320	7.8083	7.5955
GBP	0.8595	0.8888	0.8769	0.8848	0.8745

Source: Bloomberg, annual average daily price.

Long-term interest rates positive again

Short-term interest rates continued to fall over the year compared with the previous year. At the long end of the interest rate curve, the 10-year euro swap rates once again had a positive average value, compared with negative rates the year before.

T017 INTEREST RATE DEVELOPMENT in %

Instrument	2021	2020	2019	2018	2017
6-month Euribor Average rate	-0.52	-0.37	-0.30	-0.27	-0.26
6-month Euribor Year-end level	-0.55	-0.53	-0.32	-0.24	-0.27
10-year euro swap Average rate	0.05	-0.14	0.26	0.96	0.81
10-year euro swap Year-end level	0.30	-0.26	0.21	0.81	0.89

Source: Bloomberg.

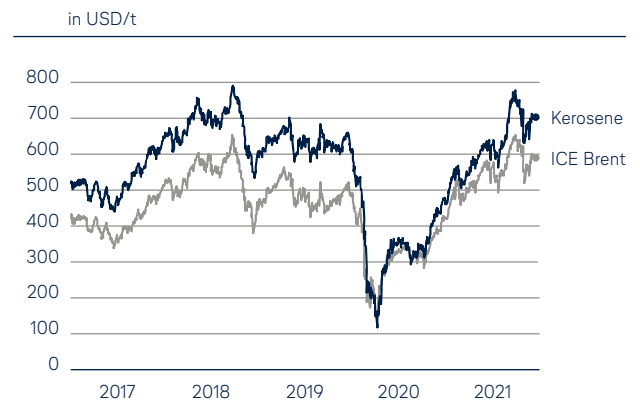
The discount rate, which is particularly important for measuring pension obligations and which is derived from the average return on a basket of investment-grade corporate bonds, followed the general interest rate trend and rose to 1.3%, which is 0.5 percentage points higher than the previous year's figure of 0.8%.

Oil price significantly higher year-on-year

Driven by a recovery in demand for fossil fuels and a delayed expansion of global supply, the oil price went up significantly in the financial year 2021. With prices between USD 51.09/barrel and USD 86.40/barrel, the average for 2021 was USD 70.92/barrel, which is 64% higher than the previous year (previous year: USD 43.20/barrel). As of year-end 2021, a barrel of Brent Crude cost USD 77.78 (year-end 2020: USD 51.80/barrel).

The jet fuel crack, the price difference between crude oil and kerosene, returned to normal over the course of the year. It moved within a range of USD 0.75/barrel and USD 13.87/barrel in 2021. On average over the year, it traded at USD 6.16/barrel and thus 140% higher than in the previous year. In the previous year, the jet fuel crack was comparatively low by historical standards due to the collapse in demand as a result of the crisis. The price at year-end 2021 was USD 10.99/barrel (year-end 2020: USD 3.43/barrel).

C10 PRICE DEVELOPMENT OF CRUDE OIL AND KEROSENE



Source: Lufthansa, based on market data.

Sector developments

Recovery in global passenger traffic makes progress over the course of the reporting year. | Airline industry still significantly affected by the effects of the coronavirus crisis. | Airfreight market at record level. | Recovery also visible in MRO and airline catering markets.

Sales in global passenger traffic increase over the course of the reporting year

The coronavirus pandemic continues to affect developments in global passenger traffic. A significant recovery was visible over the course of 2021, particularly beginning with the summer travel season. This was driven by progress with vaccination campaigns, lower infection numbers and the associated easing of travel restrictions, which had a positive impact on demand for air travel.

The total number of revenue passenger-kilometres sold worldwide increased in the reporting year by 22% year-over-year according to figures published by the International Air Transport Association (IATA) (previous year: decline of 66%). The 75% increase reported by North American airlines rep-

resents the largest growth in revenue passenger-kilometres (previous year: decline of 65%). In the same period, airlines from Europe posted a 27% increase (previous year: decline of 70%).

Global revenue passenger-kilometres were down by 58% compared with the pre-crisis level of 2019. For European airlines, the decline was 61%. According to the Federal Association of the German Aviation Industry (BDL), sales for airlines in Germany were approximately 70% lower than in 2019.

Average yields in global passenger traffic rose by 2.0% in the financial year 2021 according to the IATA (previous year: decline of 8.8%). Yields were therefore still down by 7.0% on their pre-crisis level.

T018 SALES PERFORMANCE IN THE AIRLINE INDUSTRY 2021

in % compared with previous year	Passenger-kilometres	Cargo tonne-kilometres
Europe	27	23
North America	75	15
Central and South America	40	8
Asia/Pacific	-13	18
Middle East	8	22
Africa	17	28
Global	22	19

Source: IATA Air Passenger/Air Freight Market Analysis (12/2021).

Global airfreight traffic at record levels

The global market for airfreight continued to develop positively in the 2021 financial year. Though the freight capacity on offer was expanded, demand rose significantly faster, as reduced passenger flows resulted in a large proportion of the belly capacities of passenger aircraft still being unavailable for airfreight. According to IATA estimates, this caused yields in global airfreight traffic to increase by another 15.0% (previous year: increase of 40.0%).

According to IATA, global airfreight volumes (measured in revenue cargo tonne-kilometres) increased by 19% year-on-year in 2021 (previous year: decline of 10%). European providers saw growth of 23% (previous year: decline of 16%).

Compared with the pre-crisis level in 2019, global revenue cargo tonne-kilometres were up by 7%. European providers reported an increase of 4%.

Smaller losses expected for the global airline industry

The positive developments in passenger and freight traffic in 2021 mean that the losses for the global airline industry are expected to fall significantly year-on-year. The IATA forecasts a net loss of USD 52bn for the 2021 financial year (previous year: USD 138bn). Prior to the coronavirus outbreak in 2019, the airline industry generated a net profit of USD 26bn.

On a regional basis, the highest net losses of USD 21bn are expected for the European airlines (previous year: USD 35bn). The pace of recovery in this region is thus significantly slower than in North America and Asia/Pacific, for example.

T019 EARNINGS DEVELOPMENT IN THE AIRLINE INDUSTRY

in USD bn	2021	2020
Europe	-21	-35
North America	-6	-35
Central and South America	-6	-12
Asia/Pacific	-11	-46
Middle East	-7	-9
Africa	-2	-2
Industry	-52	-138

Source: IATA Industry Statistics (10/2021).

MRO and airline catering markets show signs of recovery over the year

Demand for aircraft maintenance, repair and overhaul (MRO) services still suffered from the coronavirus crisis in the 2021 financial year. However, significant signs of a recovery were visible over the year, driven particularly by higher demand for air travel. Analyses by consultancy firm ICF indicate that, following the coronavirus-related slump of 30% in 2020 to USD 67bn, the MRO market recovered by 18% to USD 79bn in 2021. This means the market is still 17% below its pre-crisis level in 2019. Recovery curves varied significantly in the three regions of the world, however. The highest growth in 2021 was reported in the EMEA region (Europe, Middle East and Africa). Here the market volume rose year-on-year by 35% to USD 28bn thanks to exceptionally strong demand from within Europe in the summer. Market volume in Asia rose by 11% to USD 26bn. In the Americas, the MRO market also grew by 11%, to USD 25bn.

The economic impacts of the coronavirus pandemic have also drastically changed the airline catering industry. With the crisis-related decline in passenger numbers in air travel due to various travel restrictions, particularly in the long-haul business, demand for inflight catering services also fell. The situation improved over the course of the reporting year, primarily due to higher demand in passenger traffic compared with 2020. The pandemic also accelerated the digitalisation of pre- and post-flight and inflight services. The trend towards pre-ordering and inflight retail solutions continued to increase, especially for short-haul traffic, Economy Class and leisure travel.

Course of business

The Lufthansa Group's operating and financial performance have improved significantly over the year. | Capacity to be expanded to meet rising demand. | Implementation of the restructuring programme is making good progress. | Loss more than halved compared with previous year. | Capital increase and other borrowing enable early repayment of stabilisation measures.

OVERVIEW OF THE COURSE OF BUSINESS

Performance of the Lufthansa Group improves over the course of the reporting year

The Lufthansa Group made significant progress in overcoming the coronavirus crisis in 2021. The Group's operating and financial performance improved significantly over the year.

Faster worldwide vaccination progress and the successive easing of travel restrictions meant that the passenger airlines in the Lufthansa Group saw a significant upturn in demand. Demand for European holiday destinations and long-haul tourist destinations with limited or no travel restrictions rose rapidly in the summer, and demand on North American routes also increased significantly in the autumn. The re-opening of the USA for European travellers played an important role. Demand for business travel also rose noticeably. The rise in infections in the Group's home markets and the emergence of the Omicron variant had a negative impact on demand towards the end of the year, however.

Available capacity in the passenger business, as measured in available seat-kilometres, was expanded continuously over the course of 2021. Capacity in the first quarter was 21% of the pre-crisis level in 2019 and increased to 29% in the second quarter, 50% in the third quarter and 60% of the pre-crisis level in the fourth quarter. Over the full reporting year, capacity was 40% of the pre-crisis level.

The Lufthansa Group's freight business reached record heights in the reporting year, driven by further increases in demand for cargo capacities and high yields. The performance of Lufthansa Technik and LSG group also improved over the reporting year, supported by the recovery in passenger traffic. Both segments generated positive Adjusted EBIT in the reporting year.

The Lufthansa Group also made significant progress with the implementation of its restructuring programme in the reporting period. The measures that have been implemented to date account for over three quarters of the annual savings totalling EUR 3.5bn that are targeted from 2024 onwards. The restructuring expenses that are necessary for the Company to adapt to the changes in the market environment caused by the crisis came to EUR 581m in 2021 (previous year: EUR 233m).

Over the course of the year, the Lufthansa Group completed a capital increase of EUR 2.2bn and raised additional funds totalling EUR 6.1bn. This enabled the Lufthansa Group to repay the funding provided by the ESF stabilisation measures in Germany earlier than originally planned.

The expansion of flight capacities, the positive development at the Aviation Services and progress with the restructuring programme were also reflected in the earnings performance of the Lufthansa Group. Adjusted EBIT came to EUR -1,143m in the first quarter (previous year: EUR -1,220m) and to EUR -952m in the second quarter (previous year: EUR -1,679m). The Lufthansa Group reported positive earnings again with Adjusted EBIT of EUR 17m in the third quarter of 2021 (previous year: EUR -1,262m). Adjusted EBIT came to EUR -271m in the fourth quarter (previous year: EUR -1,290m).

Lufthansa Group significantly reduces operating loss in the 2021 fiscal year

A comparison of the figures for 2021 with the corresponding prior-year figures is distorted by the fact that revenue and earnings in January and February 2020 were largely unaffected by the coronavirus crisis.

Despite this, in 2021, the available capacity at the passenger airlines was 32% above the previous year. Traffic revenue for Lufthansa Group airlines rose year-on-year by 31% to EUR 11,876m (previous year: EUR 9,078m); Group revenue of EUR 16,811m was 24% higher than in the previous year (previous year: EUR 13,589m).

Supported by strict cost management and a record profit in the cargo business, the operating loss was more than halved compared with the previous year. Adjusted EBIT in the reporting period came to EUR -2,349m (previous year: EUR -5,451m). This includes non-recurring expenses for restructuring of EUR 581m (previous year: EUR 233m) and non-operating extraordinary expenses for legal procedures of EUR 103m (previous year: EUR 0m). The Adjusted EBIT margin amounted to -14.0% (previous year: -40.1%). EBIT came to EUR -2,316m (previous year: EUR -7,353m).

The net result attributable to shareholders of Deutsche Lufthansa AG in the reporting period came to EUR -2,191m (previous year: EUR -6,725m).

Gross capital expenditure increased by 4% to EUR 1,329m (previous year: EUR 1,273m) but was still significantly lower than in the years before the crisis. Cash flow from operating activities rose year-on-year to EUR 618m due to the lower pre-tax loss (previous year: EUR -2,328m). Adjusted free cash flow, which in addition to cash flow from investing activities also includes cash outflows for leases, came to EUR -855m (previous year: EUR -3,669m).

The equity ratio rose by 7.1 percentage points to 10.6% (previous year: 3.5%), partly due to the issue of new shares in the course of the capital increase. Net indebtedness of EUR 9,023m was 9% below the figure at year-end 2020 due to the equity injection, which more than offset the cash outflow from free cash flow, interest payments and pension fund allocations (31 December 2021: EUR 9,922m).

At the end of the 2021 financial year, the Group had available liquidity of EUR 9.4bn. This includes EUR 1.0bn from a state-guaranteed loan in Switzerland which had not yet been utilised and EUR 735m from available credit lines. All state funding in Germany was repaid or the agreements terminated. ➤ **Earnings, assets and financial position, p. 40ff.**

SIGNIFICANT EVENTS

Company and market developments

EU Parliament adopts new slot rules

On 10 February 2021, the European Parliament passed a resolution amending the slot rules for summer 2021 in response to the pandemic. The regulation stipulated that airlines could return up to 50% of their slot series in full before the season began and that they only had to use half the remaining slot series in order to secure them for the coming season.

On 23 July 2021, the European Commission made the decision to reduce the required slot use rate from the standard 80% to 50% in the 2021/22 winter flight timetable. This meant that airlines had to use 50% of each of their slot series at slot-regulated airports so as not to lose these slot series in subsequent periods. ➤ **Legal and regulatory factors, p. 32.**

Executive Board of Deutsche Lufthansa AG approves purchase of ten long-haul aircraft

On 3 May 2021, the Executive Board of Deutsche Lufthansa AG made the decision to purchase a total of ten long-haul aircraft: five Airbus A350-900s and five Boeing 787-9s.

With this purchase, the Lufthansa Group is accelerating the modernisation of its fleet. The new aircraft improve the customer experience and reduce unit costs. They will also have a positive effect on the environmental impact since they consume approximately 30% less fuel, which reduces their carbon emissions. ➤ **Fleet, p. 24ff.**

Lufthansa Group announces medium-term targets

The Lufthansa Group announced its medium-term targets on 14 June 2021.

Based on the transformation of its operating business model, the systematic exploitation of growth opportunities and the restructuring of the Group's cost base to the changed market, the Lufthansa Group is aiming to achieve an Adjusted EBIT margin of at least 8% by 2024.

Combined with a disciplined investment policy and strict working capital management, this should support a return on capital employed (Adjusted ROCE excluding cash) of at least 10% by 2024. ➤ **Forecast, p. 136ff.**

European Commission presents "Fit for 55" legislative package

On 14 July 2021, the European Commission presented its "Fit for 55" legislative package. The EU proposal comprises 13 legislative instruments for discussion and resolution by the 27 member states and the European Parliament.

The European Commission's proposals include a faster reduction of the number of certificates issued to the aviation sector and the stop of the free allocation of certificates by 2027. In addition, a kerosene tax is to be gradually introduced, along with an obligation to use an increasingly higher level of sustainable aviation fuels.

The Lufthansa Group welcomes the ambitious climate targets, but has put forward concrete proposals to improve the measures in order to avoid the risk of putting EU airlines at a disadvantage in international competition and to avoid carbon leakage. ➔ **Legal and regulatory factors, p. 32.**

Eurowings Discover starts flight operations in the touristic segment

Eurowings Discover, the new holiday airline of the Lufthansa Group, started flight operations on 24 July 2021. By year-end, its fleet had grown to ten aircraft: seven Airbus A330s and three Airbus A320s. With a range of short, medium and long-haul routes, it supplements and strengthens the Lufthansa Group's touristic portfolio from Frankfurt, and also from Munich starting in 2022. ➔ **Business segments, p. 53ff.**

Lufthansa Group leases additional A350-900 long-haul aircraft

On 4 October 2021, the Lufthansa Group signed leases for four state-of-the-art, fuel-efficient Airbus A350-900 aircraft. This increases the Lufthansa Group's A350 fleet to 21 aircraft.

The aircraft are scheduled for service at Lufthansa German Airlines from the first half-year of 2022, which will strengthen the premium product of the five-star airline. ➔ **Fleet, p. 24ff.**

Lufthansa Group invests in sustainable aviation fuel

The world's first industrial plant for producing carbon-neutral kerosene using electricity was officially opened in Werlte, in the Emsland region on 4 October 2021. It is operated by the climate protection organisation atmosfair and produces synthetic aviation fuel for aircraft from water, CO₂ and renewable energy (Power-to-Liquid = PtL). The Lufthansa Group is a partner in this pioneering project and will be one of the first customers to obtain this sustainable electricity-based kerosene.

To ensure the long-term supply of sustainable aviation fuel (SAF) for the Lufthansa Group, the Company has also made an initial commitment to purchase SAF for around USD 250m by 2024. In addition to the fleet modernisation, this repre-

sents the largest sustainability investment in the history of the Lufthansa Group. ➔ **Combined non-financial declaration/ Climate protection, p. 100ff.**

Lufthansa implements voluntary programmes to avoid dismissals for operational reasons

The Lufthansa Group consistently pursued its restructuring programme in 2021. Voluntary redundancy programmes were on offer for ground, cockpit and cabin crews of Deutsche Lufthansa AG (including Group Functions) and at Lufthansa Technik AG. They are intended to reduce surplus staff capacities in a socially responsible way and to avoid redundancies once the reorganisation has been completed. ➔ **Employees, p. 27ff.**

Financing

Lufthansa Group successfully secures liquidity by issuing bonds on capital markets

On 4 February 2021, Deutsche Lufthansa AG successfully issued a bond with a total volume of EUR 1.6bn.

On 7 July 2021, Deutsche Lufthansa AG successfully issued another bond with a total volume of EUR 1bn.

On 9 November 2021, Deutsche Lufthansa AG again successfully issued a bond for a total volume of EUR 1.5bn.

Altogether, Deutsche Lufthansa AG therefore raised EUR 4.1bn in 2021 by issuing bonds. ➔ **Financing, p. 46f.**

Deutsche Lufthansa AG successfully completes capital increase

Deutsche Lufthansa AG successfully completed its capital increase on 6 October 2021. The capital increase generated gross proceeds of EUR 2,162m.

In the course of the capital increase, the Company issued 597,742,822 new registered shares at a subscription ratio of 1:1. ➔ **Financing, p. 46f.**

ESF reduces equity investment in Deutsche Lufthansa AG

The ESF has reduced its stake in Deutsche Lufthansa AG to 14.09% according to its notification of voting rights on 7 October 2021. At the commencement of the stabilisation measures, its equity stake was 20%. ➔ **Financing, p. 46f.**

Deutsche Lufthansa AG repays stabilisation measures to the German federal government ahead of schedule

As a result of improved performance and the funding raised on capital markets, Deutsche Lufthansa AG was able to pay back stabilisation measures received from the ESF in full and ahead of schedule.

On 11 February 2021, Deutsche Lufthansa AG repaid the KfW loan of EUR 1bn ahead of schedule.

On 11 October 2021, Deutsche Lufthansa AG repaid in full the EUR 1.5bn tranche of Silent Participation I from the ESF that was drawn in June 2021.

On 12 November 2021, Deutsche Lufthansa AG repaid Silent Participation II amounting to EUR 1bn and cancelled the undrawn portion of Silent Participation I. This meant that all the state funding received in Germany was repaid. State-guaranteed loans are still outstanding in Belgium, Austria and Switzerland. ↗ **Financing, p. 46f.**

Corporate Governance

Contract with Detlef Kayser extended for three years

On 3 March 2021, the Supervisory Board of Deutsche Lufthansa AG decided to renew the contract with Detlef Kayser, Chief Operating Officer, for three more years until 31 December 2024. ↗ **Business activities and Group structure, p. 15.**

Changes in Supervisory Board membership

At the virtual Annual General Meeting of Deutsche Lufthansa AG held on 4 May 2021, shareholders elected Angela Titzrath (CEO, Hamburger Hafen und Logistik AG), Michael Kerkloh (former Managing Director, Flughafen München GmbH) and Britta Seeger (Executive Board member, Daimler AG) to the Supervisory Board. Britta Seeger succeeds Stephan Sturm, who stepped down from the Supervisory Board at the end of the Annual General Meeting. Angela Titzrath and Michael Kerkloh had already been appointed to the Supervisory Board by the court in 2020.

Harald Krüger succeeded Stephan Sturm as Chairman of the Audit Committee with effect from 4 May 2021. ↗ **Report of the Supervisory Board, p. 7 ff.**

EVENTS AFTER THE REPORTING PERIOD

Ukraine conflict creates uncertainty for the outlook of the world economy, the industry and the Group

The escalation of the conflict between Russia and Ukraine, which led to armed conflicts in Ukraine on 24 February 2022, has created uncertainty regarding the development of the world economy, the airline industry and the Lufthansa Group. The Group has incorporated these uncertainties into its financial outlook for the 2022 financial year. ↗ **Forecast, p. 136ff.**

Earnings, assets and financial position

Earnings improved over the course of the reporting year. | Revenue up by 24%. | Loss reduced by more than half compared with previous year: Adjusted EBIT including crisis-related restructuring expenses of EUR 581m amounts to EUR -2.3bn. | Capital expenditure still significantly below pre-crisis level despite continued fleet modernisation. | Adjusted free cash flow comes to EUR -855m. | Net debt down by about EUR 900m at EUR 9.0bn. | EUR 9.4bn liquidity available.

EARNINGS POSITION

Revenue and income

T020 REVENUE AND INCOME

	2021 in €m	2020 in €m	Change in %
Traffic revenue	11,876	9,078	31
Other revenue	4,935	4,511	9
Total revenue	16,811	13,589	24
Changes in inventories and work performed by the entity and capitalised	109	175	-38
Other operating income ¹⁾	1,502	1,830	-18
Total operating income	18,422	15,594	18

¹⁾ Without fixed asset write-ups and book gains.

Traffic figures improve over the course of the year; traffic revenue up by 31%

The operating performance of the Lufthansa Group improved significantly in the course of 2021 due to worldwide vaccination progress, the successive easing of travel restrictions and the resulting recovery in demand.

Traffic at the passenger airlines of the Lufthansa Group rose significantly over the course of the year. Capacity (available passenger-kilometres) was therefore expanded in the course of 2021. In the first quarter, it was 21% of the pre-crisis level in 2019. It then increased to 29% in the second quarter, 50% in the third quarter and 60% of the pre-crisis level in the fourth quarter. Over the year as a whole, capacity was 40% of the pre-crisis level.

The comparison of the key figures for the 2021 fiscal year against the prior-year period is influenced by the fact that the impact of the coronavirus crisis in the previous year first became evident during the month of March.

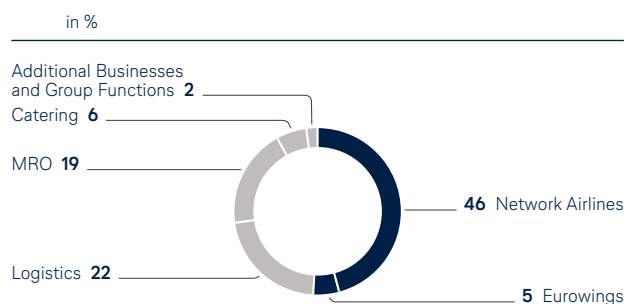
Nevertheless, capacity in the financial year 2021 was 32% up on the previous year and the number of flights was increased by 18%. Sales (revenue passenger-kilometres) increased by 29%. The airlines in the Lufthansa Group carried around 47 million passengers in total in 2021, 29% more than the previous year. The passenger load factor decreased by 1.6 percentage points to 61.6%. Traffic revenue in the passenger business went up by 26% to EUR 7,622m (previous year: EUR 6,067m).

The Lufthansa Group's freight business reached record heights in the reporting year, driven by further increases in demand for cargo capacities and high yields. Capacity (available cargo tonne-kilometres) was up by 12% and sales (revenue cargo tonne-kilometres) increased by 15%. The cargo load factor improved by 1.6 percentage points to 71.4%. Traffic revenue in the cargo business went up by 41% to EUR 4,254m, mainly as a result of significantly higher yields (previous year: EUR 3,011m).

In total, traffic revenue for Lufthansa Group airlines rose year-on-year by 31% to EUR 11,876m (previous year: EUR 9,078m).

Further information on the regional breakdown of traffic revenue for the Network Airlines, Eurowings and Logistics segments can be found in the chapters [Business segments](#), p. 53ff.

C11 BUSINESS SEGMENTS' SHARE OF GROUP EXTERNAL REVENUE



Other revenue up by 9%

Other revenue rose year-on-year by 9% to EUR 4,935m (previous year: EUR 4,511m). This was mainly due to higher revenue in the MRO (+14% to EUR 3,117m) and Catering (+2% to EUR 1,085m) segments.

Revenue up by 24%

Revenue, which consists of traffic revenue plus other revenue, rose by 24% in the financial year 2021 to EUR 16,811m (previous year: EUR 13,589m).

Further information on regional distribution of revenue can be found in the [➤ Segment reporting, p. 218ff.](#)

Changes in inventory and other capitalised internal expenses decreased by 38% to EUR 109m due to the lower volume of major maintenance events (previous year: EUR 175m).

Other operating income went down by 18% to EUR 1,502m because of lower exchange rate gains and lower reversals of provisions and accruals and deferrals (previous year: EUR 1,830m).

Total operating income increased by 18% to EUR 18,422m in 2021 (previous year: EUR 15,594m).

Expenses

T021 EXPENSES

	2021	2020	Change	Share of operating expenses in %
	in €m	in €m	in %	
Cost of materials and services	8,946	8,453	6	43
of which fuel	2,409	1,875	28	12
of which fees and charges	2,155	1,796	20	10
of which external services MRO	1,181	1,139	4	6
of which charter expenses	409	469	-13	2
Staff costs ¹⁾	6,417	6,405	0	31
Depreciation ²⁾	2,259	2,561	-12	11
Other operating expenses ³⁾	3,151	3,427	-8	15
of which indirect staff costs and external staff	479	543	-12	2
of which rental and maintenance expenses	531	603	-12	3
Total operating expenses	20,773	20,846	0	100

¹⁾ Without past service costs/settlement [➤ T022, p. 43.](#)

²⁾ Without impairment losses [➤ T022, p. 43.](#)

³⁾ Without book losses and write-downs on assets held for sale [➤ T022, p. 43.](#)

Cost of materials and services up by 6% due to operating recovery

The cost of materials and services for the Lufthansa Group in the financial year 2021 was 6% higher than the previous year at EUR 8,946m (previous year: EUR 8,453m).

Within the cost of materials and services, fuel expenses rose by 28% to EUR 2,409m. The change is due to higher volumes and prices. The average price for kerosene, including fuel hedging, was USD 640.23/tonne in 2021. The impact of significantly higher kerosene prices was offset by price hedging. The result of price hedging was EUR 174m (previous year: negative result of EUR 204m). The volume consumed went up by 19%.

Expenses for other raw materials, consumables and supplies and purchased merchandise sank by 25% to EUR 1,754m, due both to lower depreciation on materials in the MRO segment and lower volumes. Repairable spare parts had to be written down in the previous year because of the crisis.

Expenses for fees and charges rose year-on-year by 20% to EUR 2,155m because of increased traffic.

Expenses for external MRO expenses went up by 4% on the year to EUR 1,181m as a result of increasing flight activities and the related greater use of external service providers.

Charter expenses decreased by 13% to EUR 409m. Higher expenses in the Logistics segment in connection with increased freight volumes were more than offset by lower expenses for chartered passenger aircraft.

Higher restructuring expenses prevent reduction in operating staff costs

Operating staff costs of EUR 6,417m in the reporting year were at the previous year's level (EUR 6,405m). The increase in restructuring expenses to EUR 581m (previous year: EUR 233m) offset the savings from reducing the workforce, short-time work and crisis wage agreements. The average number of employees declined by 14%, driven by reductions in all business units apart from Eurowings. The number of employees in the Catering segment declined significantly, also due to the sale of the European business of the LSG group. The effect of short-time work and the accompanying government support payments declined over the course of the year. EUR 865m in government support for short-time work was received in 2021 (previous year: EUR 1,020m). Without the effects from government support and restructuring, the operating staff costs decreased by 4%.

Depreciation and amortisation down by 12%

Depreciation and amortisation decreased year-on-year by 12% to EUR 2,259m (previous year: EUR 2,561m) and related mainly to aircraft and reserve engines. The decline is mostly due to the impairment losses recognised in the previous year and to fewer investing activities than in previous years. Depreciation of aircraft, reserve engines and engine overhauls decreased by 12% to EUR 1,691m (previous year: EUR 1,923m).

Other operating expenses down by 8%

Other operating expenses went down by 8% to EUR 3,151m (previous year: EUR 3,427m), particularly as a result of lower write-downs on receivables, lower foreign currency losses, lower travel expenses and costs for outside staff, and a reduction in other infrastructure expenses. The item also comprises litigation, legal and consulting expenses, which included EUR 103m (previous year: EUR 0m) for material costs not directly related to operating activities in connection with impending fines.

Operating expenses on par with previous year

Total operating expenses for the Lufthansa Group came to EUR 20,773m and were on the same level as the year before (previous year: EUR 20,846m).

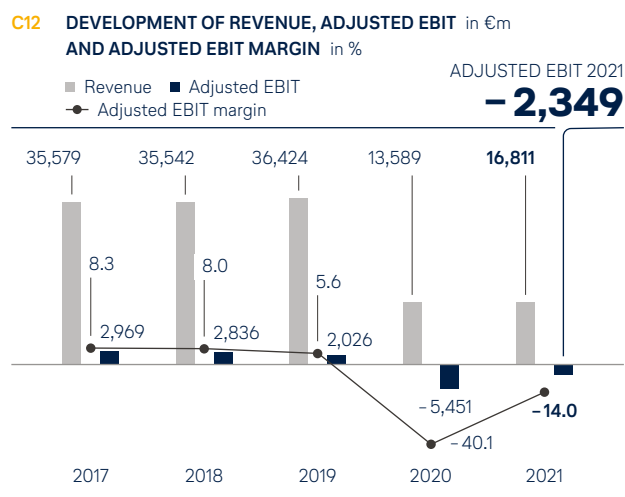
Earnings performance

Adjusted EBIT of EUR -2,349m

The operating result from equity investments came to EUR 2m in 2021 (previous year: EUR -264m). This development is attributable primarily to significantly improved results at joint venture companies in the passenger and MRO business.

Adjusted EBIT for the Lufthansa Group came to EUR -2,349m in 2021 (previous year: EUR -5,451m). This includes non-recurring expenses for restructuring of EUR 581m (previous year: EUR 233m) and non-operating extraordinary expenses for legal procedures of EUR 103m (previous year: EUR 0m).

The Adjusted EBIT margin, i.e. the ratio of Adjusted EBIT to revenue, improved by 26.1 percentage points to -14.0% (previous year: -40.1%).



Adjusted EBIT in the Network Airlines business segment was EUR -3,486m (previous year: EUR -4,674m). Eurowings reported Adjusted EBIT of EUR -230m (previous year: EUR -703m). The Logistics segment achieved another record in earnings with Adjusted EBIT of EUR 1,493m (previous year: EUR 772m). The MRO segment generated positive Adjusted EBIT of EUR 210m (previous year: EUR -383m). The Catering business segment also reported positive Adjusted EBIT of EUR 27m (previous year: EUR -284m). The other Group companies, which under IFRS 8 do not require separate reporting, and the Group Functions reduced the Group's operating Adjusted EBIT by a total of EUR -437m (previous year: EUR -314m).

EBIT of EUR -2,316m

Based on EBIT, Adjusted EBIT includes clearly defined, non-plannable earnings components as a key performance indicator for better comparability. The adjustments relate exclusively to write-downs and write-backs, earnings from the disposal of non-current assets and effects of changes in pension plans.

EBIT came to EUR -2,316m in 2021 (previous year: EUR -7,353m). The difference to Adjusted EBIT was therefore EUR 33m (previous year: EUR -1,902m).

T022 RECONCILIATION OF RESULTS

in €m	2021		2020	
	Income statement	Reconciliation Adjusted EBIT	Income statement	Reconciliation Adjusted EBIT
Total revenue	16,811		13,589	
Changes in inventories and work performed by the entity and capitalised	109		175	
Other operating income	1,602		1,897	
of which book gains et al.		-30		-38
of which write-ups on capital assets		-70		-30
Total operating income	18,522	-100	15,661	-68
Cost of materials and services	-8,946		-8,453	
Staff costs	-6,328		-6,436	
of which past service costs/settlement		-89		31
Depreciation	-2,351		-4,389	
of which impairment losses		92		1,828
Other operating expenses	-3,215		-3,472	
of which impairment losses on assets held for sale		8		6
of which expenses incurred from book losses		56		39
Total operating expenses	-20,840	67	-22,750	1,904
Profit/loss from operating activities	-2,318		-7,089	
Result from equity investments	2		-264	
Impairment loss on investments accounted for using the equity method		-		66
EBIT	-2,316		-7,353	
Total amount of reconciliation Adjusted EBIT		-33		1,902
Adjusted EBIT		-2,349		-5,451
Amortisation		2,259		2,561
Adjusted EBITDA		-90		-2,890

The adjustments include impairment losses of EUR 100m in total. These mainly concern business units in the MRO and Catering segments that are available for sale or impaired, as well as rights of use under aircraft leases that were terminated early. Impairment losses of EUR 1,515m were recognised the previous year on a total of 115 aircraft, right-of-use assets and engines, in addition to impairment losses of EUR 319m on goodwill, equity investments and non-current assets at business units.

Income of EUR 89m from changes in pension plans primarily related to measurement gains from changing the annuity factors in the pension plans at SWISS, as well as the reductions agreed for the pilots' pension plans at Austrian Airlines.

Write-backs of EUR 70m on non-current assets related largely to aircraft that had previously been written down, for which the estimate of market value increased compared with the previous year.

Expenses of EUR 56m for book losses resulted primarily from later adjustments to the sales price for the European operations of the LSG group.

The result from operating activities came to EUR -2,318m in the financial year 2021 (previous year: EUR -7,089m).

Financial result of EUR -288m

The financial result came to EUR -288m in 2021 (previous year: EUR -1,542m).

The result from equity investments included in this figure came to EUR 2m (previous year: EUR -264m). The improvement was due to the results from joint ventures and associated companies, particularly in the Network Airlines, Eurowings and Lufthansa Technik segments.

Net interest decreased by 32% to EUR -441m (previous year: EUR -334m), essentially because of lower interest income following interest rate changes and higher interest expenses on financial liabilities.

Other financial items improved to EUR 151m (previous year: EUR -944m). Positive effects from the valuation of the convertible bond issued last year and recognised in profit and loss in the current financial year contrast, in particular, with the previous year's losses on fuel hedges, which were recognised in the financial result, because kerosene consumption was lower as a result of the crisis.

A positive income tax effect of EUR 413m (previous year: EUR 1,865m) is related mainly to the recognition of deferred taxes for negative earnings in the financial year 2021. The tax rate was 16%, mainly due to the non-recognition of deferred taxes on tax loss carry-forwards, as well as non-deductible expenses.

Including earnings attributable to minority interests of EUR 2m (previous year: EUR 41m), the net profit for the period attributable to the shareholders of Deutsche Lufthansa AG was EUR -2,191m (previous year: EUR -6,725m).

Earnings per share amounted to EUR -2.99 (previous year: EUR -12.51). ➔ **Notes to the consolidated financial statements, Note 16, p. 183.**

T023 PROFIT BREAKDOWN OF THE LUFTHANSA GROUP

	2021 in €m	2020 in €m	Change in %
Operating income	18,522	15,661	18
Operating expenses	-20,840	-22,750	8
Profit from operating activities	-2,318	-7,089	67
Financial result	-288	-1,542	81
Profit/loss before income taxes	-2,606	-8,631	70
Income taxes	413	1,865	-78
Profit/loss after income taxes	-2,193	-6,766	68
Profit/loss attributable to minority interests	2	41	-95
Net profit/loss attributable to shareholders of Deutsche Lufthansa AG	-2,191	-6,725	67

Dividend payments are excluded until the stabilisation measures are completed

The stabilisation measures of the ESF preclude the payment of dividends until the ESF equity stake has been sold in full (31 December 2021: 14.09%), which according to the agreement must take place by October 2023 at the latest.

Until then, the Group will use its free cash flow primarily for repaying its financial liabilities, including the remaining state stabilisation measures.

In the long term, shareholders are expected to once again participate directly in the Company's success. ➔ **Financial strategy and value-based management, p. 20ff.**

The coupon payments of EUR 19m made to the ESF in connection with the repayment of Silent Participation I were presented as dividend payments because the funding constituted equity.

FINANCIAL POSITION

Capital expenditure

Investment volume still significantly below pre-crisis level

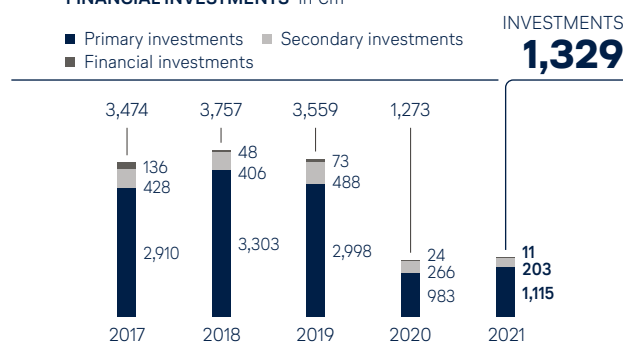
The Lufthansa Group succeeded in reducing capital expenditure in the coronavirus crisis, primarily by postponing planned aircraft deliveries. Investment remained well below the pre-crisis level in 2021. However, compared with the previous year, gross capital expenditure (not including equity investments) increased by 4% to EUR 1,329m (previous year: EUR 1,273m).

Primary investment in down payments and final payments for aircraft, aircraft components, and aircraft and engine overhauls went up by 13% to EUR 1,115m, mainly due to higher down payments on future deliveries (previous year: EUR 983m). This accounts for 84% of total capital expenditure.

Secondary investment, which includes capital expenditure for other items of property, plant and equipment and for intangible assets, decreased by 24% to EUR 203m (previous year: EUR 266m). Of the total, EUR 129m (previous year: EUR 186m) was on property, plant and equipment, such as technical equipment and machinery, and on operating and office equipment. EUR 74m was invested in intangible assets, such as licences and software (previous year: EUR 80m).

Financial investments (not including equity investments) of EUR 11m (previous year: EUR 24m) mainly related to cash outflows for loans granted to affiliated, non-consolidated companies.

C13 PRIMARY, SECONDARY AND FINANCIAL INVESTMENTS in €m¹⁾



¹⁾ Excluding acquisition of shares.

Network Airlines accounted for the bulk of capital expenditure with EUR 1,035m (+8% year-on-year). Capital expenditure at Eurowings came to EUR 254m (+140%). ➔ **Fleet, p. 24ff.**

Capital expenditure of EUR 164m (-26%) in the Logistics segment consisted mainly of final payments for cargo aircraft. Capital expenditure of EUR 95m (-38%) in the MRO business segment was mainly used for the purchase of reserve engines, to finance joint ventures and on other property, plant and equipment. Capital expenditure of EUR 23m (-18%) in the Catering segment consisted mainly of replacement investments in catering facilities.

Cash flow

Cash flow from operating activities up to EUR 618m

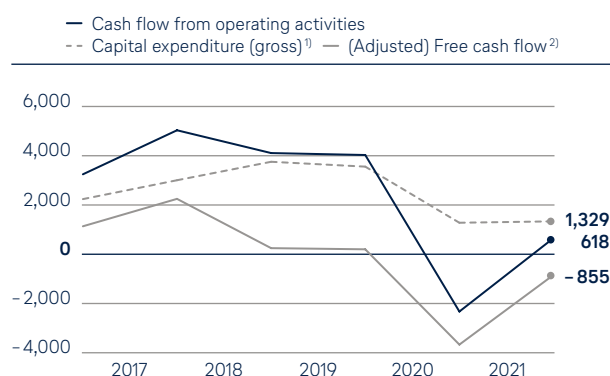
Cash flow from operating activities rose year-on-year to EUR 618m due to the lower pre-tax loss (previous year: EUR -2,328m).

The increase was lower than for pre-tax earnings, however, due to the non-cash components of earnings. These included in particular depreciation and amortisation of EUR 2,255m on non-current assets (previous year: EUR 4,552m) and valuation effects from financial derivatives of EUR -162m (previous year: EUR 334m). The negative earnings in the financial year resulted mainly from the measurement and recognition in profit or loss of the convertible bond. In the previous year, the measurement losses particularly related to the ineffectiveness of new investment hedges, as well as the fair value accounting of the convertible bond. Cash outflows related to the payment of some other taxes and charges that were deferred in the previous year (EUR -810m) and the repo agreements with emissions certificates (EUR -103m). Similar special measures in the previous year had a positive effect of EUR 1,621m on cash flow from operating activities.

Changes in working capital caused a cash inflow of EUR 1,347m (previous year: cash outflow of EUR 683m). This was mainly due to the rebound in liabilities from unused flight tickets of EUR 1,276m, which was primarily the result of higher booking volumes for future flights. The increase in trade receivables in connection with business development was largely offset by an increase in trade payables of a similar amount.

EUR 630m of the cash flow from operating activities related to payments to former employees on the basis of pension obligations (previous year: EUR 602m). Allocations to pension plans amounting to EUR 486m (previous year: EUR 235m) offset by investment income from plan assets in connection with pension payments of EUR 270m (previous year: EUR 510m), resulted in a net cash outflow of EUR 216m (previous year: cash inflow of EUR 275m), which is shown in the cash flow statement outside cash flow from operating and investing activities as part of the item "Purchase/sale of securities/fund investments".

C14 CASH FLOW AND CAPITAL EXPENDITURE in €m



¹⁾ Without acquisition of equity investments.

²⁾ Since 2018: Adjusted free cash flow.

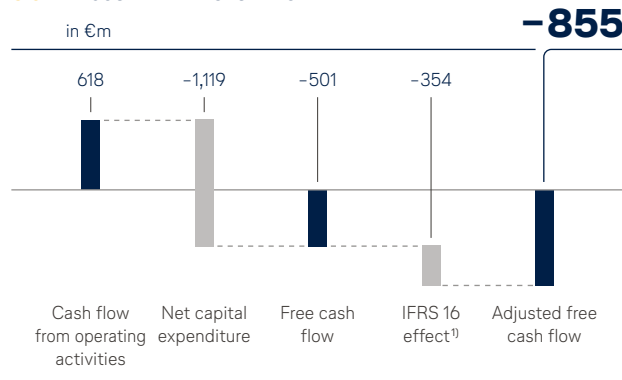
Adjusted free cash flow comes to EUR -855m

Gross capital expenditure (without share purchases) by the Lufthansa Group came to EUR 1,329m (previous year: EUR 1,273m) and includes the primary, secondary and financial investments mentioned above. This was offset by the reduction in repairable spare parts for aircraft of EUR 21m (previous year: reduction of EUR 276m). Expenditures of EUR 27m were made for acquisitions of equity interests (previous year: EUR 39m).

Income of EUR 192m from the disposal of other non-current assets (previous year: outflow of EUR 49m) related mainly to the sale of 31 aircraft. Interest and dividend income decreased by 80% to EUR 24m (previous year: EUR 123m). This brought total net cash used for investing activities to EUR 1,119m, which was 16% up on the year (previous year: EUR 962m).

After deducting this net cash used for investing activities, free cash flow for the financial year 2021 was negative at EUR -501m (previous year: EUR -3,290m).

C15 ADJUSTED FREE CASH FLOW



¹⁾ Repayment portion operating lease liabilities in the cash flow from financing activities.

Adjusted free cash flow improved to EUR –855m (previous year: EUR –3,669m). It includes cash outflows for leases (repayment portion) as shown in cash flow for financing activities. These came to EUR 354m in the financial year (previous year: EUR 379m).

Financing

Renewed access to capital markets enables repayment of stabilisation measures

In 2021, the Lufthansa Group completed successful refinancing using various capital market instruments. It benefited from its renewed access to the capital markets following its operational recovery and successful implementation of restructuring measures. This enabled the stabilisation measures in Germany to be repaid significantly earlier than originally planned.

Several bonds successfully placed on capital market

The Lufthansa Group raised a total of EUR 4.1bn on the capital market in 2021 by issuing bonds.

On 4 February 2021, Deutsche Lufthansa AG issued a bond with a total volume of EUR 1.6bn. The first tranche has a volume of EUR 750m and pays interest at 2.875% p.a. over a term of four years. The second tranche of EUR 850m has a term of seven years and pays interest at 3.75% p.a.

On 7 July 2021, Deutsche Lufthansa AG issued another bond with a total volume of EUR 1.0bn. The bond issue, with a denomination of EUR 100,000, was placed in two tranches, each with a volume of EUR 500m. The tranche with a term of three years pays interest of 2.0% p.a., while the second tranche with a term of eight years pays interest of 3.5% p.a.

On 9 November 2021, Deutsche Lufthansa AG issued a bond with a total volume of EUR 1.5bn. The bond issue, with a denomination of EUR 100,000 was placed in two tranches, with terms of two and five-and-a-half years respectively. The tranche with a term of two years has a volume of EUR 600m and pays interest of 1.625% p.a. The tranche with a term of five-and-a-half years has a volume of EUR 900m and pays interest of 2.875% p.a.

Capital increase completed successfully

Deutsche Lufthansa AG successfully completed a capital increase on 6 October 2021. The capital increase generated gross proceeds of EUR 2,162m.

In the course of the capital increase with subscription rights, the Company issued 597,742,822 new registered shares at a subscription ratio of 1:1. This brings the issued capital to EUR 3,060,443,248.64. Shareholders of Deutsche Lufthansa AG were able to buy the new shares for EUR 3.58 per share.

➔ Lufthansa share, p. 11ff.

Additional financing measures carried out

The Lufthansa Group concluded financing for a total of 20 aircraft in 2021. Borrowings of EUR 1.4bn in total were secured by five Airbus A350s, three Boeing 777Fs and twelve aircraft from the A320 family. The financing deals are repaid continuously over the eight- to eleven-year term of the respective contracts.

In the reporting year, the Lufthansa Group also took out two borrower's note loans for EUR 350m and EUR 150m.

Furthermore, the Lufthansa Group has bilateral credit lines with a large number of banks. As of 31 December 2021, these credit lines came to EUR 735m (previous year: EUR 763m).

There were no significant off-balance sheet financing activities in the reporting year.

Lufthansa Group receives further payments under stabilisation packages and the US CARES Act

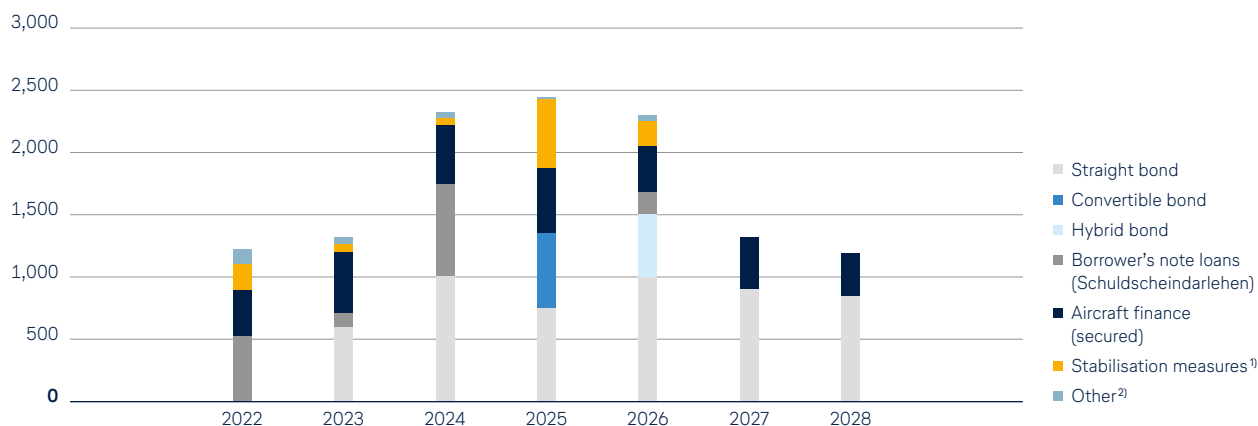
Not including the repayments, the Lufthansa Group received EUR 1.7bn in state stabilisation measures in 2021 in the Group's home markets.

On 14 June 2021, Deutsche Lufthansa AG drew down EUR 1.5bn of Silent Participation I, part of the ESF stabilisation package. This was recognised as equity in accordance with IFRS regulations. A further EUR 157m was received in the form of state-guaranteed loans in Belgium.

In addition, other loans of USD 93m (EUR 82m) that were approved the previous year under the US CARES Act I-III were also disbursed to companies from the LSG group and Lufthansa Technik. Both companies also received grants of USD 192m in total (EUR 170m) under the US CARES Act. A total of EUR 239m in additional funding from credit lines guaranteed by foreign governments was therefore drawn down in the reporting period.

C16 MATURITY PROFILE OF BORROWINGS

as of 31 Dec 2021 in €m



¹ Scheduled repay of EUR 240m Austrian state aid, CHF 420m Swiss state aid and EUR 287m Belgian state aid.

² Mainly bilateral loans; does not include operating lease payments.

Stabilisation measures from the German federal government repaid ahead of schedule

As a result of improved performance and the funding raised on capital markets, Deutsche Lufthansa AG was able to pay back stabilisation measures received from the ESF in full and ahead of schedule.

On 11 February 2021, Deutsche Lufthansa AG repaid the KfW loan of EUR 1.0bn ahead of schedule.

On 11 October 2021, Deutsche Lufthansa AG repaid in full the EUR 1.5bn tranche of Silent Participation I from the ESF that was drawn in June. The ESF used funds of EUR 282m from Silent Participation I to participate in the capital increase.

On 12 November 2021, Deutsche Lufthansa AG repaid Silent Participation II with EUR 1.0bn. The unused portion of Silent Participation I, amounting to EUR 2.3bn, was cancelled. The capital increase reduced the Silent Participation I by EUR 700m, the difference between the gross proceeds of the capital increase and the used portion of Silent Participation I. This means that all the stabilisation measures received in Germany have been repaid.

In the reporting year, the ESF reduced its stake in Deutsche Lufthansa AG to 14.09% according to its notification of voting rights on 7 October 2021. At the commencement of the stabilisation measures it held 20% of the shares. When it took part in the capital increase, the ESF committed to selling its remaining equity investment within 24 months of completion of the capital increase at the latest, meaning no later than October 2023.

Other stabilisation measures repaid

In the reporting year, capital repayments of EUR 60m and CHF 55m (EUR 53m) were made in Austria and Switzerland, respectively.

At the end of the financial year 2021, there was CHF 1.1bn (EUR 1.0bn) in stabilisation funding still available to the Lufthansa Group in Switzerland, which had not yet been drawn down or cancelled. The stabilisation funding provided in Austria and Belgium was used in full. The Lufthansa Group constantly reviews when the stabilisation measures can be repaid.

The financing restrictions on Deutsche Lufthansa AG resulting from the collateral requirements for aircraft no longer apply after the repayment of the EUR 1.0bn KfW loan.

Balance of financing activities comes to EUR 2,874m

In addition to repaying the stabilisation measures, the new debt was used for the scheduled repayment of seven borrower's note loans and short-term funding of the previous year (EUR 2.1bn), as well as the repayment of aircraft financing and leasing (EUR 849m).

Interest and dividend payments came to EUR 291m (previous year: EUR 244m). The dividend payments consisted solely of coupon payments of EUR 19m to the ESF for Silent Participation I.

The balance of financing activities resulted in a net cash inflow of EUR 2,874m (previous year: inflow of EUR 5,076m).

Liquidity

Total available liquidity of EUR 9.4bn

Balance-sheet liquidity (total of cash, current securities and fixed-term deposits) increased compared with the end of 2020 by 40% to EUR 7,666m despite the negative Adjusted free cash flow due to the financing measures and the funds drawn down from stabilisation measures (31 December 2020: EUR 5,460m). EUR 6,363m was available centrally to Deutsche Lufthansa AG at year-end 2021.

Following the repayment of all funding in Germany, EUR 1,044m of the government stabilisation funding and loans had not been utilised at the end of 2021. This figure relates to the unused credit line of this amount in Switzerland. Additionally, there were unused credit lines of EUR 735m.

As of year-end 2021, the Company therefore had around EUR 9.4bn of available liquidity (31 December 2020: EUR 11.1bn).

T024 ABBREVIATED CASH FLOW STATEMENT OF THE LUFTHANSA GROUP

	2021 in €m	2020 in €m	Change in %
Profit/loss before income taxes	-2,606	-8,631	70
Depreciation and amortisation/reversals	2,255	4,552	-50
Net proceeds on disposal of non-current assets	30	9	233
Net interest/result from equity investments	439	598	-27
Income tax payments	-101	81	
Significant non-cash expenses/income	-484	212	
Change in trade working capital	1,347	-683	
Change in other assets and liabilities	-262	1,534	
Cash flow from operating activities	618	-2,328	
Investments and additions to repairable spare parts	-1,335	-1,036	-29
Purchase/disposal of shares/non-current assets	192	-49	
Dividends and interest received	24	123	-80
Net cash from/used in investing activities	-1,119	-962	-16
Free cash flow	-501	-3,290	85
Purchase/disposal of securities/fund investments	-1,905	-1,380	-38
Capital increase	3,309	306	981
Capital reduction	-1,218	-	
Non-current borrowing and repayment of non-current borrowing	1,074	5,014	-79
Dividends paid	-19	-21	10
Interest paid	-272	-223	-22
Net cash from/used in financing activities	2,874	5,076	43
Changes due to currency translation differences	33	-33	
Cash and cash equivalents as of 1 Jan	1,804	1,431	26
Cash and cash equivalents as of 31 Dec	2,305	1,804	28

NET ASSETS

Total assets up by 8%

Total Group assets as of 31 December 2021 rose by 8% over year-end 2020 to EUR 42,538m (31 December 2020: EUR 39,484m).

Non-current assets were down by 1% at EUR 29,063m (31 December 2020: EUR 29,444m). This accounts for 68% of total assets (31 December 2020: 75%). Current assets rose by 34% to EUR 13,475m (31 December 2020: EUR 10,040m). Their share of total assets was 32% (31 December 2020: 25%).

Shareholders' equity rose by 224% to EUR 4,490m (31 December 2020: EUR 1,387m). Altogether, non-current funding accounted for 65% of total assets (31 December 2020: 63%). Non-current financing covered 96% of non-current assets (31 December 2020: 84%). Current funding came to 35% of total assets (31 December 2020: 37%).

Assets

Non-current assets down by 1%

Non-current assets decreased by 1% year-on-year to EUR 29,063m (31 December 2020: EUR 29,444m). The change mainly results from depreciation and amortisation on aircraft and reserve engines, partly offset by down payments for aircraft orders and the addition of two Boeing 777-Fs (of which one is leased), eight new aircraft from the Airbus A320 family and one A220. Furthermore, buildings and operating and office equipment, including right-of-use assets, declined due to depreciation and the termination of leases on properties. Deferred tax assets were lower due to the tax effects associated with the lower valuation of pension obligations,

which more than offset the capitalised loss carry-forwards recognised for the current financial year. This was offset by the higher value of non-current derivative financial instruments, particularly due to the higher market values of USD investment hedges.

The value of aircraft and reserve engines came to EUR 15,318m as of year-end 2021 (31 December 2020: EUR 15,842m). The Lufthansa Group fleet comprised 713 aircraft.

Current assets up by 34%

Current assets rose by 34% to EUR 13,475m (31 December 2020: EUR 10,040m), in particular due to the increase in cash including current securities, as a result of the financing activities completed in the reporting year. Current trade and other receivables also rose as a result of increased business activity in all segments. Rising kerosene prices caused the market value of hedging instruments within current derivative financial instruments to increase.

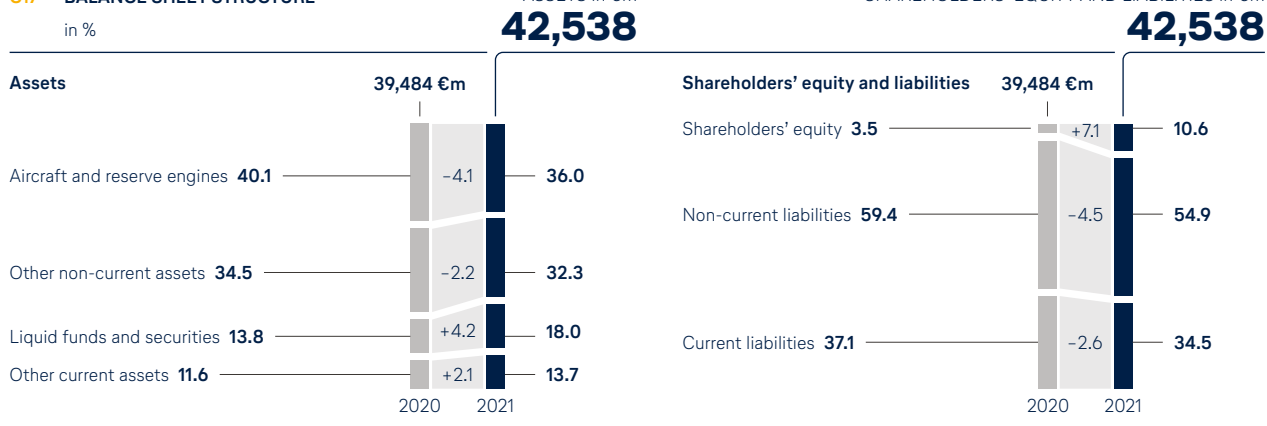
Assets held for sale of EUR 270m mainly consisted of 13 aircraft held for sale.

Shareholders' equity and liabilities

Shareholders' equity up by 224%; equity ratio increases to 10.6%

Shareholders' equity rose by 224% compared with year-end 2020 to EUR 4,490m (31 December 2020: EUR 1,387m), primarily thanks to the issuance of new shares, which resulted in an increase of EUR 2,108m. Other positive measurement effects from pensions and financial instruments recognised directly in equity also more than made up for the loss in the current financial year.

C17 BALANCE SHEET STRUCTURE



The equity ratio therefore increased by 7.1 percentage points compared with year-end 2020 to 10.6% (31 December 2020: 3.5%).

T025 DEVELOPMENT OF EARNINGS, EQUITY, EQUITY RATIO AND RETURN ON EQUITY

		2021	2020	2019	2018	2017
Profit/loss after income taxes ¹⁾	€m	-2,193	-6,766	1,245	2,196	2,374
Equity ¹⁾	€m	4,490	1,387	10,256	9,573	9,110
Equity ratio ¹⁾	%	10.6	3.5	24.0	25.1	25.5
Return on equity ¹⁾	%	-48.8	-487.8	12.1	22.9	26.1

¹⁾ Including minority interests.

Non-current liabilities and provisions on par with previous year

Non-current provisions and liabilities of EUR 23,366m were at previous year level (31 December 2020: EUR 23,438m). The increase in borrowing was offset by the decline in pension liabilities.

Non-current borrowing of EUR 15,041m was 23% higher than at year-end 2020 (31 December 2020: EUR 12,252m). The increase resulted mainly from new borrowing. It was offset by the early repayment of the ESF stabilisation measures and maturity-based reclassifications. ➔ **Financing, p. 46f.**

Pension liabilities decreased by 30% to EUR 6,676m (31 December 2020: EUR 9,531m), largely due to the increase in the interest rate used to discount pension liabilities by 0.5 percentage points to 1.3% (previous year: 0.8%) and the positive performance of plan assets.

Current liabilities and provisions remain stable

Current provisions and liabilities of EUR 14,682m remained at the previous year's level (31 December 2020: EUR 14,659m). The decline in current borrowings and other financial liabilities was partly offset by the increase in liabilities from unused flight tickets and current trade payables. Other non-financial liabilities decreased, principally due to the repayment of deferred import VAT liabilities.

Net indebtedness 9% below previous year

Net indebtedness of EUR 9,023m was 9% below the figure at year-end 2020 due to the equity injection, which more than offset the cash outflow from free cash flow, interest payments and pension fund allocations (31 December 2020: EUR 9,922m).

Adjusted net debt, the sum of net indebtedness and pension provisions less 50% of the hybrid bond issued in 2015, was down by 20% compared with the end of 2020 to EUR 15,452m (31 December 2020: EUR 19,206m).

T026 CALCULATION OF NET INDEBTEDNESS

	2021 in €m	2020 in €m	Change in %
Liabilities to banks	2,461	4,938	-50
Bonds	6,697	2,907	130
Lease liabilities	2,370	2,637	-10
Other non-current borrowing	5,142	4,886	5
	16,670	15,368	8
Other bank borrowing	19	14	36
Group indebtedness	16,689	15,382	8
Cash and cash equivalents	2,307	1,806	28
Securities	5,359	3,654	47
Net indebtedness	9,023	9,922	-9
Pension provisions	6,676	9,531	-30
Net indebtedness and pensions	15,699	19,453	-19

Comparison with original forecast and overall statement by the Executive Board on the economic position

Revenue and Adjusted EBIT at the Lufthansa Group performed in line with the original forecast. | Lufthansa Cargo posts record result.
| Main KPIs develop in line with forecasts.

COMPARISON WITH ORIGINAL FORECAST

Revenue and Adjusted EBIT at the Lufthansa Group performed as forecast

The Lufthansa Group prepared and announced its outlook for the 2021 financial year with the publication of the Annual Report 2020 on 4 March 2021. The uncertainty concerning the development of the ongoing coronavirus pandemic meant it was again not possible to give a detailed outlook for the 2021 financial year. This did not change in the course of 2021.

In March, the Lufthansa Group forecast an increase in revenue and a year-on-year decline in the operating loss on the basis of Adjusted EBIT for the 2021 financial year. In November, the Group specified its earnings outlook in the expectation that the operating loss, as measured by Adjusted EBIT, should be cut by at least half compared with the previous year. The forecast was met, with a 24% increase in revenue and an Adjusted EBIT of EUR -2,349m (previous year: EUR -5,451m).

The capacity development forecast for 2021 was adjusted over the course of the year. In its original outlook, the Lufthansa Group predicted capacity in the range of 40% to 50% of the pre-crisis level in 2019, as measured by available seat-kilometres. When the first interim report for 2021 was published in early May, the Lufthansa Group adjusted its capacity outlook to forecast that capacity would reach 40% of its pre-crisis level. This forecast was correct with an actual capacity of 40%.

Lufthansa Cargo exceeds original forecast

In line with the performance of the Group as a whole, the Lufthansa Group anticipated an increase in revenue and a decline in the operating loss for the business segments Network Airlines, Eurowings, MRO and Catering.

The forecast was realised for the segments Network Airlines, Eurowings and MRO, where revenue rose by 26%, 37% and 7% respectively and Adjusted EBIT improved to EUR -3,486m (previous year: EUR -4,674m), EUR -230m (previous year: EUR -703m) and EUR 210m (previous year: EUR -383m) respectively.

The revenue forecast was not achieved in the Catering segment. Revenue decreased by 15% in the reporting year. Despite this, the LSG group generated positive Adjusted EBIT of EUR 27m in 2021 (previous year: EUR -284m).

For the Logistics segment, the Lufthansa Group projected a decline in revenue and Adjusted EBIT when the Annual Report 2020 was published, because yields were expected to return to normal compared with the historical highs in 2020. This outlook was adjusted when the first 2021 interim report was published. Since then, the Lufthansa Group expected revenue and Adjusted EBIT to go up in 2021 in view of the persistent shortage of capacity on the market and the resulting increase in yields. The forecast was met, with a 38% increase in revenue and a 93% increase in Adjusted EBIT to EUR 1,493m (previous year: EUR 772m). Lufthansa Cargo thus reported another record result.

Main KPIs of the Lufthansa Group are developing in line with forecasts

The Lufthansa Group predicted that gross capital expenditure would come to around EUR 1.3bn in 2021. In addition, the Lufthansa Group forecast improvements in cash flow from operating activities and Adjusted free cash flow. These forecasts were met with gross capital expenditure of EUR 1,329m, an increase in cash flow from operating activities to EUR 618m (previous year: EUR -2,328m) and Adjusted free cash flow of EUR -855m (previous year: EUR -3,669m).

Borrowing developed better than originally expected. Instead of increasing as forecast, net indebtedness decreased year-on-year by 9%. This was mainly due to the equity injection, which more than offset the outflows from free cash flow, interest payments and allocations to pension plans.

The forecast of an improvement in Adjusted ROCE in 2021 was met. This key figure was 9.2 percentage points higher year-on-year.

Forecast for specific carbon emissions was achieved

The Lufthansa Group expected a decrease in specific carbon emissions in the 2021 financial year compared with the previous year. With a decrease in carbon emissions per passenger-kilometre of 3%, this forecast was achieved. This was due to the changes in the mix of routes and a corresponding increase in the average flight length.

T027 DEVELOPMENT OF SIGNIFICANT KPIS

		Result 2020 ¹⁾	Forecast for 2021 ¹⁾	Result 2021
Revenue	€m	13,589	above previous year	16,811
Adjusted EBIT	€m	-5,451	above previous year	-2,349
Available seat-kilometres	million	358,803 ²⁾	40 – 50% of the level of 2019	145,139 (40%)
Capital expenditure (gross)	€m	1,273	around 1,300	1,329
Adjusted free cash flow	€m	-3,669	above previous year	-855
Cash flow from operating activities	€m	-2,328	above previous year	618
Net indebtedness	€m	9,922	above previous year	9,023
Adjusted net debt/ Adjusted EBITDA		not meaningful	not meaningful	not meaningful
Adjusted ROCE	%	-16.7	above previous year	-7.5
Specific CO ₂ emissions	grammes	105.2	below previous year	101.6

¹⁾ As stated in the Annual Report 2020.

²⁾ Result 2019.

OVERALL STATEMENT BY THE EXECUTIVE BOARD ON THE ECONOMIC POSITION

After a challenging year in 2020, the Lufthansa Group made good progress with overcoming the coronavirus crisis in 2021.

The easing of travel restrictions made possible by the progress of global vaccination campaigns led to higher customer demand and a corresponding increase in capacity. The operating recovery enabled us to increase our revenue compared with the previous year by 24% and cut the operating loss by more than half, with Adjusted EBIT of EUR -2,349m.

The earnings performance was partly driven by the successful implementation of the restructuring programmes. More than three quarters of the total annual savings target of EUR 3.5bn was achieved in the reporting year.

The Aviation Services companies also contributed to the Lufthansa Group's financial recovery. Lufthansa Technik and the LSG group managed to return to profitability. Lufthansa Cargo reported record earnings again in the reporting year.

In addition, all stabilisation measures from the ESF were repaid in full and ahead of schedule and the balance sheet strengthened, thanks to successful financing activities on capital markets, particularly the issuance of several bonds and the successful execution of a capital increase.

We initiated deep changes in the Company to adjust to the structural changes in demand and the market environment. The Executive Board is confident that the Lufthansa Group will emerge stronger from the crisis and continue to build on its position as Europe's leading airline group.

Business segments

Network Airlines business segment

The focus of Network Airlines is on lowering costs, securing liquidity and increasing productivity. | Fleet modernisation continues.
| Operating and financial performance improve during the year.

T028 KEY FIGURES NETWORK AIRLINES

		2021	2020	Change in %
Revenue	€m	8,376	6,622	26
of which traffic revenue	€m	6,802	5,488	24
Total operating income	€m	8,946	7,616	17
Operating expenses	€m	12,413	12,258	1
Adjusted EBITDA	€m	-1,920	-2,860	33
Adjusted EBIT	€m	-3,486	-4,674	25
EBIT	€m	-3,364	-6,099	45
Adjusted EBIT margin	%	-41.6	-70.6	29.0 pts
Adjusted ROCE	%	-23.7	-27.9	4.2 pts
Segment capital expenditure	€m	1,035	958	8
Employees as of 31 Dec	number	53,295	57,363	-7
Average number of employees	number	54,918	59,191	-7

Business activities

Network Airlines offer their customers a high-quality product

The Network Airlines business segment comprises Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines. The airlines offer their customers a premium experience, with high-quality products and services. The multi-hub strategy offers passengers a comprehensive route network along with the greatest possible flexibility for their journey.

The Network Airlines segment also includes the regional airlines Lufthansa CityLine, Air Dolomiti, Edelweiss Air and Germanwings, whose passenger flight operations have since been discontinued. Eurowings Discover, the Lufthansa Group's new holiday airline, which started operations in July 2021, is also part of the segment.

Commercial joint ventures with leading international airlines also extend the route network of the Group's airlines. Commercial joint ventures exist with United Airlines and Air Canada on routes between Europe and North America, and with All Nippon Airways (ANA), Singapore Airlines and Air China on routes between Europe and Japan as well as Singapore and China respectively. In addition, numerous code-share agreements are in place.

Course of business

Network Airlines focusing on implementing the restructuring programme

The Network Airlines worked intensively on implementing their restructuring programmes during the 2021 financial year. The focus was on lowering costs, securing liquidity and improving profitability.

Fleet modernisation and unification continues

The Network Airlines are driving forward the modernisation and unification of their fleets. Older aircraft models are being retired and new, efficient aircraft with lower fuel needs and lower carbon emissions are joining the fleet. At the end of the 2021 financial year, the Network Airlines fleet consisted of a total of 598 aircraft (previous year: 654 aircraft).

➤ Fleet, p. 24ff.

Product and service expanded further

In the first six months of 2021, a new catering concept was introduced to Lufthansa German Airlines, SWISS and Austrian Airlines. Economy Class passengers for the airlines' short- and medium-haul routes are offered a customised and high-quality range of food products for purchase. The concept was developed in cooperation with Retail inMotion, an LSG group subsidiary. The "Tasting HEIMAT" catering concept was also introduced for Business Class guests at Lufthansa German Airlines in September 2021.

In addition, Lufthansa German Airlines introduced a new, innovative cabin in the new Airbus A320 family aircraft in September 2021. This noticeably improves travel comfort for the passengers. The new cabin will in future be deployed at SWISS, Brussels Airlines and Eurowings.

Focus still on sustainability despite coronavirus pandemic

Sustainability plays an important role for the Network Airlines, with a focus on reducing environmental impacts. In the 2021 financial year, the Network Airlines have continued with their fleet modernisation. The investment in modern and particularly fuel-efficient aircraft and engine technologies is currently the most important lever for reducing carbon emissions from flight operations.

In addition, the Network Airlines are investing in the development and expansion of the necessary infrastructure for the usage of sustainable fuels. For example, SWISS established a complete logistics chain for importing sustainable aviation fuel (SAF) to Switzerland for the first time in the reporting year.

The network airlines continue to expand their options for offsetting CO₂ emissions. Passengers can use the Compensaid platform to offset their CO₂ emissions by way of various high-quality climate protection projects or reduce them by purchasing sustainable aviation fuels (SAF).

You can find additional sustainability activities by the Network Airlines in the [Combined non-financial declaration p. 94ff.](#)

Operating performance

Operating performance improved over the course of the reporting year

The performance of the Network Airlines remained affected by the effects of the coronavirus pandemic in the 2021 financial year. The globally accelerated progress on vaccinations and resulting gradual relaxation in travel restrictions did, however, have an increasingly positive effect on the demand for flights over the course of the year.

This meant that, in the summer of 2021, demand for flights to European holiday destinations and long-haul tourist destinations rose strongly with only limited or no travel restrictions in place. It later also increased on routes to

North America, in particular after the announcement of the relaxation of travel restrictions to the USA. The demand for business trips also increased noticeably over the year. However, the rise in coronavirus infections in the Group's home markets and the emergence of the Omicron variant had a negative impact on demand towards the end of the year.

Traffic figures increased during the year

The capacity offered by the Network Airlines expanded during the reporting year. In the first quarter, it was 22% of the pre-crisis level in 2019. Capacity then increased to 29% in the second quarter, 49% in the third quarter and 59% of the pre-crisis level in the fourth quarter. Over the year as a whole, capacity was 40% of the pre-crisis level.

The comparison of the key figures for the 2021 financial year against the previous year is influenced by the fact that the impact of the coronavirus crisis in the previous year first became evident during the month of March.

Nevertheless, offered capacity in the financial year 2021 was 32% up on the previous year and the number of flights increased by 22%. Sales rose by 28%. The Network Airlines carried a total of 39.2 million passengers in 2021, 34% more than the previous year. The passenger load factor was 60.3%, 1.9 percentage points lower than in the previous year.

Exchange rate-adjusted yields rose by 1.7%. Traffic revenue for Network Airlines rose by 24% to EUR 6,802m due to the higher traffic (previous year: EUR 5,488m).

T029 TRAFFIC FIGURES NETWORK AIRLINES

		2021	2020	Change in %
Flights	number	379,434	310,023	22
Passengers	thousands	39,157	29,119	34
Available seat-kilometres	millions	131,225	99,568	32
Revenue seat-kilometres	millions	79,157	61,961	28
Passenger load factor	%	60.3	62.2	-1.9 pts

T030 TRENDS IN TRAFFIC REGIONS

Network Airlines

	Net traffic revenue external revenue		Number of passengers		Available seat-kilometres		Revenue seat-kilometres		Passenger load factor	
	2021 in €m	Change in %	2021 in thousands	Change in %	2021 in millions	Change in %	2021 in millions	Change in %	2021 in %	Change in pts
Europe	2,982	41	31,653	38	45,607	42	31,480	57	69.0	6.2
America	1,792	29	3,746	33	50,132	39	28,653	31	57.2	-3.3
Asia/Pacific	487	-30	793	-44	14,106	-25	5,951	-48	42.2	-19.4
Middle East/Africa	833	51	2,965	56	21,380	69	13,073	55	61.1	-5.7
Not assignable	708	-4	-	-	-	-	-	-	-	-
Total traffics	6,802	24	39,157	34	131,225	32	79,157	28	60.3	-1.9

Financial performance

Revenue increases by 26% compared to previous year

Revenue in the Network Airlines business segment rose by 26% to EUR 8,376m due to higher traffic revenue compared with the previous year (previous year: EUR 6,622m). Operating income of EUR 8,946m increased by 17% in the reporting year 17% (previous year: EUR 7,616m). Constant currency unit revenues (RASK) decreased mainly due to the lower load factor and lower yields on short-haul traffic by 6.6%.

T031 OPERATING FIGURES NETWORK AIRLINES

	2021	2020	Change	Exchange-
	in € cent	in € cent	in %	rate adjusted change in %
Yields	7.7	7.7	0.4	1.7
Unit revenue (RASK)	6.6	7.2	-8.3	-6.6
Unit cost (CASK) without fuel and emissions trading expenses	7.7	10.3	-24.6	-24.1

Expenses rise significantly less than revenue

With growth of 1% to EUR 12,413m (previous year: EUR 12,258m), operating expenses increased at a lower rate than revenue. This was mainly due to lower staff costs and depreciation and amortisation. Constant currency unit costs (CASK) excluding fuel and emissions trading expenses decreased accordingly by 24.1%.

T032 OPERATING EXPENSES NETWORK AIRLINES

	2021	2020	Change
	in €m	in €m	in %
Cost of materials and services	5,687	5,101	11
of which fuel	1,970	1,570	25
of which fees	1,667	1,316	27
of which charter	101	143	-29
of which MRO services	1,006	1,126	-11
Staff costs ¹⁾	3,311	3,340	-1
Depreciation and amortisation ²⁾	1,566	1,814	-14
Other operating expenses ³⁾	1,849	2,003	-8
Total operating expenses	12,413	12,258	1

¹⁾ Without past service costs/settlement.

²⁾ Without impairment losses.

³⁾ Without book losses.

The cost of materials and services was 11% up on the previous year at EUR 5,687m (previous year: EUR 5,101m). Fuel costs climbed by 25% to EUR 1,970m (previous year: EUR 1,570m). Expenses for fees and charges increased by 27% to EUR 1,667m (previous year: EUR 1,316m).

Staff costs fell by 1% to EUR 3,311m (previous year: EUR 3,340m). Restructuring costs totalling EUR 344m (previous year: EUR 166m) partially compensated for the 7% decline in the average number of employees and savings from short-time work and crisis wage agreements. The effect from short-time work and the associated state support reduced over the course of the year ➔ **Employees, p. 27ff.**

Depreciation and amortisation decreased by 14% to EUR 1,566m (previous year: EUR 1,814m). Other operating expenses went down by 8% to EUR 1,849m (previous year: EUR 2,003m).

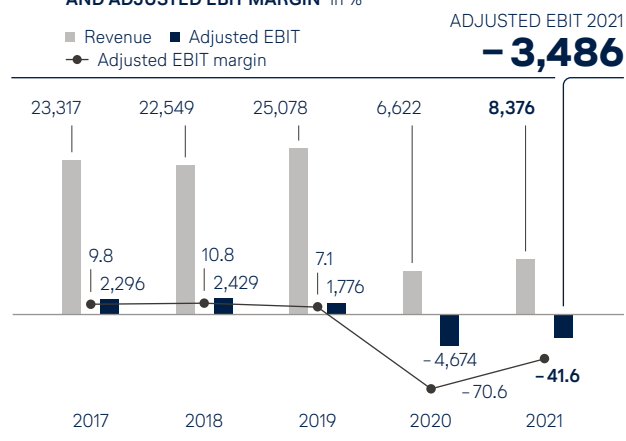
Adjusted EBIT of EUR -3,486m

Adjusted EBIT came to EUR -3,486m in 2021 (previous year: EUR -4,674m). This includes non-recurring expenses from restructuring of EUR 344m (previous year: EUR 166m) and non-operating extraordinary expenses for legal procedures of EUR 50m (previous year: EUR 0m). The Adjusted EBIT margin was -41.6% (previous year: -70.6%).

EBIT in the reporting year was EUR -3,364m (previous year: EUR -6,099m). The difference to Adjusted EBIT mainly came from the changes in pension plans at SWISS and Austrian Airlines, resulting in income of EUR 98m. Write-downs on the fleet totalling EUR 1,385m affected net income in the previous year. ➔ **Earnings position, p. 40ff.**

C18 NETWORK AIRLINES:

DEVELOPMENT OF REVENUE, ADJUSTED EBIT in €m AND ADJUSTED EBIT MARGIN in %



Segment capital expenditure increases 8% year-on-year

Segment capital expenditure rose in the reporting year in particular due to higher advance payments on aircraft orders by 8% to EUR 1,035m (previous year: EUR 958m).

Staff numbers decline by 7%

As of the end of the year, the number of employees decreased by 7% year-on-year to 53,295 (previous year: 57,363) in particular due to fluctuation, the absence of external recruitment and the introduction of voluntary programmes to lower employee numbers.

LUFTHANSA GERMAN AIRLINES

T033 KEY FIGURES LUFTHANSA GERMAN AIRLINES¹⁾

		2021	2020	Change in %
Revenue	€m	5,061	4,104	23
Total operating income	€m	5,499	4,709	17
Operating expenses	€m	8,096	8,063	0
Adjusted EBITDA	€m	-1,745	-2,297	24
Adjusted EBIT	€m	-2,616	-3,386	23
EBIT	€m	-2,587	-4,702	45
Adjusted EBIT margin	%	-51.7	-82.5	30.8 pts
Employees as of 31 Dec	number	35,738	37,741	-5
Average number of employees	number	36,545	38,670	-5
Flights	number	227,427	192,216	18
Passengers	thousands	23,544	17,996	31
Available seat-kilometres	millions	82,962	64,480	29
Revenue seat-kilometres	millions	50,067	40,064	25
Passenger load factor	%	60.3	62.1	-1.8 pts

¹⁾ Including regional partners and Eurowings Discover.

As the largest German airline, Lufthansa German Airlines offered its customers a premium product with connections to all destinations where flights were possible through the hubs in Frankfurt and Munich during 2021. The regional airlines Lufthansa CityLine and Air Dolomiti as well as Germanwings, which has now stopped passenger flight operations, are also part of Lufthansa German Airlines. Furthermore, Miles & More and the equity investment in Terminal 2 Gesellschaft in Munich belong to Lufthansa German Airlines.

Eurowings Discover starts flight operations in the touristic segment

In order to strategically focus on the growing touristic travel segment, Eurowings Discover, the new holiday airline in the Lufthansa Group, was established as a subsidiary of

Deutsche Lufthansa AG in the 2020 financial year. After Eurowings Discover received its operating licence from the German Federal Aviation Office in June 2021, the airline started flight operations in July 2021, initially with three Airbus A330 aircraft.

With a range of short-, medium- and long-haul routes, Eurowings Discover supplements and strengthens the Lufthansa Group's touristic portfolio from Frankfurt, and also from Munich as of 2022. The airline operates using the IATA code 4Y under its own commercial and operational responsibility. It is completely integrated into the feeder and sales network of Lufthansa German Airlines. Passengers therefore benefit from a smooth booking process and seamless connections.

At the end of 2021, the Eurowings Discover fleet comprised seven A330s and three A320s. All aircraft had previously been used by other Lufthansa Group companies.

The "New Tomorrow" restructuring programme focuses on sustainable cost savings

As part of the "New Tomorrow" restructuring programme, Lufthansa German Airlines successfully implemented a range of measures in the 2021 financial year.

In addition to implementing short-term cost-cutting measures to directly improve liquidity, the focus was in particular on structural, long-term changes to the cost and revenue structure. This mainly included measures to reduce staff costs (negotiation of crisis contributions and volunteer programmes for all professional groups) and realise savings in MRO (cancellation of external services) and ground operations (expansion of automation and flexible working time models), as well as in IT and infrastructure. In addition, the ground and in-flight products were adapted to the requirements of the current market environment and new approaches to increase ancillary revenue were devised.

As part of the restructuring programme, the voluntary leave programme "now!" for ground, cockpit and cabin staff was implemented successfully at Deutsche Lufthansa AG. In total, around 1,800 ground, 400 cockpit and 900 cabin crew have decided to leave voluntarily. ➔ **Employees, p. 27ff.**

Lufthansa German Airlines fleet to be reduced and structurally optimised

Lufthansa German Airlines has decided to significantly scale back its fleet as a result of the coronavirus pandemic. In particular, this entails the retirement of larger four-engine aircraft, which are less fuel-efficient.

In 2021, Lufthansa German Airlines sold twelve aircraft, including two Boeing 747-400s, six A320s and four Bombardier CRJs. Eight A340-60s were reactivated from long-term storage mode to bridge temporary capacity gaps.

To speed up fleet modernisation, five additional 787-9 aircraft were ordered in the reporting year and are expected to start operations in the first half of 2022. In addition, the existing order for A350-900 aircraft was extended by two additional aircraft. Lease agreements were signed for four A350-900s aircraft are being included in the fleet since the start of 2022.

➤ **Fleet, p. 24ff.**

Lufthansa German Airlines expands its premium product further

Even during the coronavirus pandemic, Lufthansa German Airlines has continued to work on adapting its capacity to the changed customer requirements and sustainably increase customer satisfaction with new products and services.

As part of this effort, the new catering concept “Onboard Delights” was launched for short-haul flights in May 2021. The airline offers its Economy Class customers a high-quality range of fresh meals, snacks and drinks for purchase. With this product, Lufthansa German Airlines is meeting customer demands for freshness, quality and sustainability. Since December 2021, passengers in Economy and Premium Economy Class on long-haul routes also have the opportunity to buy high-quality snacks and spirits. The main meals and drinks remain free of charge.

In September 2021, Lufthansa German Airlines introduced the “Tasting HEIMAT” culinary concept for Business Class guests on short- and medium-haul flights. Creative menus inspired by major German cities are served to give a feeling of “at home on board”. Traditional German recipes are reinterpreted and refined with culinary influences from around the world.

In the reporting year, the “Sleepers Row”, a complete sleep row in Economy class, was introduced for long-haul flights. Guests have the opportunity to book a Sleepers Row at an additional charge for over 30 routes. It offers a free seating row including preferential boarding, a comfortable mattress cover, a blanket and a pillow of Business Class quality.

Lufthansa German Airlines supports emergency and research flights

Lufthansa German Airlines again supported the federal government with emergency flights in 2021. In August 2021, an air bridge was created from Tashkent to Frankfurt to evacuate refugees from Afghanistan.

In addition, two charter flights were conducted to the Falkland Islands on behalf of the Alfred-Wegener-Institute to ensure scientists and crew for the Polar Star research ship arrived at their destination safely and in good health.

Change in the management of Lufthansa German Airlines

On 1 April 2022, Jens Ritter, currently a member of the Executive Board and the Chief Operating Officer of Eurowings, will become the new Chief Executive Officer of Lufthansa German Airlines. He succeeds Klaus Froese, who will in future serve as a captain for the 787-9 due to arrive at Lufthansa German Airlines next year.

Also on 1 April 2022, Jörg Beißel will become the new Chief Financial Officer of Lufthansa German Airlines and succeed Patrick Staudacher, who leaves the company at the end of April 2022. Jörg Beißel was previously Head of Corporate Controlling at the Lufthansa Group.

Traffic figures significantly expanded in the reporting year

In the 2021 financial year, Lufthansa German Airlines carried 23.5 million passengers and therefore 31% more than the previous year (previous year: 18.0 million). Capacity increased by 29% and sales were up by 25% year-on-year. The passenger load factor was 1.8 percentage points lower than the previous year's level, at 60.3% (previous year: 62.1%). Yields decreased by 1.0% after adjusting for exchange rates, due to declines on short-haul routes, where leisure traffic recovered faster than business traffic. Traffic revenue rose by 22% to EUR 4,241m due to the increased traffic (previous year: EUR 3,465m).

Revenue up by 23% year-on-year; Adjusted EBIT is EUR -2,616m

In the reporting year, revenue at Lufthansa German Airlines rose due to the increase in traffic revenue over the previous year by 23% to EUR 5,061m (previous year: EUR 4,104m). Operating income rose by 17% to EUR 5,499m (previous year: EUR 4,709m).

Operating expenses were around the previous year's level at EUR 8,096m (previous year: EUR 8,063m). Higher fuel costs (+20%) due to higher prices and volumes as well as higher fees and charges (+24%) were countered by lower depreciation and amortisation (-20%). Despite the significant expansion of the flight plan, staff costs only increased slightly (+3%).

Adjusted EBIT came to EUR -2,616m in 2021 (previous year: EUR -3,386m). The Adjusted EBIT margin was -51.7% (previous year: -82.5%). EBIT came to EUR -2,587m (previous year: EUR -4,702m). The previous year's value was adversely affected by write-downs on the fleet totalling EUR 1,293m.

SWISS

T034 KEY FIGURES SWISS¹⁾

		2021	2020	Change in %
Revenue	€m	2,098	1,732	21
Total operating income	€m	2,186	1,915	14
Operating expenses	€m	2,603	2,604	0
Adjusted EBITDA	€m	29	-242	
Adjusted EBIT	€m	-417	-689	39
EBIT	€m	-349	-695	50
Adjusted EBIT margin	%	-19.9	-39.8	19.9 pts
Employees as of 31 Dec	number	8,743	10,055	-13
Average number of employees	number	9,301	10,349	-10
Flights	number	66,285	54,835	21
Passengers	thousands	7,133	5,677	26
Available seat-kilometres	millions	26,420	21,489	23
Revenue seat-kilometres	millions	15,007	13,069	15
Passenger load factor	%	56.8	60.8	-4.0 pts

¹⁾ Including Edelweiss Air.

SWISS is the biggest airline in Switzerland. With its sister company Edelweiss Air, which specialises in touristic flights, it offers its customers a first-class product and a global route network. The separately managed Swiss WorldCargo division uses the belly capacities of SWISS aircraft to offer comprehensive airport-to-airport services for high-value goods and sensitive freight worldwide.

Restructuring programme implemented systematically

In order to combat the structural market changes resulting from the coronavirus pandemic, SWISS has implemented the comprehensive strategic restructuring programme “reach”, which includes a reduction of job and fleet numbers. The measures planned as part of the programme for long-term savings totalling CHF 500m, including around CHF 200m in staff costs, which also aim to secure the investment capacity and competitiveness of SWISS, are proceeding as planned. By the end of 2021, 2,000 jobs had been reduced, two thirds thereof via voluntary measures and natural turnover. In June 2021, there were 550 terminations. ➔ **Employees, p. 27ff.**

Fleet reduction and modernisation moving forward

At the end of May 2021, SWISS received the last of a total of 30 Airbus A220 aircraft and therefore completed its A220 fleet renewal. SWISS also brought two additional A320neo aircraft into its fleet. The newer generation of aircraft have 20% lower carbon emissions compared with comparable previous models.

As part of the restructuring programme, the SWISS fleet will be reduced by 15% including wet leases. For long-haul routes, five A330s were temporarily placed in long-term storage mode. The reduction in the short-haul fleet was achieved by accelerating the retirement of older A320 family aircraft and the delayed introduction of the new A320neo family aircraft as well as by reducing wet leases. ➔ **Fleet, p. 24ff.**

New Premium Economy class aims to further strengthen the premium positioning

To strengthen its premium positioning in the growing segment of touristic travel, SWISS introduced its new Premium Economy class in June 2021. Passengers benefit from more private space and greater comfort, which is emphasised by the newly developed hard shell seat. Passengers can also choose from a wide range of catering items, double the free luggage allowance and preferential boarding. The new, additional travel class will be introduced in the first quarter of 2022.

SWISS introduces a new catering concept

In March 2021, SWISS introduced the SWISS Saveurs catering concept that had already been offered successfully in Geneva to Economy Class flights on short- and medium-haul routes to and from Zurich. SWISS is working exclusively with the internationally renowned and long-standing, family-run Swiss company Confiserie Sprüngli on this.

Milestone for using sustainable fuel achieved

In cooperation with various partners, SWISS established a complete logistics chain to import sustainable aviation fuel (SAF) into Switzerland for the first time in July 2021. SWISS is therefore the first scheduled airline to use sustainable aviation fuel for its normal flight operations from Switzerland.

Dieter Vranckx is the new CEO of SWISS

Dieter Vranckx has been the Chief Executive Officer of SWISS since 1 January 2021. He succeeded Thomas Klühr, who left the company at year-end 2020 for personal reasons. Dieter Vranckx was previously Chief Executive Officer of Brussels Airlines.

Capacity and passenger numbers rising significantly

In the 2021 financial year, the number of passengers carried by SWISS rose 26% to 7.1 million (previous year: 5.7 million). Capacity was expanded by 23% and the number of flights rose by 21%. Sales were up by 15%; the passenger load factor was 4.0 percentage points lower than the previous year's level, at 56.8% (previous year: 60.8%). In total, SWISS, including Edelweiss, served around 156 destinations compared with 161 before the pandemic and is therefore achieving its mission to connect Switzerland to the world. Yields rose by 5.9% after adjusting for exchange rates. Traffic revenue went up by 11% to EUR 1,389m (previous year: EUR 1,249m).

Revenue up by 21% year-on-year; Adjusted EBIT is EUR –417m

Revenue at SWISS increased by 21% to EUR 2,098m in the reporting year due to the increase in traffic revenue (previous year: EUR 1,732m). Cargo business continued to have a disproportionate share of total revenue at SWISS at just under a third. Operating income of EUR 2,186m was 14% up on the year (previous year: EUR 1,915m).

Operating expenses were around the previous year's level at EUR 2,603m (previous year: EUR 2,604m). Higher fuel costs (+22%) due to higher prices and volumes as well as higher fees and charges due to increased volumes (+18%) were countered by lower staff costs (–7%).

Adjusted EBIT in the reporting year came to EUR –417m (previous year: EUR –689m). The Adjusted EBIT margin was –19.9% (previous year: –39.8%). EBIT came to EUR –349m (previous year: EUR –695m). The difference to Adjusted EBIT mainly resulted from changes to pension valuations.

AUSTRIAN AIRLINES

T035 KEY FIGURES AUSTRIAN AIRLINES

		2021	2020	Change in %
Revenue	€m	743	460	62
Total operating income	€m	775	671	15
Operating expenses	€m	1,039	992	5
Adjusted EBITDA	€m	–126	–162	22
Adjusted EBIT	€m	–264	–321	18
EBIT	€m	–239	–381	37
Adjusted EBIT margin	%	–35.5	–69.8	34.3 pts
Employees as of 31. Dec	number	5,793	6,443	–10
Average number of employees	number	6,039	6,689	–10
Flights	number	56,201	42,310	33
Passengers	thousands	5,008	3,114	61
Available seat-kilometres	millions	11,324	7,127	59
Revenue seat-kilometres	millions	7,011	4,412	59
Passenger load factor	%	61.9	61.9	0.0 pts

Austrian Airlines is Austria's largest airline. It offers its customers a global route network and a high-quality product.

Austrian Airlines completes fleet reduction

The downsizing of the Austrian Airlines fleet was successfully completed at the end of 2021. Since the start of the crisis, a total of 28 aircraft have left the Austrian Airlines fleet. In addition to three Boeing 767-300ERs, 18 Dash 8s and seven A319 jets were retired. Consequently, the fleet comprised 61 aircraft exclusively from the manufacturers Airbus, Boeing and Embraer at the end of 2021. ↗ [Fleet](#), p. 24ff.

Premium Economy class expanded on long-haul routes

Austrian Airlines is building up its Premium Economy class on long-haul routes. The travel class will be extended for the 2022 summer flight timetable on the Boeing 767 fleet from currently 18 to 30 seats per aircraft. The heart of the Premium Economy class is the seat specifically produced for the Lufthansa Group, which, compared with Economy class, offers passengers greater legroom and comfort for the trip. In addition, passengers in this travel class can check in two pieces of luggage each weighing up to 23 kilogrammes free of charge and enjoy a culinary highlight with a three- or four-course menu on board.

Austrian Airlines launches its new “Austrian Melangerie” catering concept

Since 18 March 2021, Austrian Airlines passengers in Economy class have been able to choose from the varied and high-quality “Austrian Melangerie” paid menu on European flights. The new catering concept is available on flights that last up to three hours. The new offer focuses on quality, regionality and choice. The fresh dishes are supplied by the DO & CO brand “Henry for Austrian”; coffee and tea are provided by Julius Meinl.

Changes in the Austrian Airlines Executive Board

Michael Trestl has been the Chief Commercial Officer of Austrian Airlines since 1 January 2021. He was previously Head of Network Management at SWISS.

Francesco Sciortino has been the Chief Operating Officer on the Austrian Airlines Executive Board since 1 April 2021. He succeeded Jens Ritter, who moved to the management of Eurowings.

Annette Mann has been the Chief Executive Officer of Austrian Airlines since 1 March 2022. She succeeds Alexis von Hoensbroech, who left the Company. Annette Mann was previously Head of Corporate Responsibility at Lufthansa Group.

Passenger numbers and load factor rising in the reporting year

With 5.0 million passengers, Austrian Airlines carried 61% more customers than in the previous year (previous year: 3.1 million). Capacity increased by 59% and sales were also up by 59%. The passenger load factor of 61.9% matched the previous year's value. Yields rose by 4.5% after adjusting for exchange rates. Traffic revenue went up by 72% to EUR 669m (previous year: EUR 390m).

Revenue increases by 62% to previous year, Adjusted EBIT amounts to EUR –264m

Revenue at Austrian Airlines rose by 62% to EUR 743m in the 2021 financial year due to higher traffic (previous year: EUR 460m). Operating income rose by 15% year-on-year to EUR 775m (previous year: EUR 671m). The previous year's value included income of EUR 150m in emergency aid granted by the Austrian government.

Operating expenses saw a mostly volume-related increase of 5% to EUR 1,039m in 2021 (previous year: EUR 992m). In particular, expenses increased for fuel (+54%) as well as for fees and charges (+48%). In contrast, positive effects from the cost-cutting measures dampened the increase in total costs.

Adjusted EBIT for Austrian Airlines in the 2021 financial year amounted to EUR –264m (previous year: EUR –321m). The Adjusted EBIT margin was –35.5% (previous year: –69.8%). EBIT came to EUR –239m (previous year: EUR –381m). The difference to Adjusted EBIT mainly resulted from changes to pension plans. The previous year's value was adversely affected by write-downs on the fleet totalling EUR 59m.

BRUSSELS AIRLINES

T036 KEY FIGURES BRUSSELS AIRLINES

		2021	2020	Change in %
Revenue	€m	560	414	35
Total operating income	€m	599	456	31
Operating expenses	€m	788	749	5
Adjusted EBITDA	€m	–76	–171	56
Adjusted EBIT	€m	–189	–293	35
EBIT	€m	–189	–332	43
Adjusted EBIT margin	%	–33.8	–70.8	37.0 pts
Employees as of 31 Dec	number	3,021	3,124	–3
Average number of employees	number	3,035	3,483	–13
Flights	number	29,645	21,280	39
Passengers	thousands	3,479	2,362	47
Available seat-kilometres	millions	10,525	6,487	62
Revenue seat-kilometres	millions	7,073	4,428	60
Passenger load factor	%	67.2	68.3	–1.1 pts

Brussels Airlines is Belgium's national airline. From its hub in Brussels, the airline offers flights to destinations worldwide, with a focus on the African continent.

Brussels Airlines successfully completed its restructuring phase

Brussels Airlines intensified its restructuring programme in response to the coronavirus pandemic. "Reboot Plus" forms the basis for the airline's sustainable future.

As part of the programme, Brussels Airlines completed the restructuring phase. Two Airbus A330s were removed from the long-haul fleet, and eight A320 family aircraft were removed from the short- and medium-haul fleets. The number of employees was reduced by more than 20% compared with the level before the coronavirus crisis began. Since January 2021, new collective bargaining agreements have been in place with all employee groups at Brussels Airlines to enable competitive staff costs. ➔ **Employees, p. 27ff.**

Brussels Airlines modernises its branding

After the restructuring phase and the numerous changes undertaken, in November 2021 Brussels Airlines presented new branding that strengthens its Belgian identity and marks a new start after the coronavirus crisis.

Fleet renewal continues

At the end of June 2021, a decision was taken to buy three Airbus A320neos for Brussels Airlines. The aircraft will join the fleet in summer 2023. With these new, state-of-the-art aircraft and by retiring three older A319s, Brussels Airlines is taking a significant step to the further modernisation of its fleet and is therefore reducing carbon and noise emissions in its medium-haul network. ➔ **Fleet, p. 24ff.**

Brussels Airlines strengthens its market position in West Africa

In November 2021, it was decided to expand the long-haul fleet of Brussels Airlines with a ninth A330. With the additional capacity in summer 2022, Brussels Airlines will restart its route to Ouagadougou, Burkina Faso, and Conakry, Guinea, and increase the frequencies of its existing West African routes. Notwithstanding the pandemic, Africa remains an important and stable pillar of the Brussels Airlines business model.

Changes in the Brussels Airlines Executive Board

Peter Gerber has been the Chief Executive Officer of Brussels Airlines since 1 March 2021. He was previously Chief Executive Officer of Lufthansa Cargo. Peter Gerber succeeds Dieter Vranckx, who became the new Chief Executive Officer of SWISS on 1 January 2021.

Edi Wolfensberger, currently Chief Operating Officer, will move to Eurowings as Chief Operating Officer at the next opportunity.

Operating performance improved over the course of the year for Brussels Airlines

At the start of 2021, flight operations at Brussels Airlines were adversely affected by a travel ban issued by the Belgian government, which led to a much reduced flight plan. The travel ban was lifted in April 2021, resulting in a steep increase in demand. In June 2021, Brussels Airlines restarted full hub operations and has significantly expanded its capacity since the summer. It was therefore possible to generate a positive Adjusted EBIT of EUR 1m in the third quarter of 2021.

With 3.5 million passengers, Brussels Airlines carried 47% more customers than in the previous year (previous year: 2.4 million). Capacity increased by 62% and sales were up by 60%. The passenger load factor was 1.1 percentage points lower than the previous year's level, at 67.2% (previous year: 68.3%). Yields decreased by 6.9% after adjusting for exchange rates. Traffic revenue increased with the expansion of traffic by 31% to EUR 503m (previous year: EUR 384m).

Revenue up by 35% year-on-year; Adjusted EBIT is EUR -189m

In the 2021 financial year, revenue at Brussels Airlines rose by 35% to EUR 560m due to the increase in traffic revenue (previous year: EUR 414m). Operating income rose by 31% to EUR 599m (previous year: EUR 456m).

The successful restructuring measures and strict cost discipline limited the increase in operating costs. At EUR 788m, this was 5% up on the previous year (previous year: EUR 749m). Higher fuel costs (+62%) due to increased prices and volumes as well as higher fees and charges due to volumes (+55%) were partially countered by lower staff costs (-17%).

In the 2021 financial year, Adjusted EBIT at Brussels Airlines was at EUR -189m (previous year: EUR -293m). The Adjusted EBIT margin was -33.8% (previous year: -70.8%). The EBIT was also at EUR -189m (previous year: EUR -332m). The previous year's value was adversely affected by write-downs on the fleet totalling EUR 33m.

Eurowings business segment

Eurowings is positioned as a value carrier with a focus on European point-to-point traffic. | Future and restructuring programme "NEW" lead to significantly higher productivity and cost reductions. | Operating loss significantly reduced.

T037 KEY FIGURES EUROWINGS

		2021	2020	Change in %
Revenue	€m	822	598	37
of which traffic revenue	€m	820	579	42
Total operating income	€m	926	745	24
Operating expenses	€m	1,180	1,346	-12
Adjusted EBITDA	€m	-25	-504	95
Adjusted EBIT	€m	-230	-703	67
EBIT	€m	-227	-802	72
Adjusted EBIT margin	%	-28.0	-117.6	89.6 pts
Adjusted ROCE	%	-16.4	-43.4	27.0 pts
Segment capital expenditure	€m	254	106	140
Employees as of 31 Dec	number	3,563	3,088	15
Average number of employees	number	3,290	3,203	3

Business activities

Eurowings is positioned as a value carrier with an exclusive focus on European point-to-point traffic

The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress, a joint venture with Turkish Airlines.

With clear positioning as Europe's value carrier for private and business travellers, Eurowings sets itself apart from the segment of ultra-low-cost carriers and enables its customers affordable and flexible flying with innovative and customer-friendly services.

The Eurowings business is focused exclusively on European point-to-point traffic. The route network is increasingly aimed at the structurally growing segment of private trips.

Eurowings opens new bases in Berlin and Prague

On 1 April 2021, Eurowings opened a new base at Berlin Brandenburg (BER) airport and therefore increased its commitment to Berlin. Three Airbus A320s were stationed at the airport in the capital city.

Eurowings has also expanded its European network. By opening a new base in Prague on 31 October 2021, the airline expanded its capacity in the Czech Republic. Two A320s were initially stationed at the base, and another is planned to follow in the future. Prague is therefore the tenth Eurowings location in Europe. The Lufthansa subsidiary can offer direct connections from Prague to attractive business and holiday destinations throughout Europe for the first time. Another base in Stockholm will open in spring 2022.

Course of business

Restructuring programme “NEW” prepares Eurowings for the post-crisis period

As part of the coronavirus crisis, Eurowings has already intensified the restructuring programme “NEW”, which was started in 2019. The programme aims to adapt the organisation to the new market conditions and to exploit the opportunities arising through the redistribution of the market in the crisis. It also aims to sustainably boost the attractiveness and popularity of the Eurowings brand. Changes to structures and processes will increase the productivity of the fleet and staff as well as create competitive cost structures in all areas.

Eurowings was able to successfully implement the planned structural measures to a large extent. Flight capacity from Germany has been bundled into one single flight operation.

In addition, the fleet size was reduced by retiring older aircraft and unified to aircraft from the A320 family. External wet leases with whole-year approval were reduced to a minimum. In future, external wet leases will only be used to cover seasonal peaks in the summer. With the homogeneous fleet, Eurowings is striving for higher productivity and a reduction of unit costs by 18% compared with the level before the crisis. At the end of the 2021, financial year the Eurowings fleet had 94 of its own aircraft from the A320 family.

In the reporting year, Eurowings also prepared to introduce A320neo family aircraft into the fleet. In total, Eurowings will receive 13 of the currently most efficient and economical medium-haul aircraft in the near future. They will start to arrive in March 2022. ➔ **Fleet, p. 24ff.**

As part of the “NEW” programme, Eurowings has also introduced slimmer corporate structures and reduced the management team by around 25%.

Short-term working was also used in the reporting year to adapt to the lower market demand. In addition, Eurowings reached a crisis agreement with the ver.di trade union for flight attendants and ground staff. A wage agreement was

signed with the Vereinigung Cockpit pilots' union to overcome the coronavirus crisis, as was an outline paper on the recruitment of cockpit crew at Eurowings Germany ➔ **Employees, p. 27ff.**

Eurowings has reduced central overheads by around one-third as part of the restructuring programme. Structural improvements to and the renegotiation of contracts with system partners also enabled savings in operating costs and project budgets.

Digital services and products for healthy travelling expanded

Health and safety have the highest priority at Eurowings. The airline expanded its range of products and services for safe travel in the 2021 financial year. For example, passengers can book a free middle seat on all Eurowings flights in advance. Alongside flexible rebooking options up to 40 minutes before departure, Eurowings customers are benefiting from the most attractive “No worries package” in the industry.

Eurowings is also offering its passengers a new service for particularly flexible, time-saving and safe travel. Via the health data solution “myHealth Docs”, passengers can check whether they have all of the necessary entry documents and therefore can board their flight. “myHealth Docs” made an important contribution to ensuring compliance with the current coronavirus travel regulations in 2021. It made it possible for passengers to check in efficiently online and therefore significantly reduced waiting times at the airport.

Eurowings growing in the “home and family visit” segment

Eurowings has further expanded its capacity in the “family and home visit” segment and included flights to Beirut, Erbil, Tiflis, Jerewan and to Yekaterinburg and Krasnodar in the flight plan. The airline is a leader in this market segment and is expanding its position as a result of rising demand.

Sustainability issues move to the foreground

Sustainability is a key issue for Eurowings. The airline shares the Group's aim of reducing carbon emissions by 50% by 2030 and being carbon-neutral by 2050.

In future, Eurowings will rely on a new, more sustainable catering concept. When selecting the range, Eurowings has relied on more intensive cooperation with suppliers of sustainable and, to the greatest extent possible, regional products. In-flight packaging should be made from renewable or recycled materials by 2025. Unsold fresh food like sandwiches or snacks are sold on the last flight of the day at a 50% discount.

Changes to management

As of 1 April 2021, Jens Ritter took the position of Chief Operating Officer at Eurowings. He succeeded Michael Knitter, who left Eurowings at the end of March 2021. From April 2022, Jens Ritter will transfer to Lufthansa German Airlines as Chief Executive Officer. Jens Ritter will be succeeded by Edi Wolfensberger, currently Chief Operating Officer of Brussels Airlines.

Since 1 February 2022, Kai Duve has been the member of the Eurowings Executive Board responsible for HR and finance. He was previously Head of Cabin Crews at Lufthansa German Airlines. He succeeded Frank Bauer, who from April 2022 will be responsible for Corporate Controlling at the Lufthansa Group.

Eurowings is a three-time winner at the “German Customer Awards 2020/21”

Eurowings has been given three “German Customer Awards 2020/21” by the Deutschen Gesellschaft für Verbraucherstudien (DtGV). The airline took first place in all three categories (customer satisfaction, customer service and value for money).

Operating performance

Operating performance at Eurowings improved over the year

The ongoing coronavirus crisis also had an effect on the operating performance of Eurowings in the 2021 financial year. However, operating performance improved significantly over the course of the year. A recovery in demand was observed in nearly all European regions, to which Eurowings responded flexibly and quickly with the corresponding increases in capacity. The aim was to optimise contribution margins and cash flow from flight operations. For example, in summer 2021 when the travel restrictions were raised in the short term for the Balearic Islands, Eurowings quickly expanded capacity to Greece to adapt to market demand. The airline thus again recorded a positive operating result for the first time since the start of the coronavirus crisis in the third quarter.

Traffic figures increased over the course of the year

Eurowings gradually increased the capacity offered over the 2021 financial year. In the first quarter, it was 10% of the pre-crisis level in 2019. It then increased to 25% in the second quarter, 62% in the third quarter and 70% of the pre-crisis level in the fourth quarter. Over the year as a whole, capacity was 43% of the pre-crisis level.

The comparison of the key figures for the 2021 financial year against the previous year is influenced by the fact that the impact of the coronavirus crisis in the previous year first became evident during the month of March.

Despite this, capacity increased by 36% compared with the previous year in the reporting year. The number of flights was at the previous year's level. The increased alignment of the network to longer routes with demand overwhelmingly characterised by touristic increased the offered kilometres per flight. Sales rose slightly more strongly than capacity by 37%. Eurowings carried a total of 7.8 million passengers, 8% more than in the previous year. The passenger load factor was 0.5 percentage points higher than in the previous year, at 73.6%.

The yields per revenue seat-kilometres were only slightly above the previous year's level. The indicator is characterised by the route distance being larger on average. In contrast, it was possible to increase the revenue per passenger significantly. Traffic revenue went up by 42% to EUR 820m (previous year: EUR 579m).

T038 TRAFFIC FIGURES EUROWINGS

		2021	2020	Change in %
Flights	number	72,420	71,829	1
Passengers	thousands	7,792	7,235	8
Available seat-kilometres	millions	13,914	10,260	36
Revenue seat-kilometres	millions	10,240	7,501	37
Passenger load factor	%	73.6	73.1	0.5 pts

Financial performance

Revenue up 37% year-on-year

Revenue in the Eurowings business segment rose by 37% to EUR 822m in the 2021 financial year as a result of higher traffic (previous year: EUR 598m). Operating income of EUR 926m was 24% up on the year (previous year: EUR 745m). Constant currency unit revenues per available seat-kilometre (RASK) reduced in contrast by 0.7% year-on-year. This is due to the larger route distances, which, however, at the same time contribute to above-average unit cost reductions and therefore improve the result.

T039 OPERATING FIGURES EUROWINGS

	2021	2020	Change	Exchange-rate adjusted change
	in € cent	in € cent	in %	in %
Yields	6.7	6.6	1.0	0.9
Unit revenue (RASK)	6.1	6.5	-5.6	-0.7
Unit cost (CASK) without fuel and emissions trading expenses	6.4	11.0	-42.0	-41.4

Expenses 12% below previous year's level

Operating expenses in the Eurowings business segment decreased in the reporting year in particular due to the restructuring measures and reductions in fixed costs by 12% to EUR 1,180m (previous year: EUR 1,346m). Constant currency unit costs (CASK) without fuel and emissions trading expenses decreased by 41.4% compared with the previous year. The key drivers for this were significant cost reductions including for maintenance and the termination of wet lease agreements in 2020. Productivity was also significantly increased, including by taking on longer routes. This enabled Eurowings to achieve the unit costs of 2019 at a capacity of just 43% of that before the crisis.

The cost of materials and services was down by 13% year-on-year to EUR 607m (previous year: EUR 699m). There was a 45% volume and price-related increase in fuel expenses to EUR 187m (previous year: EUR 129m). At EUR 238m, expenses for fees and charges were 2% higher than a year ago (previous year: EUR 234m). With the termination of wet lease agreements in 2020 and starting a seasonal wet lease model, charter costs decreased by 75% to EUR 25m (previous year: EUR 102m).

Staff costs rose by 7% year-on-year to EUR 189m (previous year: EUR 176m). Whereas the costs for flying staff rose as a result of expanding capacity and the end of short-term working in the summer, the administrative costs reduced further as part of the restructuring. The average number of employees was slightly above the level of the previous year.

Depreciation rose by 3% year-on-year to EUR 205m (previous year: EUR 199m).

Other operating expenses decreased in the 2021 financial year by 34% to EUR 179m (previous year: EUR 272m). Write-downs on receivables as part of the insolvency of the wet lease partner Luftfahrtgesellschaft Walter (LGW) and restructuring costs for Germanwings had a negative impact in the previous year.

T040 OPERATING EXPENSES EUROWINGS

	2021 in €m	2020 in €m	Change in %
Cost of materials and services	607	699	-13
of which fuel	187	129	45
of which fees	238	234	2
of which charter expenses	25	102	-75
of which MRO services	68	146	-53
Staff costs ¹⁾	189	176	7
Depreciation and amortisation ²⁾	205	199	3
Other operating expenses ³⁾	179	272	-34
Total operating expenses	1,180	1,346	-12

¹⁾ Without past service costs/settlement.

²⁾ Without impairment losses.

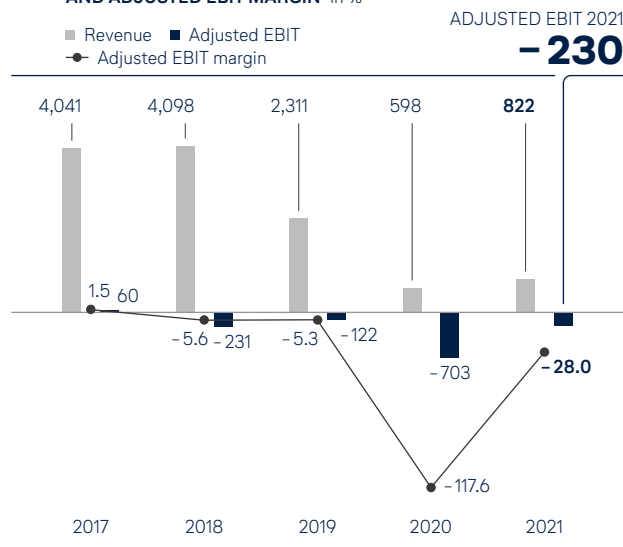
³⁾ Without book losses.

Adjusted EBIT of EUR -230m

Earnings in the reporting year were largely defined by the coronavirus pandemic. The increase in revenue and cost reductions as part of the restructuring programme also contributed to improving the result, as did the result from the equity investment in SunExpress, which in the 2021 financial year reached EUR 24m (previous year: EUR -102m). The Adjusted EBIT loss could therefore be reduced significantly in the 2021 financial year to EUR -230m (previous year: EUR -703m). The Adjusted EBIT margin was -28.0% (previous year: -117.6%).

EBIT in the reporting year was EUR -227m (previous year: EUR -802m). The previous year's value was adversely affected by write-downs on goodwill and aircraft totalling EUR 94m.

C19 EUROWINGS: DEVELOPMENT OF REVENUE, ADJUSTED EBIT AND ADJUSTED EBIT MARGIN in %



Segment investments are 140% above the previous year

Segment investments rose by 140% to EUR 254m (previous year: EUR 106m). Investments predominantly included the purchase of 23 Germanwings GmbH aircraft. The aircraft were previously used for Eurowings within the framework of operating leases.

Employee numbers increased by 15%

The number of employees at the end of the year rose over the previous year as a result of the expansion of the flight plan by 15% to 3,563 (previous year: 3,088).

Logistics business segment

Lufthansa Cargo has benefited from extraordinarily strong demand for airfreight and achieved record results. | Cost-cutting measures have led to structural savings. | Fleet modernisation was completed. | Entry to the short-haul freight segment. | Ground infrastructure is being modernised.

T041 KEY FIGURES LOGISTICS

		2021	2020	Change in %
Revenue	€m	3,800	2,757	38
of which traffic revenue	€m	3,644	2,596	40
Total operating income	€m	3,865	2,826	37
Operating expenses	€m	2,396	2,082	15
Adjusted EBITDA	€m	1,642	950	73
Adjusted EBIT	€m	1,493	772	93
EBIT	€m	1,497	717	109
Adjusted EBIT margin	%	39.3	28.0	11.3 pts
Adjusted ROCE	%	47.2	26.2	21.0 pts
Segment capital expenditure	€m	164	222	-26
Employees as of 31 Dec	number	4,162	4,373	-5
Average number of employees	number	4,210	4,436	-5

the transport of live animals, valuable cargo, post and hazardous goods, as well as meeting growing market demand for the carriage of temperature-controlled cargo. The company has specialised infrastructure at Frankfurt Airport to handle these goods, including the Animal Lounge and the Lufthansa Cargo Pharma Hub.

In addition to eleven of our own Boeing 777F freighters, Lufthansa Cargo uses the belly capacities of Lufthansa German Airlines, Austrian Airlines, Brussels Airlines, Eurowings Discover and SunExpress to transport freight.

In addition, the AeroLogic joint venture in Leipzig operates 20 777F freighters on behalf of the two shareholders, Lufthansa Cargo and DHL Express. Lufthansa Cargo is responsible for marketing the capacities of four of these aircraft.

Lufthansa Cargo also has successful international partnerships with the cargo divisions of All Nippon Airways, Cathay Pacific and United Airlines.

Business activities

Lufthansa Cargo is one of Europe's leading freight airlines

In addition to Lufthansa Cargo AG, the Lufthansa Group's logistics specialists, the Logistics segment includes the airfreight container management specialist Jettainer group, the time:matters subsidiary, which specialises in particularly urgent consignments, the subsidiary Heyworld, which specialises in tailored solutions for the e-commerce sector, and the equity investment in cargo airline AeroLogic. Lufthansa Cargo also has equity investments in various handling companies and smaller companies involved in aspects of digitalising the sector.

The focus of Lufthansa Cargo's operations lies in the airport-to-airport airfreight business. Its product portfolio encompasses standard and express freight as well as highly specialised products. Cross-border eCommerce shipments are the fastest-growing airfreight segment. These include

Course of business

Cost-cutting programme results in structural improvements to the cost base

As part of the "ProFlex" cost savings programme, a range of measures were implemented that aim to achieve sustainable savings. These include unifying the fleet, further development of handling processes, sales and slimming down the head office. The programme was successfully concluded at the end of the reporting year. The cost base for Lufthansa Cargo, relating to material and staff costs, is therefore being reduced permanently by more than EUR 70m from 2022.

Fleet modernisation and unification is complete

In the 2021 financial year, two additional 777F aircraft were added to the Lufthansa Cargo fleet; one of which was purchased and the other leased. By retiring the last five MD-11F freighters, the fleet modernisation and unification was completed successfully. Lufthansa Cargo now operates a uniform fleet of eleven highly efficient 777F freighters. ➔ Fleet, p. 24ff.

Lufthansa Cargo opens up new growth potential with the use of medium-haul freighters

Lufthansa Cargo is investing in future growth potential in the fast-growing eCommerce segment. With the ongoing conversion of, initially, two Airbus A321 passenger aircraft to freighters, the rising demand for airfreight connections within Europe will be better served starting in 2022 in order to secure short delivery times. The two aircraft will in future be operated by Lufthansa CityLine.

Leading position to be expanded further through digitalisation

The leading position of Lufthansa Cargo in the airfreight industry is to be expanded by building up digital services. In addition to developing digital sales channels, the focus in 2021 was on improving data quality and therefore the associated increase in the efficiency of the handling processes. This offers massive opportunities to make the cooperation with all partners along the entire supply chain more efficient and therefore make airfreight even faster. The implementation of the Lufthansa Cargo “mobile digital handling” initiative is an important step towards replacing paper-based processes with digital solutions.

Ground infrastructure being modernised at the Frankfurt hub

Over the 2021 financial year we started a comprehensive infrastructure programme that includes the development and renovation of the logistics centre at the home Frankfurt hub. The programme was designed so that we can finally respond flexibly to market developments and the changing needs of customers.

The complete modernisation of the Lufthansa Cargo Center began in January 2021 and should be completed in 2028. In the reporting year, the conversion to a new production planning and control system (PPC) was completed.

Lufthansa Cargo is reducing carbon emissions and developing sustainable logistics solutions

In April 2021, Lufthansa Cargo included the first freight flight with sustainable fuels, making it the first carbon-neutral freight flight in the flight plan. In addition, Lufthansa Cargo has been one of the first customers since October 2021 to utilise the world’s first power-to-liquid fuel site in Emsland, Lower Saxony.

All Lufthansa Cargo customers have been able to transport their freight in a carbon-neutral manner since September 2021 by selecting the “Sustainable Choice” service.

In order to further reduce the fleet’s carbon footprint, from 2022 all 777Fs will be equipped with an innovative surface technology. The “AeroSHARK” film, which imitates sharkskin, reduces aircraft air resistance and thus reduces fuel consumption. ➔ **Combined non-financial declaration, p. 94ff.**

Personnel changes in the Executive Board of Lufthansa Cargo

Dorothea von Boxberg has been the Chief Executive Officer of Lufthansa Cargo since 1 March 2021. Previously, she was the Lufthansa Cargo Executive Board member responsible for global sales, network planning and product development. Her predecessor, Peter Gerber, moved to become Chief Executive Officer at Brussels Airlines. Ashwin Bhat followed her in the role of Chief Commercial Officer. He had previously led the cargo business of SWISS.

On 1 March 2022 Dietmar Focke joined the Executive Board at Lufthansa Cargo AG, where his is responsible for Operations and HR. He previously headed up Engine Services at Lufthansa Technik AG. His predecessor Harald Gloy left the company.

Operating performance

Lufthansa Cargo responds to the challenges of the coronavirus pandemic with flexibility and shows strong operating performance

In the reporting year, the market for airfreight continued to be characterised by extreme shortages in belly capacities due to the coronavirus pandemic. Lufthansa Cargo was also lacking a large part of the belly capacities of the Group airlines that would normally transport half of the total freight volume. Flexible network planning, the use of passenger aircraft as pure freighters and the delayed retirement of the Boeing MD-11F fleet were only able to partially compensate for these effects.

As demand for the remaining freight capacities increased significantly due to global supply bottlenecks and disruptions in ocean freight traffic, it was possible to achieve average prices and high load factors that were unprecedented in a historical comparison. Revenue and earnings therefore achieved new record levels.

Lufthansa Cargo doubles yields compared with the levels before the crisis

Lufthansa Cargo expanded its offering in the 2021 financial year by 9% over the previous year. When compared with the year before the crisis, 2019, the capacity was 30% lower. Belly capacities in the reporting year have gradually recovered, whereas freighter capacities were maintained at virtually the same levels through the inclusion of two 777Fs to compensate for the retirement of the last remaining MD-11Fs. Sales climbed by 11% compared with the previous year.

T042 TRAFFIC FIGURES AND OPERATING FIGURES LOGISTICS

		2021	2020	Change in %
Available cargo				
tonne-kilometres ¹⁾	millions	10,134	9,319	9
Revenue cargo				
tonne-kilometres	millions	7,198	6,461	11
Cargo load factor ¹⁾	%	71.0	69.3	1.7 pts
Yields	€ cent	50.6	40.2	25.9 ²⁾

¹⁾ Previous year’s figures have been adjusted.

²⁾ Exchange rate-adjusted change: 26.6%.

T043 TRENDS IN TRAFFIC REGIONS

Lufthansa Cargo

	Net traffic revenue external revenue		Available cargo tonne-kilometres		Revenue cargo tonne-kilometres		Cargo load factor	
	2021 in €m	Change in %	2021 in millions	Change in %	2021 in millions	Change in %	2021 in %	Change in pts
Europe	236	28	490	3	249	-2	50.8	-2.8
America	1,722	55	4,958	14	3,384	16	68.2	0.9
Asia/Pacific	1,451	24	3,891	-2	3,054	3	78.5	4.1
Middle East/Africa	235	82	795	53	511	60	64.4	2.9
Total	3,644	40	10,134	9	7,198	11	71.0	1.7

The cargo load factor improved by 1.7 percentage points to 71.0% (previous year: 69.3%). Yields adjusted for exchange rate effects increased in all Lufthansa Cargo traffic regions and were 26.6% higher than the previous year. Compared with the pre-crisis level in 2019, yields were 100.4% higher.

Traffic revenues increased due to the higher sales and yields by a total of 40% to EUR 3,644m (previous year: EUR 2,596m). Traffic revenues rose in all traffic regions.

Asia/Pacific and the Americas remain Lufthansa Cargo's main traffic regions. The two regions account for nearly 90% of capacity and sales. Capacity was expanded in the Europe, the Americas and Middle East/Africa travel regions; sales and cargo load factors rose in the Americas, Asia/Pacific and Middle East/Africa traffic regions.

Financial performance

Revenue increased by 38% year-on-year due to prices and quantities

Revenue in the Logistics segment rose by 38% to EUR 3,800m in 2021 (previous year: EUR 2,757m). Higher yields due to capacity reductions across the industry were responsible for the increase. Operating income went up by 37% to EUR 3,865m (previous year: EUR 2,826m).

Expenses up by 15%

Operating expenses rose by 15% to EUR 2,396m in the reporting year (previous year: EUR 2,082m).

The cost of materials and services increased year-on-year by 28% to EUR 1,665m (previous year: EUR 1,300m). The fuel expenses rose by 44% to EUR 251m due to higher load factors on the fleet and pricing (previous year: EUR 174m). Charter expenses increased due the rising capacities in the bellies of passenger aircraft. This also meant an increase in belly expenses paid to Group companies by 43% to EUR 945m (previous year: EUR 660m).

Staff costs went down by 2% to EUR 369m in 2021 (previous year: EUR 377m). The fall in average employee numbers by 5% was countered by the end of short-term working in Germany.

Depreciation and amortisation decreased by 16% year-on-year to EUR 149m (previous year: EUR 178m).

Other operating expenses decreased by 6% to EUR 213m, mainly due to currency effects (previous year: EUR 227m).

T044 OPERATING EXPENSES LOGISTICS

	2021 in €m	2020 in €m	Change in %
Cost of materials and services	1,665	1,300	28
of which fuel	251	174	44
of which fees	259	250	4
of which charter expenses	945	660	43
of which MRO services	95	98	-3
Staff costs ¹⁾	369	377	-2
Depreciation and amortisation ²⁾	149	178	-16
Other operating expenses ³⁾	213	227	-6
Total operating expenses	2,396	2,082	15

¹⁾ Without past service costs/settlement.

²⁾ Without impairment losses.

³⁾ Without book losses.

Lufthansa Cargo generates another record result totalling EUR 1,493m

Adjusted EBIT increased accordingly by 93% in 2021 to EUR 1,493m (previous year: EUR 772m). Lufthansa Cargo thus further improved on the record earnings generated in the previous year. The Adjusted EBIT margin improved by 11.3 percentage points to 39.3% (previous year: 28.0%). EBIT came to EUR 1,497m at the end of the reporting year (previous year: EUR 717m).

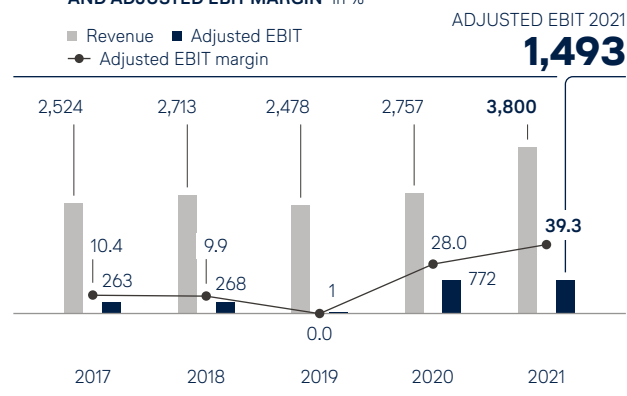
Segment capital expenditure down 26% on the year

Investment in the Logistics segment declined in the reporting period by 26% to EUR 164m (previous year: EUR 222m). This mainly related to the arrival of a 777F freighter during the reporting period.

Staff numbers decline by 5%

The number of employees at the end of the year declined by 5% to 4,162 due to productivity improvements (previous year: 4,373).

C20 LOGISTICS: DEVELOPMENT OF REVENUE, ADJUSTED EBIT AND ADJUSTED EBIT MARGIN in €m and in %



MRO business segment

Operational development of Lufthansa Technik improves over the year. | Comprehensive restructuring measures were implemented. | Range of digital and sustainable products is being expanded. | Earnings up significantly on previous year.

T045 KEY FIGURES MRO

		2021	2020	Change in %
Revenue	€m	4,003	3,747	7
of which with companies of the Lufthansa Group	€m	886	1,023	-13
Total operating income	€m	4,408	4,184	5
Operating expenses	€m	4,173	4,502	-7
Adjusted EBITDA	€m	384	-186	
Adjusted EBIT	€m	210	-383	
EBIT	€m	163	-508	
Adjusted EBIT margin	%	5.2	-10.2	15.4 pts
Adjusted ROCE	%	4.2	-6.3	10.5 pts
Segment capital expenditure	€m	95	152	-38
Employees as of 31 Dec	number	20,569	22,745	-10
Average number of employees	number	21,328	23,519	-9
Fully consolidated companies	number	25	25	

Business activities

Lufthansa Technik is the world's leading MRO provider

Lufthansa Technik is the world's leading independent provider of maintenance, repair and overhaul services (MRO) for civilian commercial aircraft. The Lufthansa Technik group comprises 35 plants offering technical aviation services worldwide. The company also holds direct and indirect stakes in 61 companies. Lufthansa Technik AG serves more than 800 customers worldwide, including OEMs, aircraft leasing companies and operators of VIP jets, as well as airlines. Around 80% of the business relates to external customers.

Course of business and operating performance

MRO business recovers significantly in the reporting year

Lufthansa Technik benefited from the increasing recovery in passenger traffic during the 2021 financial year. Flight hours and capacity utilisation improved as of the end of the year to around 80% of the level before the crisis.

Ongoing cost saving measures should secure future activity

To dampen the impact of the coronavirus crisis, the cost-cutting measures started in the previous year were continued consistently in the reporting year. Specifically, these include very restrictive spending management, the postponement of investment projects and HR measures, and continuing short-term working.

A voluntary programme to reduce jobs was also implemented. In order to offer socially acceptable solutions, partial retirement, dissolution contracts and moving to a transfer company were offered. By the end of the reporting year, around 1,400 employees in Germany had accepted these offers.

➤ **Employees, p. 27ff.**

Restructuring at Lufthansa Technik

To secure a stronger position for the long term in the independent MRO market and achieve improved competitiveness, comprehensive restructuring has been undertaken and the strategic profile has been tightened.

Accordingly, a firmer organisational structure was introduced to Lufthansa Technik as of 1 July 2021. This structure is divided into three classical MRO areas (Engine Services, Aircraft Component Services, Aircraft Maintenance Services) and two future fields (Digital Fleet Services and Original Equipment & Special Aircraft Services). The portfolio covers a variety of differently structured products and product combinations, from the repair of individual components to consultancy services as well as the fully integrated and digital supply of entire fleets.

In connection with the restructuring of the line maintenance activities, six stations in Germany were closed. This resulted in the loss of around 700 jobs without compulsory redundancies. To further adjust the portfolio, sales of the base maintenance company, Lufthansa Technik Shannon Limited in Ireland, and the two line maintenance companies, Lufthansa Technik Maintenance International GmbH in Frankfurt and Lufthansa Technik Brussels N.V. in Belgium, to external companies were agreed. The transfer is planned for the end of March 2022.

Lufthansa Technik meets demand for crisis products and digital services

At the start of the coronavirus crisis, Lufthansa Technik not only moved the focus to partnership cooperation and jointly overcoming the crisis with its customers, but also responded flexibly to the changing market environment and expanded its offering accordingly. In the reporting year, Lufthansa Technik and Airbus were able to jointly offer customers a reversible cargo-in-cabin solution to increase the freight capacity and serve the strong demand.

The coronavirus pandemic has continued to result in greater demand for digital MRO services so that future physical maintenance inspections can be organised more cheaply and reliably. One Lufthansa Technik product is its proprietary independent AVIATAR platform. AVIATAR supports customers in real time with the management of complex fleet operations and helps to diagnose errors in individual components, thus supporting the digital transformation of air traffic. More companies joined the platform in the reporting year, including United Airlines, Sichuan Airlines, Etihad and TAP Portugal.

In addition, WIZZair was the first airline to use the technical logbook solution from AVIATAR, a digital and automated solution to record technical problems during flight operations. The data recorded is available in real time in the linked maintenance and engineering systems.

Lufthansa Industry Solutions, which specialises in artificial intelligence and data analytics and is also part of Lufthansa Technik, was able to significantly increase its share of business with customers outside the Lufthansa Group over the past year.

Lufthansa Technik focusing on technologies for more sustainable flying

In addition to digital products, the focus is also on technologies to improve fuel efficiency and achieve sustainability targets. In one project, Lufthansa Technik and BASF are bringing the innovative AeroSHARK surface technology to standard production; this will be in use on the Lufthansa Cargo fleet from 2022. In collaboration with partners in Hamburg, Lufthansa Technik also started a project in 2021 for the early testing of MRO and ground processes for future climate-neutral hydrogen aircraft. A former Lufthansa Airbus A320 will be converted into a functional laboratory in 2022.

Important contracts to be renewed and signed

Lufthansa Technik serviced 4,208 aircraft under exclusive contracts in 2021. In the financial year, the company won 42 new customers and signed 621 contracts with a volume of EUR 4.7bn.

Personnel changes in the Executive Board of Lufthansa Technik

The Supervisory Board of Lufthansa Technik appointed William Willms as a member of the Executive Board for three years from 1 September 2021. William Willms is responsible for finances.

Sören Stark, currently Chief Operating Officer of Lufthansa Technik, will take over the position of Chairman of the Executive Board and CEO from Johannes Bußmann as of 1 July 2022, who is leaving the company at his own request after seven years in his current function and ten years on the Executive Board. This timely succession planning ensures continuity at the head of Lufthansa Technik.

Financial performance

Revenue up on previous year by 7%

The comparison of the key figures for the 2021 financial year against the previous-year period is influenced by the fact that the impact of the coronavirus crisis in the previous year only became evident during the month of March.

Nevertheless, revenue in the MRO segment rose in the financial year 2021 by 7% to EUR 4,003m (previous year: EUR 3,747m). In particular, a recovery in customer flying hours and ensuring long-term external customer contracts contributed to this.

Whereas internal revenue, especially for Engine Services and Aircraft Maintenance Services, recorded lower volumes, external revenue rose, above all in Aircraft Component Services and Original Equipment & Special Aircraft Services. Operating income rose by 5% to EUR 4,408m (previous year: EUR 4,184m).

Expenses reduced by 7%

Operating expenses declined by 7% to EUR 4,173m in the reporting period as a result of lower volumes and cost-cutting measures (previous year: EUR 4,502m).

The cost of materials and services decreased by 13%, mainly due to volumes, to EUR 2,075m (previous year: EUR 2,372m). In the previous year, EUR 158m in crisis-related write-downs on materials had a negative impact on earnings.

Staff costs of EUR 1,233m were up on the previous year by 11% (previous year: EUR 1,113m). Non-recurring restructuring expenses of EUR 151m and decreased use of short-term working over the course of the year were the main drivers of this development.

Depreciation and amortisation decreased by 12% to EUR 174m (previous year: EUR 197m).

T046 OPERATING EXPENSES MRO

	2021 in €m	2020 in €m	Change in %
Cost of materials and services	2,075	2,372	-13
of which other raw materials, consumables and supplies	1,195	1,609	-26
of which external services	880	763	15
Staff costs ¹⁾	1,233	1,113	11
Depreciation and amortisation ²⁾	174	197	-12
Other operating expenses ³⁾	691	820	-16
Total operating expenses	4,173	4,502	-7

¹⁾ Without past service costs/settlement.

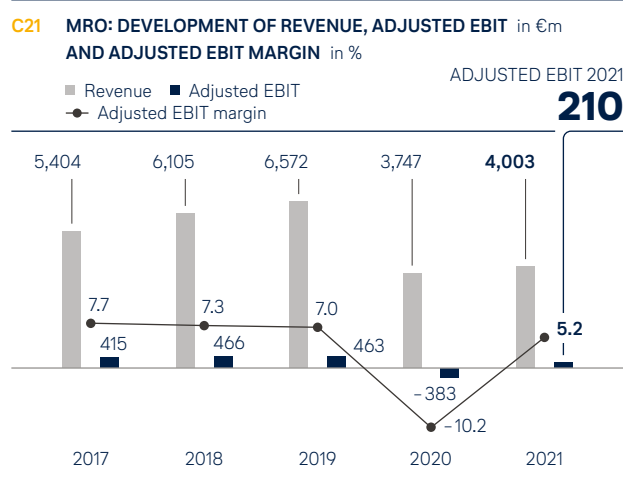
²⁾ Without impairment losses.

³⁾ Without book losses.

Positive Adjusted EBIT totalling EUR 210m

Adjusted EBIT improved significantly to EUR 210m in spite of significant restructuring costs (previous year: EUR -383m). The Adjusted EBIT margin improved by 15.4 percentage points to 5.2% (previous year: -10.2%).

At the end of the reporting year, EBIT came to EUR 163m (previous year: EUR -508m). The difference to Adjusted EBIT mainly resulted from depreciation and amortisation in connection with assets classified as held for sale as part of the restructuring. The previous year's value was affected by write-downs on the carrying amounts of joint ventures and replacement engines.



Segment capital expenditure down by 38%

Segment capital expenditure in the MRO segment was reduced by 38% to EUR 95m (previous year: EUR 152m). This mainly resulted from the cancellation or postponement of investment projects. Capital expenditure mainly related to the purchase of reserve engines, financing joint ventures and other property, plant and equipment.

Staff numbers decline by 10%

The number of employees declined at the end of the year compared with the previous year by 10% to 20,569 (previous year: 22,745), driven in particular by the ongoing restructuring measures, fluctuation and a hiring freeze.

Catering business segment

New strategy in response to new market requirements. | Complete digital solutions and new partnerships increase customer benefits. | Opening up new markets and convenience retail business support capacity utilisation. | Strict cost management and restructuring package secure liquidity during the crisis. | Earnings positive again.

T047 KEY FIGURES CATERING

		2021	2020	Change in %
Revenue	€m	1,113	1,305	-15
of which with companies of the Lufthansa Group	€m	28	241	-88
Total operating income	€m	1,352	1,448	-7
Operating expenses	€m	1,303	1,698	-23
Adjusted EBITDA	€m	108	-167	
Adjusted EBIT	€m	27	-284	
EBIT	€m	-24	-431	94
Adjusted EBIT margin	%	2.4	-21.8	24.2 pts
Adjusted ROCE	%	2.1	-17.3	19.4 pts
Segment capital expenditure	€m	23	28	-18
Employees as of 31 Dec	number	15,626	13,227	18
Average number of employees	number	15,546	25,288	-39
Fully consolidated companies	number	79	83	-5

Business activities

LSG group offers extensive range of products and services

The LSG group offers a comprehensive range of products, concepts and services related to in-flight service as well as for other areas, such as retail and food producers. It has two strong, independent expert brands. LSG Sky Chefs is a global food specialist with the highest hygiene and quality standards for airlines, the home delivery market and retail. Retail inMotion (RiM), which specialises in in-flight sales, product development and technology solutions, sets standards with its innovative strength and varied partnerships with technology suppliers.

The LSG group also has a comprehensive network of joint ventures and partnerships around the globe. The SCIS Air Security subsidiary provides security services in North America.

The European business of the LSG group was sold to gate-group at the end of the 2020 financial year. The previous year's figures still include the European business.

Course of business and operating performance

LSG group drives restructuring forward

The coronavirus pandemic and the associated flight and route cancellations as well as reduced in-flight service offerings for the airlines, continue to heavily and adversely affect the catering industry. The LSG group is therefore consistently pushing ahead with the implementation of its new growth strategy: Starting from the core business of airline catering, the in-flight sales and digitalisation areas will be strengthened and new markets opened. Strict cost management will continue. Restructuring and cost-cutting measures that were started early, such as halting spending, reducing job and introducing short-term work, as well a new organisational strategy that favours decentralisation, limited the effects of the pandemic despite ongoing travel restrictions.

Recovery in the North American market is supporting positive development for the LSG group

Significant recovery in the North American market for airline catering supported the development of the LSG group. Until the North American market reopened for international flights, the focus of the catering market was, however, on the market within North America.

The Asia/Pacific and Latin American regions continued to suffer heavily from the coronavirus crisis and benefited mainly from the convenience retail business. The development of the catering business in the Emerging Markets region remained volatile in line with the flight operations.

In-flight sales and digitalisation are models for the future

Even before the pandemic, the LSG group focused on innovative in-flight sales concepts and technologies. It is building specifically on LSG Sky Chefs's many years of expertise as the second largest supplier in the airline catering market and combining this expertise with that of the in-flight retail and technology leader RiM. This connection has resulted in individual concepts and partnerships that improve the quality of the products and therefore the passenger experience and customer satisfaction at the same time as increasing crew satisfaction and also enabling airline cost efficiency and further sources of income.

RiM began its cooperation with Eurowings Discover in 2021. The new Lufthansa Group holiday airline offers its guests not only food, drink and boutique products with the assistance of RiM but also relies on the company's know-how to provide a completely digital in-flight magazine.

The airline also uses the new augmented reality purchasing technology that RiM has developed alongside IT experts in the LSG group and for which the technology company has received awards from Onboard Hospitality in the "Ones to Watch" and "Industry Champions" categories.

New business and contract extensions strengthen the position of the LSG group

In the 2021 financial year, the LSG group was able to extend important catering contracts in all regions or sign new ones, for example with Greater Bay Airlines in Hong Kong, Lufthansa German Airlines (outside Europe), JetBlue and Alaska Airlines in the USA and LATAM Airlines in Brazil. LSG Sky Chefs opened a new catering operation in Chengdu, China, and in Brazil the new site at Congonhas (São Paulo) joined the network.

The introduction of "Onboard Delights", "SWISS Saveurs" and "Austrian Melangerie", the new catering concepts in the Lufthansa Group developed with RiM, was seamless and received positive feedback from airlines, passengers and crews. The new in-flight sales concept was also successfully introduced to the Lufthansa German Airlines long-haul routes with RiM as the partner.

The convenience retail segment saw contract extensions and new contracts in particular in the US, Latin America and New Zealand. This made an important contribution to capacity utilisation in the catering facilities. Progress was made in the "new business model" area by the ghost kitchen project, which produces virtual brands with delivery services to generate additional revenue. What started as a pilot project in Miami in 2020 has developed into a comprehensive project with several locations in the US and additional pilot projects in Hong Kong and the Baltic states.

LSG group follows holistic approach to sustainability

The LSG group is following a holistic approach when it comes to sustainability. This approach collects all of the sustainability activities of the LSG group into three key pillars: People, Planet and Prosperity.

Due to the pandemic, a range of corporate activities in 2021 focused on People, such as local vaccination campaigns and the free disinfection of homeless shelters. The issue of diversity moved increasingly into focus. In the reporting year, the five dimensions of diversity were communicated and the focus was initially placed on gender equality. With these standards, the LSG group presents itself as a safe harbour for all employees.

The LSG group also took on the chair of the sustainability committee of the Airline Catering Association (ACA). In this role, it drives forward the creation of a range of specific initiatives and guidelines for the ACA members and catering industry.

Wilken Bormann is new Executive Board member for Finance and Human Resources

Wilken Bormann has been a member of the LSG group Executive Board since 1 March 2022 and is responsible for finances and HR. He succeeded Kirstin Neumann, who left the Company. Wilken Borman was previously Head of Lufthansa Group Finance.

Financial performance

Revenue falls by 15% year-on-year due to the disposal of the LSG group's European business

Revenue in the Catering segment decreased in the 2021 financial year by 15% to EUR 1,113m (previous year: EUR 1,305m). The decline is mainly due to the sale of the LSG group's European business. Excluding the sold European business, revenue increased by 18%, mainly due to the positive development of the North American business, which more than compensated for decreases in Asia.

Other operating income rose in particular due to subsidies totalling EUR 184m as part of the US CARES Act by 67% to EUR 239m (previous year: EUR 143m). The subsidies are linked to the ongoing employment of staff and were used accordingly for wage and salary payments.

Operating income decreased by a total of 7% to EUR 1,352m (previous year: EUR 1,448m).

Expenses down by 23%

Operating expenses declined by 23% to EUR 1,303m in the reporting year (previous year: EUR 1,698m), mainly due to the sale of the LSG European business.

The cost of materials and services was 24% down on the year at EUR 416m (previous year: EUR 545m).

Staff costs decreased by 17% to EUR 619m (previous year: EUR 742m). The average number of employees decreased by 39%.

Depreciation and amortisation went down by 31% to EUR 81m (previous year: EUR 117m).

T048 OPERATING EXPENSES CATERING

	2021 in €m	2020 in €m	Change in %
Cost of materials and services	416	545	-24
Staff costs ¹⁾	619	742	-17
Depreciation and amortisation ²⁾	81	117	-31
Other operating expenses ³⁾	187	294	-36
Total operating expenses	1,303	1,698	-23

¹⁾ Without past service costs/settlement.

²⁾ Without impairment losses.

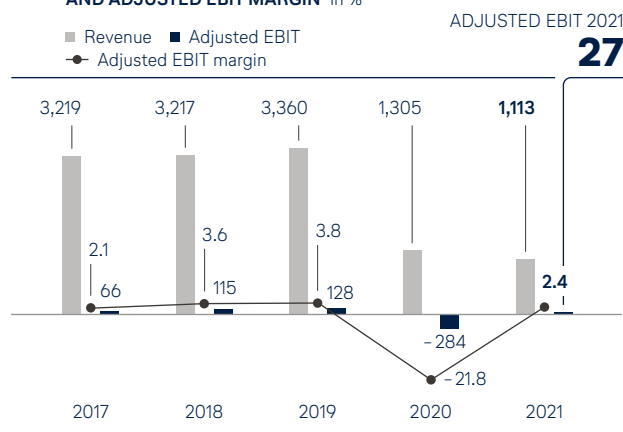
³⁾ Without book losses.

Positive Adjusted EBIT totalling EUR 27m

In the 2021 financial year, the Catering segment exceeded the profit threshold and recorded positive Adjusted EBIT of EUR 27m (previous year: EUR -284m). The Adjusted EBIT margin improved by 24.2 percentage points to 2.4% (previous year: -21.8%).

EBIT came to EUR -24m (previous year: EUR -431m). The difference to Adjusted EBIT mainly results from the net income from the sale of companies. The previous year's value was mainly affected by the write-down on goodwill for LSG North America and LSG Sky Chefs Korea Ltd. totalling EUR 157m.

C22 CATERING: DEVELOPMENT OF REVENUE, ADJUSTED EBIT in €m AND ADJUSTED EBIT MARGIN in %



Segment capital expenditure reduced by 18%

Segment capital expenditure was 18% down on the year at EUR 23m (previous year: EUR 28m) and consisted mainly of essential replacement investments in production sites.

Staff numbers decline by 39%

The average number of staff over the year declined by 39% to 15,546 (previous year: 25,288). Around 6,100 employees left the company with the sale of the LSG group's European business in 2020. The increase in employee numbers compared with the previous year as of 31 December 2021 is due in particular to the positive business development in North America.

Additional Businesses and Group Functions

AirPlus continues to expand corporate payment business.
| Restructuring at Lufthansa Aviation Training. | Lufthansa Systems strengthens position in the airline IT market. | Group Functions earnings are below the previous year.

T049 KEY FIGURES ADDITIONAL BUSINESSES AND GROUP FUNCTIONS

		2021	2020	Change in %
Total operating income	€m	1,732	2,041	-15
Operating expenses	€m	2,188	2,361	-7
Adjusted EBITDA	€m	-317	-190	-67
Adjusted EBIT	€m	-437	-314	-39
EBIT	€m	-434	-363	-20
Segment capital expenditure	€m	49	48	2
Employees as of 31 Dec	number	8,075	9,269	-13
Average number of employees	number	8,351	9,570	-13

Additional Businesses and Group Functions include the Group's service and financial companies, above all AirPlus, Lufthansa Aviation Training and Lufthansa Systems, as well as the Group Functions for the Lufthansa Group.

AirPlus offers corporate payment solutions

Lufthansa AirPlus Servicekarten GmbH (AirPlus) is a leading international provider in the global market for payment and billing services. Under the AirPlus International brand, it offers solutions in over 60 countries worldwide. The company served more than 49,000 corporate customers in total in 2021.

The ongoing coronavirus pandemic also affected the business travel management market in 2021. During the financial year, however, volumes rose noticeably due to the number of business trips starting to increase. AirPlus also made great progress in migrating the IT infrastructure. In the reporting year, the remaining AirPlus virtual cards for companies, travel agents and organisers were migrated to the newest systems. In addition, the modernisation of the internal IT infrastructure was completed by introducing SAP in the reporting year.

The Adjusted EBIT at AirPlus was EUR -174m in the reporting year due to lower revenue because of the pandemic as well as IT and restructuring costs (previous year: EUR -146m).

Lufthansa Aviation Training benefits from an increase in training requirements from the airlines

Lufthansa Aviation Training GmbH (LAT) is one of the leading flight training companies, providing vocational and professional training for cockpit and cabin crew at twelve training centres. LAT's customer portfolio includes the companies in the Lufthansa Group as well as more than 250 national and international airlines.

During the second year of the coronavirus pandemic, LAT benefited from the increasing demand for cockpit and cabin crew training, which was associated with the industry-wide expansion of flight schedules. A simulator for the Embraer 190 E2 was launched during the reporting year in Zurich. The first training devices were purchased for the planned inclusion of Boeing 777s and 787s in the Lufthansa Group fleet.

With regard to pilot school, in 2021 there was again no demand to train new pilots. With the "Future One EFA Pilot School" project, the concept of our own, market-appropriate training for pilots was continued and at the same time this implemented a future-proof concept for the pilot school. A new site structure to match the requirements for theoretical and practical training has already been completed. In the future, the theoretical part will be concentrated at the Bremen site. The planned practical training element will be merged at Rostock-Laage Airport, where LAT already has a modern and recognised training operation.

LAT's Adjusted EBIT improved to EUR -2m during the 2021 financial year due to higher training volumes and the cost-cutting measures implemented (previous year: EUR -29m).

Lufthansa Systems strengthens its position in the international airline IT market

Lufthansa Systems was able to expand its position in the international airline IT market despite the difficult market environment caused by the coronavirus pandemic. Flexible solutions that can adapt quickly to crises and in particular support agile flight operations make the company a pioneer in the field of digital transformation for its more than 350 airline customers. This enabled it to win additional new customers, sign contract extensions with strategic customers and bring numerous projects to a successful close in the reporting year. Within the Lufthansa Group, Lufthansa Systems continues to contribute to the harmonisation of the IT landscape. The structural crisis management (SCM) programme set up at the start of the pandemic made important contributions to the good earnings situation.

Including all of its equity investments, the IT company generated Adjusted EBIT of EUR 9m in the reporting period (previous year: EUR 17m).

Group Functions results below the previous year

The earnings for the Additional Businesses and Group Functions business segment are largely determined by the Group Functions, whose earnings reflect the currency hedging and financing activities carried out by Deutsche Lufthansa AG on behalf of the companies in the Group. The result is therefore heavily exposed to exchange rate movements.

Total operating income for the Group Functions decreased by 26% to EUR 937m (previous year: EUR 1,274m). Operating expenses of EUR 1,229m were 14% down on the year (previous year: EUR 1,425m). Adjusted EBIT came to EUR -292m (previous year: EUR -151m). The development was mainly due to higher currency effects as well as higher restructuring and legal costs.

Result for Additional Businesses and Group Functions below previous year

Total operating income for Additional Businesses and Group Functions decreased by 15% to EUR 1,732m in the 2021 financial year (previous year: EUR 2,041m). Operating expenses declined by 7% to EUR 2,188 m (previous year: EUR 2,361m). Adjusted EBIT came to EUR -437m (previous year: EUR -314m). This includes non-recurring expenses from restructuring totalling EUR 77m (previous year: EUR 17m) and non-operating extraordinary expenses for legal procedures of EUR 51m (previous year: EUR 0m). EBIT in the reporting year was EUR -434m (previous year: EUR -363m).

Opportunities and risk report

The management of opportunities and risks is integrated into all business processes. | Risks are identified early and are managed and monitored proactively. | Targeted use of opportunities.

OPPORTUNITIES AND RISK MANAGEMENT

Opportunity management process

For the highly dynamic global airline industry, opportunities can arise both externally – from new customer wishes, market structures, ongoing consolidation or changes in the regulatory environment – and internally – from new products, innovations, quality improvements and competitive differentiation.

Employees and managers in the Lufthansa Group identify opportunities in the course of day-to-day processes and market observation. Opportunity management is also an integral part of the annual strategy and planning process. Scenario analyses and accurate return calculations are used to precisely examine opportunities and the associated risks. Opportunities that, in an overall assessment, are considered advantageous for the development of the Lufthansa Group are pursued and implemented by means of defined steps. They are managed by established planning and forecasting processes as well as by projects. Opportunities of relevance

to the whole Group are incorporated into [Group strategy, p. 16ff.](#) The individual business segments also identify specific opportunities [Business segments, p. 53ff.](#)

Objectives and strategy of the risk management system

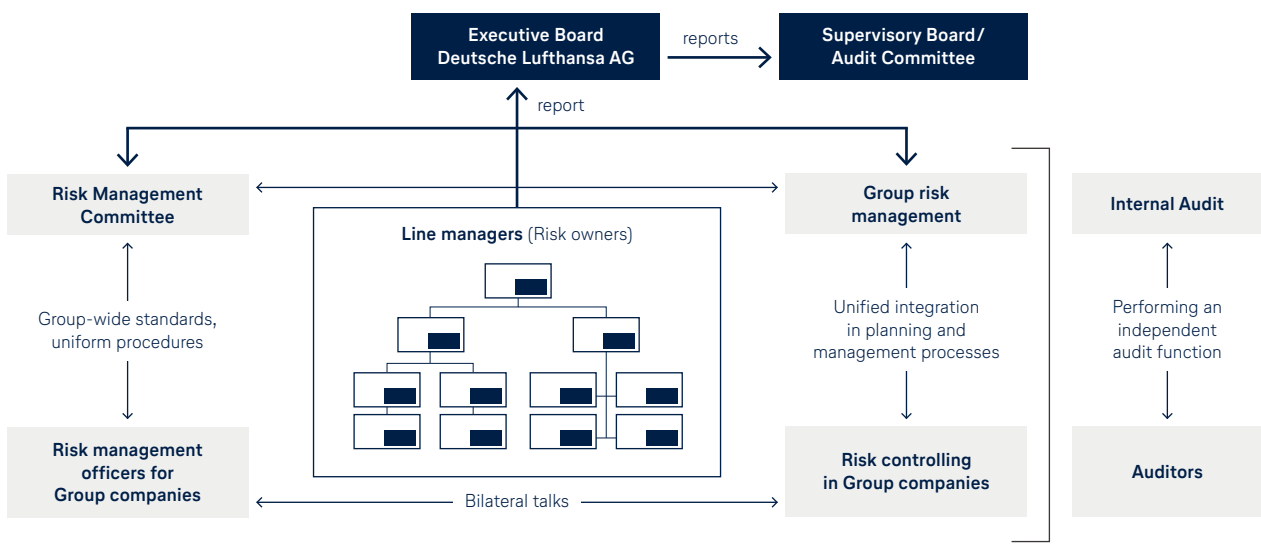
Risk management at the Lufthansa Group aims to fully identify material risks, to present and compare them transparently and to assess and manage them. Risk owners are obliged to monitor and manage risks proactively and to include relevant information in the planning, steering and control processes. The Group guidelines on risk management adopted by the Executive Board define all the binding methodological and organisational standards for dealing with opportunities and risks.

Structure of the risk management system

The scope of consideration covered by the Lufthansa Group's risk management system comprises all of the airlines in the Lufthansa Group, the MRO, Logistics and Catering segments, as well as Lufthansa Aviation Training, AirPlus, Miles & More, Lufthansa Global Business Services, the IT companies and the Delvag group.

[C23 Risk management in the Lufthansa Group](#) shows the different functions involved.

C23 RISK MANAGEMENT IN THE LUFTHANSA GROUP



The Supervisory Board's Audit Committee monitors the existence and the effectiveness of the Lufthansa Group's risk management.

The Risk Management Committee ensures, on behalf of the Executive Board, that business risks are always identified at an early stage, evaluated and managed across all functions and processes. It is also responsible for improving the effectiveness and efficiency of risk management. Appointments to and the responsibilities of the committee are defined in internal regulations.

The Corporate Controlling department has functional responsibility for ensuring that the risk management system is standardised across the Group. It reports directly to the CFO. Group risk management is responsible for implementing uniform standards and methods, for coordinating and continuously refining the risk management process and for all risk management reporting in the Lufthansa Group.

The managing directors or management boards of all the companies covered by the risk management system also appoint risk managers. They are responsible for implementing the Group guidelines within their own companies and are in close, regular dialogue with the Lufthansa Group's risk management function. In addition, they ensure that risk-relevant information is agreed with the planning and forecasting processes in their company (risk controlling).

Managers with budgetary and/or disciplinary responsibility are designated as risk owners. Their role is to implement risk management for their area. The identification, evaluation, monitoring and management of risks are therefore fundamental aspects of every management role. The "principles of risk management" stipulate that the occurrence of predictable risks that have not been reported in the past is considered to be a serious management error.

The Internal Audit department carries out internal, independent system audits focusing on the effectiveness, appropriateness and cost-effectiveness of the risk management system practised in the Lufthansa Group. This was last the case in 2018. Another review will take place in 2022.

During its annual audit of the financial statements, the auditor examines the system for the early identification of risks in place at Deutsche Lufthansa AG with regard to statutory requirements. In 2021, the review came to the conclusion that all statutory requirements were met in full.

Stages of the risk management process

The closed and continuous risk management process, which is supported by IT, begins with the identification of current and future, existing and potential opportunities and risks from all material internal and external areas. The Lufthansa Group defines opportunities and risks as the possible positive or negative deviations from a forecast figure or a defined objective. The risks identified are checked for plausibility by the companies' risk coordinators and gathered together in the Group's risk portfolio. The risk portfolio documents the systematic entirety of all individual risks and constitutes the quality-assured result of the identification phase. As the risk landscape is dynamic and subject to change, the identification of risks is a continuous task for the risk owners.

Risk owners are obliged at least once a quarter to verify that the risks for which they are responsible are complete and up to date. They also evaluate the extent to which circumstances involving risk have already been included in the forecast results and to what extent there are additional opportunities or risks of achieving a better or worse result than the one forecast. They actively manage opportunities and risks by means of risk mitigation instruments and measures.

On this basis, the Executive Board is regularly informed about the current risk situation of the Lufthansa Group and its business segments.

The Executive Board reports annually to the Audit Committee on the performance of the risk management system, the current risk situation of the Lufthansa Group and on significant individual risks and their management. In the event of significant changes to previously or recently identified top risks, mandatory ad hoc reporting processes have been defined in addition to these standard reports.

Evaluation methodology in the risk management process

Once the risks have been identified, all the individual risks are measured according to uniform measurement principles. Risks are generally evaluated on a net basis, i.e. taking implemented and effective management and monitoring instruments into account. A methodological distinction is made between qualitative and quantitative risks. Regardless of the risk type, objective criteria or figures derived from past experience are used for the evaluation wherever possible. Risk measurement thus forms the basis for consolidating similar individual risks into an aggregate risk. Suitable instruments for risk management are defined with the aim of proactively limiting the risk position. Continuous risk monitoring identifies changes in individual risks and any required adjustments to risk management at an early stage. Steps necessary to manage and monitor risks are initiated as required. Steps, in this sense, mean clearly defined activities with a fixed duration, responsibility and time frame, which serve to develop control instruments.

Qualitative risks are mostly long-term developments with potentially adverse consequences for the Lufthansa Group. As concrete information is often not available, these risks cannot or cannot yet be quantified. In the context of qualitative risks, risk management amounts to a strategic approach to uncertainty. In order to evaluate such risks as systematically as possible in spite of this, estimates are made about their significance and their magnitude. Significance describes the potential impact of the individual risk – for example, on the Group’s reputation, business model or earnings. The estimate of magnitude assesses how pronounced or intense the (weak) signals are that indicate a potential risk to the Lufthansa Group or a specific company. ➔ **C24 Lufthansa risk evaluation for qualitative and quantitative risks** shows the different categories used.

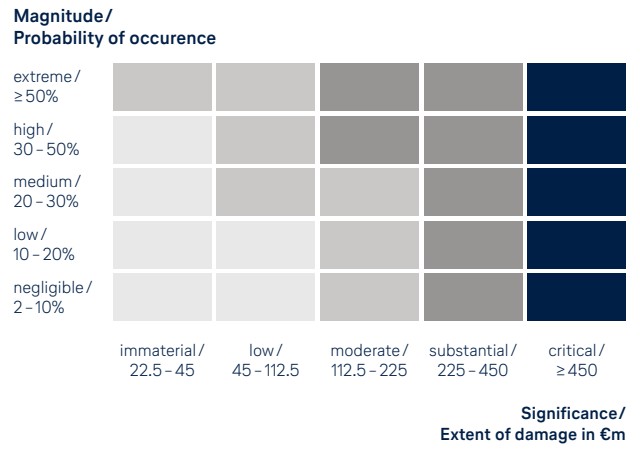
Quantitative risks are those whose potential effect on earnings can be estimated. A distinction is made between different probabilities of occurrence. The extent of loss is given as the potential monetary impact on the planned Adjusted EBIT. Depending on the type of risk, this may relate either to relatively infrequent event risks, such as an airspace closure, or to risks from deviations from planned business developments, due to fuel price volatility, for instance. Quantitative risks therefore form the basis for the overarching verification of potential deviations from plans and forecasts. The thresholds for classifying the monetary Adjusted EBIT effect are defined centrally for the Lufthansa Group and for the Group companies according to standardised criteria.

The individual qualitative and quantitative risks are divided into classes A, B, C, D and other risks to assess their materiality. In accordance with DRS 20, all quantitative A risks and B risks as well as all qualitative A and B risks that are at least of a “substantial” significance and a “high” magnitude count as material risks for the Lufthansa Group. ➔ **C24 Lufthansa risk evaluation for qualitative and quantitative risks**.

Risks for the Lufthansa Group that meet this materiality criterion are presented in a table in the order of their significance for the Lufthansa Group in the section ➔ **Risks at an individual level, p. 82ff.** and are described in detail below. In some cases, equivalent risks are shown here in a more aggregated form than that used for internal management purposes. Unless stated otherwise, all the segments in the Lufthansa Group are exposed to a greater or lesser degree to the risks described.

C24 LUFTHANSA RISK EVALUATION FOR QUALITATIVE AND QUANTITATIVE RISKS

■ A risks ■ B risks ■ C risks ■ D risks



Description of risk-bearing capacity

A concept for calculating the risk-bearing capacity of the Lufthansa Group was added to the risk management system in 2021. It entails comparing an indicator of risk-bearing capacity based on liquidity with the aggregated top risks in order to ensure that sufficient funds are available to cover the risks. This procedure has been approved by the Executive Board and meets the requirements of IDW PS340 as revised. This audit standard 340 issued by the Institute of German Public Auditors comprises the audit of the early warning system, with additional requirements added in the revised version.

Compliance with the Act to Strengthen the Integrity of Financial Markets (FISG)

The risk management system fulfils the requirements of the FISG, which took effect on 1 July 2021.

Inclusion of CSR Directive Implementation Act in risk management

In accordance with the CSR Directive Implementation Act (CSR-RUG), the Lufthansa Group’s risk management also covers aspects relevant to CSR (environmental, employee and social concerns, as well as human rights, anti-corruption measures, bribery and the supply chain) and their risks for external stakeholders. Risks are reported in the combined non-financial declaration in line with CSR-RUG if they would have a severely adverse impact on the Company and their occurrence is highly likely. In 2021, the CSR content was updated to include mitigating instruments and measures. As in the previous year, none of the CSR risks were so material that they were described at an individual level.

Internal Control System for monitoring the risk management process

The risk management process in the Lufthansa Group is monitored by an internal control system (ICS). This entails systematically reviewing the effectiveness of control measures for material risks as part of the Lufthansa Group's ICS. The relevant risks are selected annually. The review includes an assessment of the structure and the functionality of the Lufthansa Group's ICS. Reporting on the results of the review forms part of the report to the supervisory boards of the individual companies on the effectiveness of the ICS, and to the Audit Committee of the Deutsche Lufthansa AG Supervisory Board on an overall basis.

OPPORTUNITIES AT AN INDIVIDUAL LEVEL

Employees and managers in the Lufthansa Group identify opportunities in the course of day-to-day processes and market observation. Opportunity management is also an integral part of the annual strategy and planning process.

Opportunities that, in an overall assessment, are considered advantageous for the development of the Lufthansa Group are pursued by means of defined steps.

Opportunities in the sense of this report are defined as possible future developments or events which may lead to a deviation from plans, forecasts or targets that is positive for the Company.

Macroeconomic opportunities

Economic environment

The Lufthansa Group's forecast for the year 2022 is based on the expectation that future macroeconomic conditions and sector developments will correspond to the description given in the [Forecast, p. 136ff.](#) Thus, on the basis of forecasts by Global Insight for 2022, the Lufthansa Group is expecting the world economy to grow by 4.2%. If the global economy performs better than forecast, this is expected to have a positive effect on the Lufthansa Group's business. Future revenue and earnings for the Lufthansa Group may, in this case, exceed the current forecast. As a global company, the Lufthansa Group can also benefit from positive developments outside its own core market.

Opportunities beyond those specifically planned by the Lufthansa Group for the years ahead could arise if the world economy recovers faster from the coronavirus pandemic and

there is greater related demand for flight travel and freight capacities. Faster progress in achieving a high global vaccination rate could contribute to a stabilisation and open up additional revenue opportunities.

Ongoing stimulus measures in the main global economies, combined with the continuation of an expansive monetary policy by the main central banks, could also lead to a faster upswing in demand and so to higher revenue for the Lufthansa Group.

Sector-specific opportunities:

Development of markets and competition

In line with the expectations of the International Air Transport Association (IATA), the Lufthansa Group's forecasts assume that the airline industry will recover gradually from the coronavirus crisis in the years ahead, but will not regain its pre-crisis level before 2024. For the business travel segment the Company is expecting around 80% of the business travellers in 2019 to return in 2024.

If the market develops better than forecast, for example because demand for business travel or for long-haul flights recovers faster, this would represent an additional opportunity for the Company and could result in higher revenue, as long as the available market capacities do not rise faster than demand, especially due to the large number of aircraft retired because of the crisis.

Market consolidation

In the years before the coronavirus pandemic, an increased trend towards consolidation in the fragmented European airline sector was apparent. The dynamics of consolidation are expected to slow temporarily in the wake of the pandemic, as fewer market exits are taking place due to government support measures and fewer financial resources for takeovers are available. Therefore, there is currently no expectation that consolidation progress will return to its pre-crisis level in the next two years.

In the medium term, however, the negative financial consequences of the pandemic will again result in more airlines with weaker financial backing leaving the market. The Lufthansa Group remains willing and able to play an active role in consolidating the market and seizing opportunities as they arise. Any potential capacity reduction as a result of faster consolidation in the markets relevant for the Lufthansa Group would offer the Company the opportunity to expand its market share and achieve higher yields.

Company-specific opportunities

“ReNew” restructuring programme

The Lufthansa Group is setting itself up for the different market environment resulting from the crisis with its “ReNew” restructuring and transformation programme and the related “ReStructure” programme in place across the Group. They are intended to create the conditions for a return to a positive operating result. Even once the pandemic is over, the aim is to increase structural profitability by continuously reducing unit costs, simplifying processes and structures and improving productivity.

The expected effects of implementing the restructuring programme are included in the planning and forecast for the Lufthansa Group. Additional opportunities for the Lufthansa Group would arise if the steps taken as part of the programme are more successful than planned and additional measures with a positive earnings impact are identified and implemented. In both cases, the programme could then have a better effect than forecast overall. ➤ **Failure to achieve assumed improvement in the scope of “ReNew”, p. 84f.**

Fleet modernisation

There are advantages for the Lufthansa Group in the strategic renewal of its fleet. The modernisation and simplification of the fleet structure helps to cut emissions, increase fuel efficiency and reduce maintenance and staff costs, and so directly to improve earnings.

The ongoing optimisation of the Group fleet has been accelerated as a result of the crisis. For the Lufthansa Group there would be additional opportunities if the optimisation of the Group fleet and the positive earnings effect could be realised faster than expected as a result of favourable purchasing opportunities.

Partnerships and cooperation

Partnerships with other airlines are important to strengthen the market presence on key traffic flows, particularly during the coronavirus crisis. The Lufthansa Group’s successful joint ventures are therefore being further developed and partnerships expanded in all key markets.

The Lufthansa Group airlines are based in economically strong regions and are therefore attractive as partners for airlines within Europe and elsewhere. Connecting new markets as part of existing and new cooperation agreements gives the Company the opportunity to reach additional customers and generate revenue.

Development of customised products and services

The further sharpening of the customer focus is a core element of the Lufthansa Group’s strategy. The key aspects here are individualisation, digitalisation and sustainability. Developing new, innovative and sustainable products and services on the ground and on board, which are tailored to the individual needs of customers along the entire travel chain, creates opportunities for increasing income.

Digitalisation and the digital transformation

It is vital to consistently exploit the potential for innovation and digitalisation in order to stay relevant in a market environment that is defined by higher customer expectations of digital services and competitive pressure to be efficient.

A particular focus of product development is on the seamless digital travel experience for the customer, which is linked with personal appreciation. By concentrating on products and services with direct relevance for the purchase decision and willingness to pay, the focus on the customer is also reconciled with the necessary structural cost reductions.

In its administrative, operational and customer processes, the Lufthansa Group continues to make increasing use of digitalisation with the aim of increasing service quality, cutting costs, refining existing offers and addressing new customer groups.

The Lufthansa Group also has technological opportunities. As an airline group, it is particularly dependent on developments and innovations by aircraft manufacturers and technology partners. Since there is an increasing focus on climate protection, the development of technologies with lower or no emissions could accelerate and be ready for the market earlier.

Lufthansa Technik uses its technical expertise to link MRO process data with customer data from flight operations in order to generate additional customer benefits. This also helps to make MRO processes more efficient. Lufthansa Technik’s airline customers become more competitive as a result and can operate their fleets more sustainably. At the same time, Lufthansa Technik gains an additional competitive edge.

Sustainability

Sustainability aspects play an increasingly important role for the Lufthansa Group. The Lufthansa Group therefore assumes its responsibility for the climate and the environment and works continuously to improve its ecological efficiency. The Lufthansa Group CleanTech Hub, for instance, pools airline know-how with ideas from global start-ups and academia to address the challenges of climate change with first-class technology and thereof the opportunities it presents.

It meets growing customer demand for sustainable travel by continuously improving its carbon footprint, for example by using fuel-efficient aircraft, more efficient processes in flight operations and avoiding waste and plastic on board. The Lufthansa Group is a pioneer in the development and promotion of sustainable aviation fuels and was the biggest purchaser of such fuels among all the European airlines in 2021. ➔ **Combined non-financial declaration, p. 94ff.**

Sustainable products and services are also being developed or refined to provide customers with climate-optimised travel. They particularly include the expansion of intermodal transport solutions (train to plane) or the integration of carbon offsets into the booking process by means of the Group's own Compensaid platform.

The Lufthansa Group's particular commitment to sustainability, which is reflected in its above-average performance in the important CSR rating, also opens up opportunities for the Company in several areas, because sustainability aspects play an increasingly important role both for customers and on capital markets.

Additional opportunities exist in terms of customers, because customers focused on sustainability could prefer the Lufthansa Group to other competitors on the basis of its commitment and the possibility of offsetting carbon emissions. Meeting demand for certified offsets is increasingly important, especially in the business travel segment. The Lufthansa Group's pioneer role here creates particular opportunities.

The increasing relevance of the subject for investment decisions could also mean that the Lufthansa Group can obtain better financing conditions than companies that are less committed.

Opportunities from the legislative framework

Political decisions at national and European level continue to have a strong influence on the international aviation sector and so on the Lufthansa Group. Opportunities from improvements in the regulatory framework could arise for the airlines

in the Lufthansa Group from the faster implementation of the Single European Sky project to harmonise air traffic control across Europe. In addition to reducing the costs of air traffic control, the implementation of the project would result in significantly shorter flight routes in Europe and therefore to savings on fuel consumption and emissions.

In addition, the further easing or lifting of global travel restrictions related to the coronavirus could lead to higher demand for flights and thereby a better business performance by the Company than expected. In particular, a faster opening of the Asian intercontinental markets than is currently forecast could have a positive impact on income in the following year.

Finally, greater government funding for research and development of sustainable technologies, particularly sustainable fuels, could enable these technologies to get to the market faster, increase their availability and reduce their price. This could reduce emissions faster and deliver associated positive effects on income and costs.

Financial opportunities

Financial market developments also represent opportunities for the Lufthansa Group. Positive changes in fuel prices, exchange rates, interest rates or a higher credit rating can result in lower expenses and/or higher income compared with the assumptions used for planning and forecasting.

Since changes in fuel prices, exchange rates and interest rates are material risks as defined in the Lufthansa Group's risk management system, the relevant comments can be found in the chapter ➔ **Financial risks, p. 90ff.**

RISKS AT AN INDIVIDUAL LEVEL

Table ➔ **T050, p. 82**, shows the top risks for the Lufthansa Group. It encompasses all quantitative A and B risks, as well as qualitative risks with a rating of at least "substantial" and "high" in the order of their significance. Detailed explanations can be found in the following sections.

T050 TOP RISKS LUFTHANSA GROUP

	Significance	Magnitude	Trend	Description
Quantitative risks				
Fuel price movements	critical	extreme	→	↗ p. 90f.
Earnings risks	critical	extreme	→	↗ p. 84
Cyber- and IT risks	critical	high	→	↗ p. 86f.
Breaches of compliance requirements and data protection regulations	critical	medium	→	↗ p. 87f.
Exchange rate losses on pension fund investments	critical	negligible	→	↗ p. 91
Risks from state aid and liquidity risks	substantial	negligible	→	↗ p. 91f.
Risk of failure to achieve cost savings targets	substantial	extreme	↑	↗ p. 84f.
Exchange rate movements	substantial	extreme	↑	↗ p. 91
Crises, wars, political unrest or natural disasters	substantial	high	→	↗ p. 82f.
Provider default risk	substantial	medium	↓	↗ p. 85
Risk of a downgrade in the credit rating	moderate	high	→	↗ p. 91
Qualitative risks				
Pandemic diseases	critical	high	↓	↗ p. 83
Political risks in the context of the coronavirus pandemic	critical	high	↓	↗ p. 89
Flight operations risks (with information security risks)	critical	negligible	→	↗ p. 86
Regulatory risks resulting from climate change	substantial	extreme	↑	↗ p. 89f.
Human resources	substantial	high	→	↗ p. 85
Infrastructure risk	substantial	high	→	↗ p. 84
Strategic fleet sizing	substantial	high	→	↗ p. 84
Increased noise legislation	substantial	high	→	↗ p. 90
Entry of new competitors onto the MRO market (Lufthansa Technik) ¹⁾	critical	medium	→	↗ p. 84
Risks from breaches of hygiene and food safety standards (Catering) ¹⁾	critical	low	→	↗ p. 86

¹⁾ Risk evaluation on segment level.

Macroeconomic risks

Uncertain economic environment

The Lufthansa Group's forecast for the year 2022 is based on the expectation that future macroeconomic conditions and sector developments will correspond to the description given in the ↗ Forecast, p. 136ff. If the global economy performs worse than forecast, this is expected to have a negative effect on the Lufthansa Group's business. Risks with potential effects on global economic growth, and thereby for the Lufthansa Group's sales, primarily arise from the further course of the global coronavirus pandemic, increasing inflation, the energy transition towards renewable energies with the related government regulation, and disruption to supply chains.

Crises, wars, political unrest and natural disasters

The security situation due to military action in Ukraine, the continued critical security situation in the Middle East and North Africa as well as in Germany, and the latent risk of terrorist attacks on air traffic and aviation infrastructure could have concrete effects on business operations and on the safety of the Lufthansa Group's flight operations, customers and employees. The consequences of the coronavirus pandemic play a role here too, and include rising poverty, higher criminality and increasing radicalisation.

In addition, the coronavirus pandemic increases the risk of staff shortages and financial bottlenecks at airports as well as the risk that the focus on hygiene could come at the expense of safety measures. There is also a risk of limited access to safety-critical information due to travel restrictions.

The Ukraine conflict and the sanctions it has caused, including potential countermeasures, could affect the development of the global economy, the prices of important energy sources such as oil and gas, and the availability of Russian airspace for overflights. A destabilisation of the region and continued tensions between Russia and the member countries of NATO and the EU could also lead to pressures in the medium and long term.

Potential financial losses could result from primary effects, such as not being able to fly to individual destinations, but also from significant secondary effects, including a fall in passenger numbers, higher insurance premiums, higher fuel costs due to airspace closures or more stringent statutory security requirements.

Because of its strong symbolic effect, civil aviation is still a potential target of terrorist attacks. At the same time, military conflicts between states could also pose significant risks, especially if they take place in the short term and outside clearly defined borders. Flights over areas of conflict continue to require comprehensive risk assessment and management, because there is a risk to civil aviation from complex anti-aircraft systems, especially in the hands of non-state forces, and increased military activity makes it more difficult to use and coordinate airspace. The demands made of the security functions of international companies are rising continuously in view of the political environment and the continuous development of new technology. In this context, particular mention should be given to the greater availability and use of unmanned, and in some cases armed aircraft (drones) and the various challenges they present. Increasing security regulations due to greater threats, as well as a tightening of entry requirements for passengers around the world, could lead to further restrictions in international air traffic and thereby to adverse effects for the air transport industry. The ongoing coronavirus pandemic is expected to have a negative effect on the overall security situation and state stability. In addition to the escalation or acceleration of existing conflicts, there is also growing pressure on internal resources and established conflict resolution mechanisms at the same time.

In order to analyse, track and manage these risks, the Lufthansa Group carries out comprehensive monitoring of the global security situation and current events – including natural disasters – that may affect the Lufthansa Group. The Lufthansa Group prepares comprehensive security analyses on an ongoing basis in order to assess developments in advance and so to draw up preventive scenarios in the event of any disruptions. It can draw on an extensive network of national and international security services and specialised security advisers to do so. The necessary security measures depend on the probability and consequences of the event.

To evaluate security-relevant events in the context of the regional environment, the Lufthansa Group uses a quality management system, which helps with the continuous evaluation of local security procedures, both in existing operations and with new destinations. In order to guarantee compliance with national, European and international aviation security legislation and the Lufthansa Group's own security standards, these sites are inspected regularly in the course of risk audits for aviation security and country risks. This also takes into account any indirect effects of the current coronavirus pandemic. If necessary, deficits are compensated for by additional measures that may affect all relevant functional areas. In addition, perceptions of Germany, and of Switzer-

land, Austria, Belgium or the European Union in certain regions of the world and the profile of the Lufthansa Group compared with other, particularly exposed Western airlines are taken into account when choosing infrastructure and processes abroad.

Pandemic diseases

Risks exist around the world from the transmission of pathogens from animals to humans, from humans to humans and by other means. Epidemics, pandemics or other causes such as bioterrorism could cause high rates of disease in various countries, regions or continents. In the short, medium and long term, this could drastically reduce the number of passengers travelling by air due to a fear of contagion, as was dramatically demonstrated in 2020 by the pandemic spread of the coronavirus. Furthermore, it is possible that staff are not willing to fly to the countries concerned for fear of infection and that local employees want to leave these countries. A high prevalence of sickness among employees may endanger operations. Official travel restrictions to prevent the transmission of pathogens may also result in operational constraints.

The Lufthansa Group permanently reviews information from the World Health Organisation (WHO), the US and European Centres of Disease Control, the Robert Koch Institute in Germany and other institutions in order to identify risks of an epidemic or pandemic as early as possible. To this end, we have our own employees trained in medical intelligence who make use of various early warning systems. Employees receive detailed information, risk groups are given personal protective equipment and preventive vaccination campaigns against influenza run throughout the Lufthansa Group every year. Since the beginning of the coronavirus pandemic, the Lufthansa Group has implemented a comprehensive safety plan for the prevention of infections for passengers and employees.

The Lufthansa Group has already factored the economic impact of the coronavirus into its financial forecast. Progress achieved with the vaccination campaign has now reduced the health risk to the customers and employees. There is nevertheless still a risk that the economic impact of the coronavirus pandemic will be worse than forecast. In particular, the different vaccination levels in individual countries, the appearance of new virus variants – which can influence vaccination success, pattern of spread and test efficiency – and the highly heterogeneous assessment by individual countries of the risks of the coronavirus can have a negative impact on further developments.

Sector-specific risks

Development of markets and competition

The growth of the aviation sector remains highly dependent on the global political situation and correlates with macro-economic development. In the past, the development of the airline industry was on a long-term growth path with above-average growth rates, especially in regions such as Asia/Pacific. Structural changes in demand in connection with the coronavirus pandemic, infrastructure limitations, the influence of the climate debate and continued digitalisation mean that long-term market growth is expected to be lower than in the past. Cost competition, which is already prevalent in many segments of the airline market, will intensify further as a result of the changed market environment.

Earnings risks

There are revenue risks for the entire Lufthansa Group. There is still a high level of uncertainty concerning future market developments. Country-specific infection rates and the closure of national borders and markets at short notice play a key role in this context. These developments have a significant influence on demand and booking patterns, and make it enormously difficult to forecast revenue and increase the risk. Consequently, the development of bookings and revenues is continuously monitored. In addition to the factors mentioned above, risks can still result from price fluctuations, excess capacities, economic fluctuations, current market and competitive developments, potential changes in customer behaviour for reasons of climate protection, geopolitical changes and unforeseen global events. These challenges will be addressed in the short term, in particular by adjusting capacity. Sales, product, capacity and cost-cutting measures are also taken. In the long term, unit costs are improved systematically and sustainably by continuous efficiency gains and as the result of segment-specific restructuring projects.

Risks of increasing infrastructure costs

Airports and air traffic control organisations have been sustaining high losses due to grounded air traffic since the coronavirus crisis began. Since this infrastructure is basically financed by users, there is a risk that the cumulative losses are passed on to the airlines by their system partners, therefore increasing the costs significantly and in some cases lastingly.

The air traffic infrastructure is financially burdened by the coronavirus crisis to such an extent that the state must provide relief for the system as a whole. Lufthansa German Airlines and the other German airlines, as well as the airports, air traffic control and aviation associations are actively lobbying political decision makers to provide this relief in the form of compensation for losses, among other things. The same applies to all the airlines in the Lufthansa Group in their respective home markets.

Risks from digital transformation and market entry of new competitors in the Lufthansa Technik segment

The post-coronavirus pandemic market environment will be marked by overcapacity of maintenance, repair and overhaul (MRO), as global aircraft movements continue to be significantly below available capacity. Sustainable business success requires a competitive cost structure. There is still a risk of insolvencies among airline customers due to the expiry of government aid to overcome the coronavirus crisis and the fact that infection rates remain high and continue to have an impact on air travel.

The market position of the original equipment manufacturers (OEMs) results in barriers to entry for independent providers of aircraft MRO services, especially for new aircraft models, and makes it more difficult to gain access to licences and intellectual property. OEMs will use competitive advantages in the aftermarket to compensate for the reduced volume of new business. Expanding and maintaining their market position in this environment is a key challenge for MRO providers.

Digital platforms are also becoming increasingly important for the planning, management and awarding of physical MRO fulfilment and jeopardise the direct contractual and customer relations between the MRO provider and the airline. As part of this digital transformation, new competitors are trying to enter the market with data-based services and digital capabilities. Access to and control over this data play an overarching role for gaining control over costs and competence in the MRO award process and predictability.

Lufthansa Technik manages these risks using efficiency and restructuring programmes, strict management of accounts receivable, strategically important partnerships and an expanded performance profile of the AVIATAR digital platform.

Company-specific risks

Failure to achieve assumed improvement in the scope of “ReNew”

The Lufthansa Group is striving to achieve significant improvements in the cost base and efficiency in all business units within the framework of its restructuring programme “ReNew” and the associated Group-wide programme “ReStructure”. The measures identified form part of the planning by the business units and are discussed in detail as part of the planning process; the business units then enter them into a Group-wide tracking system. The current scope of measures and progress in implementation are discussed in monthly performance dialogues with each business unit. In addition, the progress in each business unit across the Group is discussed with the Executive Board. Risks can arise despite

intensive tracking at both business unit and Group level. For one thing, it can become apparent in the course of implementation that the expected effects cannot be achieved in full or only later than initially assumed; for another, the possibility exists that not enough additional potential can be identified during the year, making it impossible to achieve the agreed targets in full. In order to take early countermeasures, the volume of identified measures is compared against the targets on a monthly basis.

Human resources

INTERNAL AND EXTERNAL LABOUR DISPUTES

There is always a latent strike risk originating in wage agreements that have been or could be terminated, including those that will expire or become eligible for termination in 2022. The strike risk was classified as low in 2021, partly due to the crisis, but will increase in 2022. Factors increasing the risk include, in particular, higher inflation rates, the wish to be compensated for concessions made during the crisis and greater interest on the part of trade unions in securing a share of the economic recovery following the crisis. Opportunities in collective bargaining lie in the joint interest in overcoming the crisis and its consequences.

COOPERATION BETWEEN WORKS COUNCILS AND LABOUR UNIONS

The success of structural measures depends heavily on effective cooperation with co-determination within the Company. The coronavirus pandemic has made it necessary to introduce short-time work across the Company. It has also highlighted the need for organisational restructuring, including a possible reduction in staff through a redundancy programme. These measures were negotiated in 2021 and are currently being implemented. This could lead to risks, particularly that new conflicts such as disagreements with the works council concerning staff appointments or the allocation of tasks could result in the course of implementing the organisational restructuring. There is a possibility that the implementation makes further restructuring necessary, which would then have to be negotiated in its turn. The elections to be held in 2022 for the works council also give rise to political conflicts that may increase risk, also from a legal perspective.

Further crisis contributions from employees also have to be negotiated with the trade unions. In view of the gradual improvements in the economic situation of the industry and the very public debate about inflation rates in Germany in 2021, this may lead to an unwillingness to compromise and so to conflicts.

EMPLOYEE COMMITMENT

More than half of the Lufthansa Group's workforce was on short-time work at least one day a week at the end of 2021. This situation is expected to continue as demand for flights will not return to pre-crisis levels in 2022 either. As a result, the (pro rata) loss of work could lead to a weakening of how closely employees identify with the Company. Employees who are not on short-time work are working under significantly changed conditions. In some cases, variable remuneration components and special payments were cancelled and wages were reduced as employee contributions to overcoming the crisis in order to secure jobs. Finally, the build-up of restructuring and transformation pressures can potentially lead to a loss of confidence and a lack of orientation. There is the risk that further important sources of knowledge will quit the Company because of the current remuneration outlook and the worsened prospects. In order to maintain employee commitment, the Lufthansa Group tries to communicate the need for these measures by being completely transparent. Selected talents are given particularly intensive support and are prioritised in being given opportunities to work on restructuring projects.

STAFF STRUCTURE

Differences between strategic HR requirements, the existing competences of employees and how they are distributed across the companies in the Lufthansa Group constitute a structural HR risk. The Lufthansa Group addresses this risk by means of strategic human resources planning, drawing up a skills model and offering training courses for all the employees in the Group.

Provider default risk

The economic impact of the coronavirus pandemic also affects providers of the Lufthansa Group, in particular those that are heavily dependent on the air transport industry. If a key provider should become insolvent this would pose the risk of disruptions in the supply of goods and services. Furthermore, there is a risk that rights to services under existing maintenance contracts could be lost. Purchasing at the Lufthansa Group regularly identifies providers that are critical for business continuity and assesses the relevant risk. Regular exchanges with identified providers are conducted in an attempt to counter the risk of any supply disruptions in a timely manner. This includes the targeted use of suitable instruments such as changing payment terms or taking precautions to ensure smooth operations.

Risks from strategic fleet sizing

The strategic sizing of the Group fleet determines the available capacity and therefore also a large part of the fixed costs and future capital expenditure. Due to the demand and competition risks mentioned above, there is a risk of over-sizing that is not commercially viable, resulting in a decline in earnings.

As part of the annual strategy and planning process, the Lufthansa Group regularly reviews the planned fleet development over the next ten years and takes decisions on the allocation of aircraft to the various airlines in the Fleet planning is also reviewed and adjusted during the year as needed. The fleet may be reduced through the sale and parking of aircraft. Similarly, aircraft orders may be cancelled or delivery postponed in negotiations with aircraft manufacturers, and lease agreements may be terminated.

Flight operations risks

The airlines in the Lufthansa Group are exposed to potential flight and technical operating risks.

One of these is the risk of not being able to carry out regular flight operations for technical or external reasons. Another risk is the risk of an accident, with the possibility of damage to people and property; it is divided into environmental factors (for example, weather or bird strike), technical factors (for example, engine failure), organisational factors (such as contradictory instructions) and the human factor.

The direct effects of the ongoing coronavirus pandemic are permanently monitored as part of safety and compliance monitoring management; any potential risks were proactively identified, mitigation measures were developed and their implementation monitored as part of the corresponding audit activities. National and international civil aviation regulations relating to the coronavirus were systematically identified, evaluated and their implementation verified using a standard methodology for the Group.

Far-reaching effects of the pandemic on the Company, such as the reorganisation and redimensioning of Lufthansa German Airlines are still being monitored as part of the "management of change" in order to detect any risks at an early stage and take countermeasures in the spirit of a safety management system.

The companies in the Lufthansa Group search for these dangers systematically and in a forward-looking manner in order to manage the resulting risk by means of suitable countermeasures and to increase the level of flight safety further. For example, every single flight made by an airline in the Lufthansa Group is routinely analysed using the parameters recorded in the flight recorder (black box) in order to identify any peculiarities at an early stage and to act on them, such as in the context of training courses, for example. Other sources of information, e.g. accidents and hazardous situations around the world that come to light, are also analysed and

the results are integrated into prevention measures, such as training courses, where relevant. The safety management systems are continuously improved and refined.

The sustained implementation of uniform flight safety standards across the entire Lufthansa Group is also supported by further progress on harmonising the IT environment in the course of safety management. Ongoing dialogue between the airlines in the Lufthansa Group provides an opportunity to consolidate information gained in an operational setting and factor it into the development of the corresponding standards. A standardised platform for the analysis of flight data relevant to flight safety is currently being implemented.

Risks in connection with information security when operating civil aircraft are also taken into account. This concerns the IT systems on board and on the ground that are relevant to a flight event and the associated data exchange processes; it applies both to Lufthansa's own systems and processes and to supplier processes and products.

Risks from breaches of hygiene and food safety standards in Catering

In the Catering segment, it is vital that food is produced to the highest quality and in accordance with all hygiene and food safety standards. Standardised quality management systems are used to identify potential quality defects at an early stage. Furthermore, the LSG group invests continuously in its production facilities and equipment as well as in modern technology. The modernisation process is supported by intensive training courses as well as learning and problem-solving workshops in the individual companies.

Cyber and IT risks

Cyber-risks are all risks to which computer and information networks, ground and flight infrastructure as well as all IT-enabled commercial and production processes are exposed to sabotage, espionage or other criminal acts. If established security measures fail, the Lufthansa Group may suffer reputational damage and be obliged to make payment on the basis of contractual and statutory claims by customers, contract partners and public authorities. A loss of income is also conceivable if operating systems should fail.

The business processes in the Lufthansa Group are supported by IT components in virtually all areas. The use of IT inevitably entails risks for the stability of business processes and for the availability, confidentiality and integrity of information and data, and such risks ultimately cannot be fully eliminated.

Cyberattacks have increased worldwide since the coronavirus crisis. They are becoming increasingly professional, more international and more numerous. This is borne out by the Group's own experience of security incidents and by information from other companies and public agencies. At the same time, the digitalisation of business processes in the Lufthansa Group is increasing, meaning that the potential effects of cyberattacks may continue to escalate. Cyber risks are therefore an ever greater potential risk for the Lufthansa Group.

The Lufthansa Group monitors the IT security situation across the Group and worldwide on an ongoing basis. Based on this monitoring, the Executive Board has in recent years increasingly adopted and implemented measures to strengthen the IT security of the Lufthansa Group. Technological tools have been introduced to prevent and respond quickly to cyberattacks, processes have been adapted to changing risk scenarios and the changed way of working from home, and awareness training is carried out regularly. Measures have been implemented in various core areas across the Group since late 2018 as part of the cybersecurity programme adopted by the Executive Board and are being rolled out to strengthen broad-based cyber-resilience within the Lufthansa Group. This also includes preparing the airlines of the Lufthansa Group for the next generation of e-enabled aircraft to mitigate new risks arising from the digitalisation of aircraft. Measures are defined in line with the current risk assessment that also include partners and providers of the Lufthansa Group when they are implemented in the IT systems and processes. Initial results from the programme are already showing a positive contribution to reducing risks. The Lufthansa Group also monitors its own cybersecurity performance, that of the individual subsidiaries and key providers using an external neutral cybersecurity rating. This makes it possible to compare the Group's security level with that of other industry participants and sectors.

IT risk and IT security processes are organised across segments. The status of IT risks and IT security is compiled annually, consolidated at Group level and discussed by the Risk Management Committee for the Lufthansa Group. The risk and security management systems and selected other measures are also reviewed regularly by the Internal Audit department.

The Lufthansa Group sources most of its IT infrastructure from external service providers. The operational and commercial risks that by nature accompany this kind of outsourcing are assessed and managed on a continuous basis.

Risks of breaching data protection regulations

Protecting the privacy of its customers, employees, shareholders and providers has always been an important and self-evident concern for the Lufthansa Group. With a view to

meeting the requirements of the General Data Protection Regulation (GDPR), all Group companies within the scope of the GDPR have put in place appropriate governance structures and processes in accordance with the requirements of the Group's data protection policy to identify and manage potential risks from breaches of the extensive legal requirements. Customers regularly exercise their rights to access and erasure of data.

Risks arising from international regulations are also taken into account.

Data can now be exchanged with the United Kingdom over the next four years on a secure legal basis, since the EU classified the UK as a secure third country in its adequacy decision pursuant to Art. 45 GDPR on 28 June 2021.

Compliance risks

Compliance refers to the observance of legally binding requirements, and is intended to ensure that the Company, its executive bodies and its employees act in accordance with the law. The effectiveness of the compliance programme is therefore vital to the Lufthansa Group. <https://investor-relations.lufthansagroup.com/en/corporate-governance.html>.

The Lufthansa Group is active in many countries and is therefore subject to various legal norms and jurisdictions with different, and sometimes hard to interpret, legal frameworks, including for criminal law on corruption. In addition, all activities not only have to be judged against local criminal law, the laws applicable in the sales area and the local cultural customs and social conventions, but also against extraterritorial regulations like the US Foreign Corrupt Practices Act (FCPA) and the UK Bribery Act. Any infringements are investigated rigorously; they may result in criminal prosecution for the individuals involved and could expose the Company to hefty fines. There would also be reputational damage that is difficult to measure and the Company would be put at a distinct disadvantage when competing for public tenders. The Lufthansa Group has put processes in place that are intended to identify specific compliance risks and, in particular, to prevent corruption.

The Lufthansa Group is also exposed to risks arising from competition and antitrust law. They stem, in particular, from the fact that the Lufthansa Group also operates in highly oligopolistic markets, has a strong position in some markets, cooperates with competitors in alliances, and that legal parameters may change. In some business units in the Lufthansa Group the same individuals are employees of suppliers and competitors and customers. The Lufthansa Group's Competition-Compliance function addresses the risks of collusive behaviour and provides executive bodies and employees with extensive training.

The Lufthansa Group, in particular Deutsche Lufthansa AG as a publicly listed company, is also exposed to risks from capital market compliance. The EU Market Abuse Regulation (MAR) and many other national and European regulations have codified bans on insider trading and market manipulation, the obligation to make ad hoc announcements as well as other obligations relating to capital markets. These regulations are directly applicable in Germany. However, in some cases, it is still difficult to predict and to put into practice the interpretation of these new European rules, particularly concerning ad hoc announcements and administrative practices. The Lufthansa Group takes many organisational precautions to comply with the provisions of the MAR. The Group uses special software to compile insider lists, for instance, and to publish any ad hoc announcements, and it has the corresponding policies, information letters and process descriptions at hand. In addition, the Corporate Compliance Office conducts online training courses for groups of employees specifically affected by the laws applicable to insider trading and market abuse. Matters relating to the law on ad hoc announcements are also discussed with the Ad Hoc Committee in consultation with external experts.

Despite the existence of a compliance management system and its risk-mitigating activities, individual breaches, the related investigations by public authorities and penalties cannot be ruled out completely, particularly in the fields of integrity, competition and capital market compliance.

Litigation, administrative proceedings and arbitration

The Lufthansa Group is exposed to risks from legal, administrative and arbitration proceedings in which it is currently involved or which may take place in the future. Due to the possible restricting effect, the risks have not been quantified in accordance with DRS 20 No. 154. It cannot be ruled out that the outcome of these proceedings may cause significant damage to the business of the Lufthansa Group or to its net assets, financial and earnings position. Appropriate provisions have been made for any financial losses that may be incurred as a result of legal disputes. More information on provisions for litigation risks and contingent liabilities can be found in the Notes to the consolidated financial statements [➤ Note 36, p. 208ff.](#), and [Note 46, p. 240ff.](#)

Furthermore, the Lufthansa Group has taken out liability insurance for an amount that the management considers appropriate and reasonable for the industry in order to defend itself against unjustified private third-party claims and to settle such claims it considers justified. Even in such cases, however, this insurance cover does not protect the Lufthansa Group against possible damage to its reputation. Such legal disputes and proceedings may also give rise to expenses in excess of the insured amount, expenses not covered by the insurance or those which exceed any provisions previously recognised. Finally – and depending on the type

and extent of future losses – it cannot be guaranteed that the Lufthansa Group will continue to obtain adequate insurance cover on commercially acceptable terms in the future.

There are insurance contracts in place for Germanwings and Deutsche Lufthansa AG as well as for other Lufthansa Group companies, covering various liability claims in connection with the Germanwings accident on 24 March 2015. The same applies to the lawsuits filed against Germanwings, Deutsche Lufthansa AG and other Group companies. The Lufthansa flying school in Arizona (formerly Airline Training Center Arizona, Inc. (ATCA), now Lufthansa Aviation Training USA, Inc. (LAT US)), has also been sued for material and non-material damages. The lawsuit was originally filed in the USA, where it was dismissed. It is now being pursued in Germany before the Essen regional court. In the lawsuit, the claimants argued, among other things, that the flying school doubted the co-pilot's mental stability but still trained him nonetheless. The litigation was later extended to Deutsche Lufthansa AG and alleges organisational deficits and individual errors in the medical treatment of the co-pilot. Moreover, parallel proceedings were opened – only against Deutsche Lufthansa AG – before the Frankfurt regional court. The Essen regional court dismissed the claim outright, and in the appeal before the Hamm higher regional court, only putative claims against Deutsche Lufthansa AG were still being pursued. The Hamm higher regional court also dismissed the claim outright and denied leave to appeal to the German Federal Court of Justice. Whether the plaintiffs will appeal against the ruling denying leave to appeal is currently unknown, as is the outcome of the parallel proceedings still pending at Frankfurt higher regional court. The lawsuits are still considered to have little chance of success. Companies in the Lufthansa Group may still be faced with costs, however, since in France at least, public prosecution and judicial investigations into the case are still under way. [➤ Notes to the consolidated financial statements, Note 46, Legal risk, p. 240f.](#) Legal costs are incurred here. Costs have already been incurred and others may follow for investigations and voluntary payments to the dependants of the victims of the accident.

Ryanair has appealed to the European Court of Justice against the decisions by the European Commission approving stabilisation measures for companies in the Lufthansa Group.

Stabilisation measures for Deutsche Lufthansa AG, Austrian Airlines and Brussels Airlines SA/NV are affected. The Lufthansa Group believes the chances of success are slim. If the appeals are successful, however, the decisions by the European Commission would be declared null and void. If the respective public-sector agencies are prevented from continuing to grant the stabilisation measures, the funds concerned would have to be cancelled and repaid, whereby Deutsche Lufthansa AG has already repaid in full the silent participations from the ESF.

The Lufthansa Group is subject to tax legislation in many countries. Changes in tax laws and case law, as well as different interpretations as part of tax audits/external wage tax audits can result in risks and opportunities affecting tax expenses, income, claims and liabilities. The Corporate Taxation department identifies, evaluates and monitors tax risks and opportunities systematically and at the earliest stage possible, and initiates steps to mitigate the risks as necessary.

Regulatory risks

Political decisions at national and European level continue to have a strong influence on the international aviation sector. This is particularly the case when countries or supranational organisations unilaterally intervene in the competition within a submarket, for example, by way of regional or national taxes, emissions trading, fees and charges, restrictions or subsidies. The Lufthansa Group campaigns actively to influence these developments in the appropriate boards and forums and in cooperation with other companies and industry associations.

Political risks in the context of the coronavirus pandemic

There are a number of political risks in connection with the current coronavirus pandemic that could exacerbate the economically tense situation. Air traffic is subject to wide-ranging restrictions based on disparate decisions by national governments, which are only gradually being lifted. Travel restrictions are still expected in 2022, particularly in the Asian market. Permanent changes in the administrative requirements for entering a country increase the risk that usable traffic rights will be restricted. The pandemic poses the risk that states will seal themselves off due to the spread of the coronavirus and reduce agreed international air traffic to a minimum.

In addition, slots may be lost worldwide due to flight cancellations caused by the crisis. The basic rule on the use of take-off and landing rights is that the right to reallocation of slots in subsequent periods is lost if they have been used less than 80% of the time in a flight period. This rule was initially suspended by authorities worldwide until March 2021 due to the slump in air traffic caused by the coronavirus. It was modified thereafter, most recently for winter 2021/2022, by reducing the slot use ratio to 50% instead of 80%. In the event of concrete flight and/or travel restrictions, it is also possible to qualify flight cancellations as force majeure and the flights are then deemed to have been operated.

The EU published further exemptions for summer 2022 on 15 December 2021, which set the slot use ratio at 64%. Depending on the traffic situation, there is a risk that flights have to be flown even with low passenger load factors to maintain slots. Slot rules have also been changed in all other countries in response to the pandemic, sometimes to better conditions than in the EU. If the EU rules are more restrictive than those in other regions of the world, there is a risk that the EU rules will also be applied there to EU companies (and only to them). The current regulation does not provide for the slot exemptions to be extended past summer 2022, so a new legislative procedure would be necessary.

The Lufthansa Group advocates, in dialogue with German, European and international policymakers, for risk-based reductions in entry restrictions, the harmonisation of rules for entering a country, the flexible application of the regulations in place and another European regulation to change the slot-use rule depending on the traffic situation.

Regulatory risks in connection with climate change

The European Commission published a package of legislation entitled "Fit for 55" in July 2021, which is intended to reduce CO₂ emissions by 55% compared with 1990. Air transport is particularly affected by the revision of the Emissions Trading Scheme (ETS), the proposal to introduce a quota for blending sustainable aviation fuels (SAF) and the proposal to abolish the mandatory tax exception and introduce a uniform minimum tax for aviation fuel.

Air traffic within the EU is already part of the EU Emissions Trading Scheme EU-ETS, which has been associated with the Swiss Emissions Trading Scheme since the beginning of 2020. The revision of the ETS entails a risk of higher costs and/or additional requirements, because there are proposals to, for example, reduce the emissions limit, or "cap", and abolish the existing allocation of free emissions rights. Both may increase the Lufthansa Group's ETS costs in future financial years beyond 2021. Tightening the ETS severely distorts competition.

The introduction of quotas for blending SAF is also planned at the European level and in various EU member states. This would not only increase fuel costs for the Lufthansa Group, but result in a further distortion of competition in long-haul traffic. Airlines from outside Europe with transfer stops near Europe could then continue to use unblended fuel for part of the journey. The ban on tankering, i.e. carrying fuel for the return/onward flight, which is being proposed to accompany the introduction of a quota, would stop airlines from protecting themselves against unjustified price differences for fuel at European airports.

As part of the revision of the Energy Taxation Directive, the European Commission is proposing to abolish the mandatory tax exemption and introduce a minimum tax on aviation fuel, which creates an additional cost risk. Since the proposal is only for a minimum tax, there is also the risk of different tax rates within Europe, which would create a distortion of competition.

In future, the regulation will also take into account the “non-CO₂ climate impact of aviation”, such as condensation trails and nitrogen emissions. Operational measures may also reduce climate impact. However, research in this area has only just begun. As a result, the focus of regulation will remain on CO₂ emissions for the time being. In addition to wide-ranging measures to limit CO₂ emissions, such as the continuous renewal of its fleet and the expansion of voluntary carbon offset options, the Lufthansa Group participates in the public debate – sometimes together with other European airlines, airports and industry associations – and endeavours to prevent any regulations that could distort competition.

➤ **Combined non-financial declaration, p. 94 ff.**

Increased noise legislation

Stricter noise standards may apply to airlines or airports. They may cause, for example, higher costs for retrofitting aircraft, bans on specific aircraft models, higher charges or higher monitoring expenses. The still outstanding revision of the directive on environmental noise at European level is relevant here. The limits set in the Aircraft Noise Abatement Act were reviewed at the federal level as scheduled in 2017. The Act has not yet been amended. Although the latest results of noise research do not show any significant changes in health risks, the way in which noise is perceived as a nuisance by those affected has changed radically, even when noise levels at airports are stable. Further lobbying in this area is therefore expected to result in more restrictive legislation.

In November 2017, the Lufthansa Group, Fraport, Condor, the Board of Airline Representatives in Germany (BARIG) and the government of Hesse came to a voluntary agreement on noise limits at Frankfurt Airport. Due to the crisis, only around 50% of the noise limit was reached in 2020 compared with around 80% in 2019. The assumption is that this framework will allow for further growth, even after the crisis. The agreement does not provide for any interference with operating licences as long as the limits are respected. Introducing a voluntary noise limit in Frankfurt could have an effect on other sites in Germany.

The Lufthansa Group develops coordinated strategies by means of targeted communications in collaboration with trade associations and other industry stakeholders. It is involved in research projects looking at active noise abatement measures ➤ **Combined non-financial declaration, p. 94ff.**, and closely monitors research into the effects of noise.

Financial risks

Financial market developments represent opportunities and risks for the Lufthansa Group. Negative changes in fuel prices, exchange rates and interest rates can result in higher expenses and/or lower income compared with the assumptions used for planning and forecasting.

System of financial risk management for fuel prices, exchange rates and interest rates

Financial and commodity risks are systematically and centrally managed for the entire Group on the basis of internal guidelines. The derivative financial instruments used serve to hedge underlying transactions. Here, the Lufthansa Group works with partners that have at least an investment grade rating equal to Standard & Poor's BBB rating or a similar long-term rating. All hedged items and hedging transactions are tracked in treasury systems so that they can be valued and monitored at any time. The functions of trading, settlement and controlling of financial risk are strictly separated at an organisational level. The executive departments and Financial Risk Controlling ensure compliance with these guidelines. The current hedging policies are also discussed regularly in management board meetings across the business areas. The Supervisory Board is regularly informed of the amounts of risk. ➤ **Notes to the consolidated financial statements, Note 45, p. 225ff.**

Fuel price movements

In 2021, the oil price was on average 64% higher than in the previous year. There has been no year-on-year change in the risk of price fluctuations.

In the reporting year, the Lufthansa Group consumed around 4.4 million tonnes of kerosene. At around EUR 2,409m, fuel expenses constituted a major item of expense for the Lufthansa Group in 2021. Severe fluctuations in fuel prices can have a significant effect on earnings. A change in the fuel price of +10% (-10%) at year-end 2022 would increase (decrease) the anticipated earnings of the Lufthansa Group by EUR 261m (EUR -361m) after hedging. This scenario analysis does not assume that ticket prices are altered following changes in fuel prices.

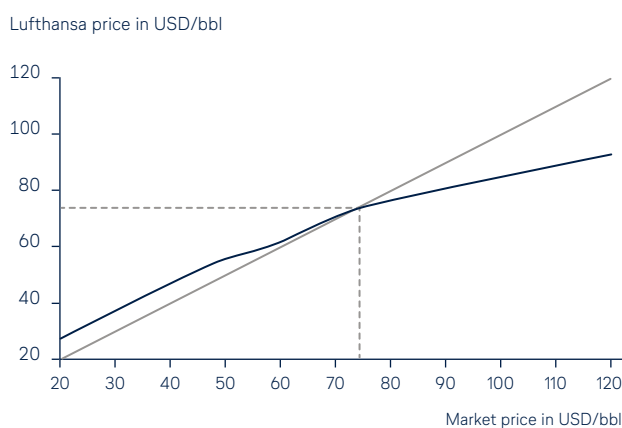
The Lufthansa Group uses rules-based fuel hedging with a time horizon of up to 24 months. This is aimed at reducing fluctuations in fuel prices. Limited protection against higher prices is accepted in exchange for maximising the benefits derived from any fall in prices. The Lufthansa Group uses standard financial market instruments in fuel hedging. Hedges are mainly in crude oil for reasons of market liquidity. The instruments used will be settled by payments and will not result in physical deliveries.

Capacity adjustments at the beginning of 2021 due to the coronavirus pandemic meant that some of the fuel hedging was not matched by hedged items. Earnings from fuel price hedges not allocated to hedging are shown in the financial result. Fuel hedging was resumed in spring 2021, having been suspended in spring 2020.

As of 31 December 2021, there were crude oil and kerosene hedges for circa 60% of the forecast Group fuel requirement for 2022, in the form of futures and options. For 2023, around 20% of the forecast fuel requirement was hedged at that time. As fuel is priced in US dollars, fluctuations in the euro/US dollar exchange rate can also have a positive or a negative effect on reported fuel prices. US dollar exposure from planned fuel requirements is included in currency hedging.

C25 HEDGED OIL PRICE LUFTHANSA GROUP 2022¹⁾

in USD/bbl (as of 31 Dec 2021) — Market price
— Lufthansa price



¹⁾ Including fuel price hedges not allocated to hedging.

Exchange rate movements

Foreign exchange risks for the Lufthansa Group arise in particular from international ticket sales and the purchasing of fuel, aircraft and spare parts. All subsidiaries report their planned currency exposure over a time frame of at least 24 months. At Group level, a net position is aggregated for each currency to take advantage of “natural hedging”. Twenty of the foreign currencies are hedged because their exposure is particularly relevant to the Lufthansa Group. ➤ **Notes to the consolidated financial statements, Note 45, p. 225 ff.**

Rating downgrade

Due to the impact of the coronavirus pandemic, the rating agencies lowered the Lufthansa Group’s credit rating over the course of 2020. The rating agency Moody’s currently gives Lufthansa the non-investment-grade rating of Ba2, with a “negative outlook”. Standard & Poor’s also sees Lufthansa as non-investment grade with “BB-”, but raised the outlook to “stable” in November 2021. The rating agency Scope, on the other hand, assigns Lufthansa an investment-grade rating of “BBB-” with a “negative outlook”.

Further downgrades by the rating agencies would likely have negative effects on the Company’s ability to finance itself on the capital market. These effects include a reduced market capacity for borrowing capital and increased financing costs. Measures to strengthen liquidity and ongoing communication with the rating agencies should help avoid further downgrades.

Exchange rate losses on pension fund investments

Pension fund investments are subject to price fluctuations on international capital markets. However, the broad diversification across many asset classes (including global equities and fixed-income securities) does reduce the overall investment risk to capital investments. Thanks also to the existing hedging mechanisms, the risk of significant losses is still considered to be low. ➤ **Financial strategy and value-based management, p. 20ff.**

Risks in connection with state aid and liquidity risks

To offset the severe revenue losses resulting from the coronavirus pandemic, the Lufthansa Group has taken advantage of government support from Germany, Belgium, Austria, Switzerland and the USA since June 2020 in order to secure the necessary liquidity of the Group. The ESF stabilisation measures in Germany have already been repaid.

➤ **Financing, p. 46f.**

The loan agreements featuring guarantees provided by the Swiss federal government and the Republic of Austria concluded in the context of the government stabilisation measures contain various financial covenants requiring adherence to specific minimum values (liquidity, equity, EBITDA/R). Breaches of these financial covenants can result in termination of the loans granted and – in the event that repayments are not made or the breach concerned is not remedied otherwise – ultimately in the attachment of the Company's equity investments in SWISS and Edelweiss or in the part of the loan granted to Austrian Airlines that has not yet been repaid falling due for immediate repayment. The Lufthansa Group monitors compliance with these covenants on an ongoing basis and, if need be, takes countermeasures to ensure that its financial obligations are met.

At the Lufthansa Group, the Treasury department checks the status of the available liquidity reserves on a daily basis. A forecast for the coming months is also prepared as part of the monthly forecast process, so that any potentially critical liquidity situation can be responded to at an early stage with appropriate countermeasures. If necessary, financing measures will be initiated to ensure compliance with financial and commercial obligations.

Counterparty risks

The transactions completed in the course of financial management give rise to default risks. The counterparty default risk is continuously assessed using a system of counterparty limits.

In addition, the transactions completed in the normal course of the companies' business give rise to further default risks for receivables. This counterparty risk is also assessed continuously on the basis of a risk assessment methodology.

The Lufthansa Group has implemented a Group-wide, integrated reporting system with specific yet, if necessary, flexible limits in order to keep the risks of default on customer receivables as low as possible. The reporting periods can be altered at short notice if necessary. Data are available on a daily basis and the system has warnings for individual counterparties. This transparency across the Group makes it possible to seize opportunities at short notice for offsetting and netting when possible. In addition to the measures implemented in the individual business segments, a Group-wide Credit Risk Committee has been established, which takes decisions in advance on coordinated preventive measures such as calling in collateral, limiting transactions or making advance payments to individual counterparties, based on close monitoring [➤ Notes to the consolidated financial statements, Note 39, p. 212ff.](#)

OVERALL STATEMENT ON OPPORTUNITIES AND RISKS

The coronavirus crisis still represents a profound turning point for air traffic, and consequently for the Lufthansa Group as well. Global air traffic is not expected to return to its pre-coronavirus level until the mid-2020s. As in the previous year, this means the coronavirus crisis remains a significant factor in the Lufthansa Group's overall risk exposure.

Continuing global uncertainty about the development of the pandemic, combined with vaccination rates that in some cases differ widely from one region to another, create an environment that is defined by travel restrictions in which demand is depressed by the crisis. Despite this, the liquidity risk was significantly reduced through financing measures involving equity and borrowed capital while repaying most of the stabilisation measures at the same time. An additional instrument for identifying and managing liquidity risks was also created by introducing the measurement and continuous reporting of risk-bearing capacity.

In this challenging environment, the Lufthansa Group continues to rely on its ability to adjust its capacities and resources flexibly to changing market conditions and to use this flexibility to seize opportunities for the Company's long-term development.

Generally speaking, the Executive Board remains convinced that the opportunities and risk management system is effective. It continues to strive for a balance between opportunities and risks. In the context of the successful capital increase and other financial measures on capital markets, and on the basis of the steps taken to combat the coronavirus crisis and the scenarios on which its financial planning is based, the Executive Board still does not consider that the continued existence of the Lufthansa Group is at risk.

DESCRIPTION OF THE ACCOUNTING-RELATED INTERNAL CONTROL SYSTEM AND RISK MANAGEMENT SYSTEM IN ACCORDANCE WITH SECTION 289 PARAGRAPH 4 AND SECTION 315 PARAGRAPH 4 HGB

The Lufthansa Group's Internal Control System (ICS) covers all the principles, procedures and steps intended to ensure effective, economical and accurate accounting and compliance with the relevant legal regulations. It is based on the COSO framework (Committee of the Sponsoring Organizations of the Treadway Commission).

Overall responsibility for the Internal Control System required to manage risk lies with the Executive Board of Deutsche Lufthansa AG, which defines the scope and the format of the systems in place based on the specific requirements of the Lufthansa Group.

The Corporate Audit department of Deutsche Lufthansa AG as well as the decentralised internal audit departments at Delvag Versicherungs-AG and Lufthansa AirPlus Servicekarten GmbH are embedded in the internal monitoring system for the Lufthansa Group and act independently of business processes. In addition, the effectiveness of those areas of the Internal Control System relevant to financial reporting are reviewed by the auditors as part of a risk-oriented approach to their audit. The Audit Committee of the Deutsche Lufthansa AG Supervisory Board monitors the effectiveness of the Internal Control System and risk management system on the basis of Section 107 Paragraph 3 German Stock Corporation Act (AktG).

The objective of the Internal Control System for accounting processes is, by making checks, to provide a reasonable degree of certainty that the financial statements and the consolidated financial statements of Deutsche Lufthansa AG comply with the rules, despite the risks identified.

The following preventative and investigative checks are embedded in the accounting process:

- IT-supported and manual cross-checks,
- functional separation,
- dual signatures and
- monitoring checks.

Operational accounting processes are carried out locally at the Group companies and also using the Group's own and external shared service centres. Expert opinions for determining the amount of pension provisions are prepared by external consultants.

Corporate Accounting is functionally responsible for preparing the consolidated financial statements and draws up binding regulations for the Group companies that pertain to form, content and deadlines. The Lufthansa Group's accounting guidelines are updated regularly and define uniform accounting policies for the domestic and foreign companies included in the consolidated financial statements of the Lufthansa Group in accordance with the International Financial Reporting Standards (IFRS) applicable in the European Union. For Deutsche Lufthansa AG and other German companies in the Group, a guideline defines rules for drawing up individual financial statements in line with the German Commercial Code (HGB). This ensures that standardised Group accounting practices are applied to the recognition, measurement and presentation of balance sheet items, with as little room for discretion as possible. The formal requirements relate to the mandatory use of a standardised and complete set of reporting forms and a uniform account framework for the Group. Individual financial statements that contain errors are selected and restated as necessary at company or Group level on the basis of control mechanisms already defined in the SAP SEM-BCS consolidation software and/or by systematic plausibility checks. The consolidation system dictates the different deadlines for various elements of the reporting package and verifies centrally that they are adhered to during the preparation process.

The IT systems used for accounting are protected against unauthorised access by special security precautions.

By means of the organisational, control and monitoring structures defined for the Lufthansa Group, the Internal Control System and risk management system as it relates to accounting ensures that all matters affecting the Company are captured, processed and evaluated, and are presented adequately in the Group's financial reporting. In particular, the use of individual discretion, faulty checks, criminal acts by those involved and other circumstances may compromise the effectiveness and reliability of the Internal Control System and risk management system in place. This means that even the Group-wide application of these systems cannot guarantee with complete certainty that facts are presented correctly, fully and promptly in the consolidated financial statements. These statements only relate to Deutsche Lufthansa AG and the major subsidiaries included in the consolidated financial statements of Deutsche Lufthansa AG.

Combined non-financial declaration

Lufthansa Group wants to fulfil its role as a leading airline group, also in terms of sustainability. | Corporate responsibility is an integral part of the corporate strategy. | The combined non-financial declaration focuses on the aspects of environmental concerns, customer concerns, employee concerns, social concerns, business ethics and compliance, including anti-corruption and bribery as well as respect for human rights and responsible supply chain management. | Declaration is based on the GRI Standards 2016.

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Note: This combined non-financial declaration is part of the Lufthansa Group's Annual Report 2021 and contains references to disclosures in the Annual Report. It is published on the Lufthansa Group website.

About this combined non-financial declaration

Deutsche Lufthansa AG is publishing a combined non-financial declaration for the financial year 2021 in accordance with Sections 315b and 315c German Commercial Code (HGB) in conjunction with Sections 289b to 289e HGB. Deutsche Lufthansa AG publishes a non-financial declaration at Company level and a non-financial Group declaration together as a combined non-financial declaration. It combines aspects and reporting on the following key issues: environmental concerns, customer concerns, employee concerns, financial resilience, business ethics and compliance, including anti-corruption and bribery as well as respect for human rights, social concerns and sustainability in the supply chain.

Disclosures on whether and to what extent the activities of the Company are related to economic activities that are classified as taxonomy-eligible within the meaning of the EU Taxonomy Regulation (2020/852) are included at the end of this combined non-financial declaration. ↗ **First-time applicability of the EU Taxonomy Regulation (EU) 2020/852, p. 134f., and Summary, p. 135.**

In addition, measures and initiatives taken by the Lufthansa Group that demonstrate the Company's wide-ranging commitment to corporate responsibility are described in the combined management report. References to these passages are made in this declaration. The impact of the Company on non-financial aspects is taken into account in the Group risk management system of the Lufthansa Group. ↗ **Opportunities and risk report, p. 76ff.**

Taking into account the measures and concepts described and using the net method, there are currently no indications of risks that would have a severe negative impact on these material aspects and that are highly likely to occur. Unless otherwise stated, the disclosures made here relate to the group of consolidated companies referred to in the consolidated financial statements. Unless stated otherwise, the disclosures reflect the perspective of both the Group and Deutsche Lufthansa AG. This combined non-financial declaration was subject to a voluntary limited assurance engagement in accordance with ISAE 3000 (revised). ↗ **Independent auditor's report on a limited assurance engagement regarding the Non-Financial Declaration, p. 296f.**

References to disclosures outside the combined management report are additional information and do not form part of the combined non-financial declaration.

Lufthansa Group reports according to TCFD and SASB standards and bases its reporting on GRI Standards 2016

The Lufthansa Group published further information concerning the 2020 financial year on its website in 2021 in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) initiated by the Financial Stability Board as well as the Sustainability Accounting Standards Board (SASB). These reports are also planned for the financial year 2021 and will be published on the websites of the Lufthansa Group.

The combined non-financial declaration is based on the GRI Standards 2016. ↗ **T198 GRI Content Index, p. 288.**

Disclosures on the business model

The Lufthansa Group is a global aviation group with a total of 302 fully consolidated subsidiaries. The business model of the Lufthansa Group is described in detail in the combined management report. ↗ **Principles of the Group, p. 15ff.**

Values and guidelines

Sustainability is firmly established within the Company

Responsible conduct in compliance with legislation is a key element of the Lufthansa Group's corporate culture and is firmly embedded in the Group strategy. This is reflected in the vision statement of the Lufthansa Group: "Connecting people, cultures and economies in a sustainable way." Since 2002, the Company has applied the principles of the UN Global Compact for sustainable and responsible corporate governance. In addition, it supports the Sustainable Development Goals (SDGs) of the Agenda 2030, as adopted by the UN member states in 2015. During the reporting year, the Lufthansa Group conducted a new analysis of the aspects it considers as material. In order to contribute towards achieving the SDGs, the Company has identified ten SDGs in line with its material aspects where it can reduce its negative impact and increase its positive effect due to its business model. Based on the findings, the targeted allocation of the relevant SDGs was also adjusted. The addition of SDGs 3 (Good Health and Well-Being), 7 (Affordable and Clean Energy) and 16 (Peace, Justice and Strong Institutions) took into account the developments towards greater differentiation and focus of certain aspects. Activities that were previously allocated to SDG 5 (Gender Equality) are now combined with other activities in the newly included SDG 10 (Reduced Inequalities).

C26 RELEVANT SUSTAINABLE DEVELOPMENT GOALS (SDG) OF LUFTHANSA GROUP

	SDG 3: Good Health and Well-Being
	SDG 4: Quality Education
	SDG 7: Affordable and Clean Energy
	SDG 8: Decent Work and Economic Growth
	SDG 9: Industry, Innovation and Infrastructure
	SDG 10: Reduced Inequalities
	SDG 12: Responsible Consumption and Production
	SDG 13: Climate Action
	SDG 16: Peace and Justice
	SDG 17: Partnerships for the Goals

An overview of the goals and comments on Lufthansa Group activities to support them can be found in [T199 Sustainable Development Goals, p. 289ff.](#)

The Code of Conduct, which has been binding for all bodies, managers and employees of the Lufthansa Group since 2017, was supplemented by a Supplier Code of Conduct. In this Supplier Code of Conduct, the Lufthansa Group lays out its position that it also expects business partners and suppliers to adhere to the principles as a fundamental aspect of the business relationship. The standards at its core are not only the basis for responsible conduct and fair competition, but also seek to identify legal and reputational risks at an early stage and avoid them. The Lufthansa Group has published the Code of Conduct and the Supplier Code of Conduct on its website.

Value-based management is also an integral element of sustainable corporate governance for the Lufthansa Group. Sustainability considerations are increasingly helping to

ensure financial resilience. The financial strategy of the Lufthansa Group seeks to increase its Company value in a sustainable manner. It will concentrate on three dimensions: returning to value creation, generating free cash flows and maintaining financial and stability. The concept and the associated performance indicators are described in detail in the chapter [Financial strategy and value-based management, p. 20ff.](#) Variable management remuneration is also linked to non-financial factors such as specific CO₂ emissions. [Remuneration report, p. 271ff.](#)

Material aspects

Materiality analysis forms basis for determining material aspects

Continuous dialogue with stakeholders delivers an important contribution to refining the sustainability strategy of the Lufthansa Group. The Lufthansa Group plans to conduct a comprehensive survey in 2022 to follow up on the stakeholder survey, conducted in October 2018.

The Lufthansa Group expanded the selection of aspects and issues to be assessed in its materiality analysis conducted in the reporting year. Extensive research was conducted into the interests and demands of the public, investors, customers, employees, international reporting standards and also future requirements, such as the EU Taxonomy Regulation, the Corporate Sustainability Reporting Directive (CSRD) and the German Corporate Due Diligence in Supply Chains Act (Lieferkettensorgfaltspflichtengesetz – LkSG). In particular, the significant impact of the coronavirus pandemic on the entire aviation sector has also been taken into consideration. The issues identified were analysed for their business relevance and for the impacts of the Lufthansa Group's business activities along the entire value chain. An external agency was involved in the analysis process, including the review of the results.

The results of the materiality analysis were reviewed by the management in August 2021 in accordance with Section 289c (3) HGB and again formed the basis for selecting the aspects and concerns to be covered in this combined non-financial declaration.

Environmental concerns, customer concerns and employee concerns continue to be particularly important for the business of the Lufthansa Group. Furthermore, the aspects of business ethics and compliance, including the fight against corruption and bribery, respect for human rights and responsible supply chain management are of great relevance to the Lufthansa Group. To reflect the increased focus on certain issues, climate protection, for example, was evaluated in a more nuanced approach, with a breakdown into emissions with climate impacts and energy and fuel efficiency. Waste management and diversity and equal opportunity were identified as separate issues. Corruption, bribery and respect for human rights have been subsumed under the aspect of

C27 ASPECTS, ISSUES AND PERFORMANCE INDICATORS

Aspects	Environmental concerns	Customer concerns	Employee concerns
Issues Performance indicators	Climate protection CO ₂ emissions	Operational stability Departure punctuality	Attractiveness as an employer Engagement Index
	Active noise abatement Percentage of aircraft that meet the 10dB criterion of ICAO Chapter 4	Product and services Net Promoter Score	Diversity and equality of opportunity Share of women in management roles
	Waste management		Transformation capacity Health and safety at work Health Index
Aspects	Social concerns ¹⁾	Business ethics and compliance	
Issues Performance indicators	Corporate citizenship help alliance gGmbH	Fighting corruption and bribery Integral part of the Lufthansa Group Compliance Management System	
		Respect for human rights Important part of the corporate culture – embedded in the Code of Conduct	
		Responsible political engagement	
Interdisciplinary topics ²⁾	<ul style="list-style-type: none"> • Responsible supply chain management • Containment of coronavirus pandemic 		

¹⁾ Immaterial as defined in Section 289c Paragraph 3 German Commercial Code (HGB), voluntary presentation at specific request of addressees.

²⁾ Interdisciplinary topics represented quantitatively in the non-financial declaration.

business ethics and compliance. The coronavirus pandemic mainly affects the aspect of customer and employee concerns.

In addition, the management of the help alliance reports functionally to the Corporate Responsibility department.

Organisational foundations and responsibilities

Corporate responsibility is firmly established in the organisational structure

The highest monitoring body in the area of sustainable management is the Supervisory Board. The Executive Board function of the Chief Customer Officer is responsible for the Company's environmental, climate and social impact at the Executive Board level. In the reporting year, the Corporate Responsibility department, which reports directly to the Chief Customer Officer, was expanded significantly in terms of content and personnel in order to meet the growing requirements and aims of the Lufthansa Group. In addition to the existing focus areas of environment and reporting and rating, the CleanTech Hub was established, a distinct interface for customer issues was created and a coordinating function for comprehensive external and internal communication was set up.

The Group Executive Board meetings determined the focus and further development of sustainability-related activities within the Lufthansa Group. These are prepared in part by the Group Executive Committee (GEC), chaired by the Chief Executive Officer. The GEC is a senior management level entity and consists of the Executive Board of Deutsche Lufthansa AG, the CEOs of the segment parent companies, the senior executives of the Network Airlines and the heads of the Group's Strategy, Controlling and Communications departments. In the reporting year, the Group Policy Committee (GPC) was also established. It is chaired by the Chief Executive Officer. The GPC discusses politically significant issues, also relevant to sustainability, and prepares decisions. Individual managers within the committees are responsible for implementing concrete activities and projects. The Sustainability Circle, led by the Corporate Responsibility department, was also established in the reporting year. Its objective is to promote a Group-wide exchange on sustainability topics. The members of this committee are the Corporate Responsibility Officers of the Group companies and relevant Group Functions.

External ratings

The Lufthansa Group's sustainability management is rated above-average

On 7 December 2021, as in the previous year, the Lufthansa Group's commitment to climate protection, focusing on CO₂ management, was awarded a climate score of B by the non-profit rating organisation CDP. This rating remains better than the industry average. The extensive and transparent CO₂ description, divided into Scope 1, 2 and 3, received an A score for each section. The full report is available from CDP and on the Lufthansa Group website.

The Lufthansa Group has been included in the FTSE4Good Index Series (FTSE4Good Europe Index, FTSE4Good Developed Index) since its launch in 2001. This inclusion was most recently reviewed in December 2021. The FTSE4GOOD is a sustainability and corporate governance index family created by the London-based provider FTSE. Companies that are particularly committed in the area of corporate social responsibility (CSR) are included in the index. The indices work with the "best-in-class" principle and are often used as benchmarks by investors. In the MSCI rating, the Lufthansa Group improved from "BBB" to "A" in the financial year 2021. This improved rating was due in particular to very good ratings in the area of corporate governance.

The Lufthansa Group received a score of 27.5 from the rating agency Sustainalytics. As in the previous year, this means that it was classified as "medium risk" due to its high CO₂ relevance. It ranked 13th out of 69 in the "Airlines" sub-category. Sustainalytics rates the management of the Lufthansa Group as strong in terms of the main Environment, Social, Governance (ESG) aspects.

The rating agency Vigeo Eiris (Moody's ESG Solutions) also has a positive view of the Group's environmental management, with a rating of 44 points. The Lufthansa Group was able to further improve its ranking compared with the previous year, taking 8th place out of 20 in the sector comparison. The Lufthansa Group scored above-average results in the areas of environment (E) and governance (G). The score of 64 out of 100 points in the category "Energy Transition Score" in a CO₂-intensive sector is particularly noteworthy.

ISS ESG rates the Lufthansa Group "C+". Here too, the Group is significantly above the industry average.

The sustainability commitment of the Lufthansa Group regularly undergoes a voluntary external evaluation by the sustainability rating platform EcoVadis. In August 2021, the commitment of the Lufthansa Group was reconfirmed for a further year when it received "Silver Status". The Lufthansa Group increased its score from 58 in 2019 to 65 and is once again rated better than comparable companies.

C28 SUSTAINABILITY RATINGS

as of 31 Dec 2021



Contribution to containing the coronavirus pandemic and upholding global supply chains

The Lufthansa Group and in particular its logistics subsidiary Lufthansa Cargo often have a particularly important role to play in responding to crises and natural disasters, because it is only by air that aid workers and equipment can be transported over great distances. Lufthansa Cargo supported the UNICEF Humanitarian Airfreight Initiative in 2021 as one of the airlines to transport vaccines around the globe. The initiative brought together airlines covering routes to more than 100 countries to support the COVAX Facility – the global efforts to ensure fair access to vaccines against the coronavirus.

Airfreight is also vital for maintaining global supply chains and helps to strengthen global trade. For these reasons, the airlines in the Lufthansa Group also decided in 2021 to maintain relevant flight connections for the transport of passengers and freight despite wide-ranging travel restrictions. This made it possible to deliver urgently needed goods. Lufthansa Cargo also increased its scarce airfreight capacities for its customers, partly by using passenger aircraft that had been modified at short notice for this purpose and were dubbed "preighters".

Environmental concerns



Climate protection and active noise abatement are cornerstones of the environmental strategy – waste management is another key area of action

The material environmental impacts of flight operations are primarily climate effects due to the CO₂ emissions produced by burning kerosene and the noise caused by aircraft taking off and landing. In addition, waste is produced during every flight which must be reduced or recycled wherever possible.

Based on its understanding of responsible practices and the increased demands from external stakeholders such as customers, business partners, investors and the legislature as well as current and future employees, the Lufthansa Group is strengthening its long-standing commitment to climate protection with the aim of limiting the environmental impact of its business activities. This is consistent with its own economic interests, since resource consumption and emission-related fees all represent costs for the Company.

An event devoted to environmentally relevant sustainability aspects took place in the reporting year, which was organised for the Supervisory Board together with the Executive Board of the Lufthansa Group.

The Lufthansa Group's senior executives, the Group Leadership Team (GLT), also attended sessions to delve deeper into these topics.

The Lufthansa Group actively participates in relevant national and international business and industry associations and their environmental and sustainability working groups. They include active memberships of the International Air Transport Association (IATA), Airlines for Europe (A4E), Federal Association of the German Aviation Industry (BDL), Federal Association of German Industry (BDI), German Equities Institute (DAI) and econsense. A4E, for example, has a Jour Fixe every fortnight, during which position papers on environmentally relevant issues are drafted and consultations on draft legislation are actively supported. The Lufthansa Group also maintains a direct exchange with national ministries and EU bodies through the associations. ➤ **Opportunities from the legislative framework, p. 81, and Risks from the legislative framework, p. 89f.**

The Lufthansa Group follows a strategic environmental programme that is applied in all areas of the Group. Its main fields of action are the reduction of emissions, active noise abatement, energy and resource management, investment in research and the successive establishment of environmental management systems.

The Lufthansa Group has been operating a central environmental database for several years. One of its functions is to collect and process information and data that is relevant to the environment – such as on energy consumption – so this information can be employed in business decisions. The resource consumption recorded in this database and the emissions calculated on this basis are also used to determine the Lufthansa Group's carbon footprint, with annual audits by external experts.

Many Lufthansa Group companies use certified environmental management systems

To ensure continuous progress, the environmental management systems in the Lufthansa Group include binding environmental targets and a regular review by the Executive Board.

The Lufthansa Group undertakes central and local ongoing audits of the use of environmental management systems. Around 32% of the divisions were covered by a certified environmental management system in 2021 (measured by the number of employees in companies of the Lufthansa Group/sites with a certified environmental management system).

The environmental management system of Lufthansa German Airlines in Munich has thus been EMAS validated and ISO 14001 certified. In 1999, Lufthansa CityLine was the first passenger airline in the world with an independently certified environmental management system. Since then, the Munich-based airline regularly receives certification based on the demanding EMAS EU environmental standards. Air Dolomiti passed the audit for ISO 14001 certification in 2020 and for the EMAS validation in 2021.

Lufthansa Cargo has been certified according to the environmental management standard ISO 14001 at its location in Frankfurt. The subsidiaries Jettainer and time:matters have been integrated into the environmental management system. Continual improvements are achieved by means of ambitious environmental targets, above all in particularly energy and resource-intensive areas such as flight operations, freight handling and facility management.

The Lufthansa Technik group manages its sustainability activities within a uniform environmental management system. The environmental management system is certified under ISO 14001 and provides a stable organisational basis for implementing the regularly updated environmental strategy, ensuring compliance with relevant legislation and actively managing opportunities and risks. Within the Lufthansa Technik group, the system is also embedded in a process-based, integrated management system. The ISO 14001 certification has been continually expanded to all new locations since 2012. The Lufthansa Technik group passed its recertification audit in the reporting year.

Organisational foundations and responsibilities

The Group function Corporate Responsibility, which reports directly to the Chief Customer Officer, is responsible for defining, agreeing and adopting the overarching environmental management targets and activities.

In addition, all larger subsidiaries have their own environmental departments, an environmental officer or a coordinator. The environmental officers and coordinators meet monthly with other Group sustainability officers in the Sustainability Circle to discuss Group-wide sustainability issues and, in particular, environmental protection concerns. This exchange offers the sustainability and environmental experts in the Lufthansa Group an opportunity to identify potential synergies and to discuss and evaluate new ideas, activities and projects concerned with environmental protection.

Several new formats for Group-wide networking were also introduced in the reporting year, such as the “Campus Weeks”, during which specific content is developed at workshops. This content is then used for subsequent implementation in the various departments. In the reporting year, the Corporate Responsibility department also ensured that environmental issues were addressed internally through increased internal communication, such as the “Ecologue” lecture format on the occasion of the 2021 World Climate Conference in Glasgow (COP26).

CLIMATE PROTECTION

Concept

Four-pillar strategy defines climate protection measures

Progress can only be made through cooperation and by combining various activities of different players, such as manufacturers, airports, air traffic control, airlines and policy-makers. As early as 2007, IATA divided its emission-reduction activities into four action areas in its four-pillar climate protection strategy for the airline industry. This strategy and these action areas also form the basis for the Lufthansa Group’s activities to improve fuel efficiency and reduce CO₂ emissions.





Achieving the goals requires focused political and financial supporting mechanism. This is why the Lufthansa Group is involved in a wide range of private and government-sponsored research and development initiatives. Working with the scientific community, it has also funded atmospheric research for many years to contribute to a better understanding of climate effects.

1. TECHNOLOGICAL PROGRESS

The Lufthansa Group invests continuously in modern, fuel-efficient aircraft and engine technologies, which represent the most important element in reducing CO₂ emissions from flight operations.

Measures to technically modify the existing fleet are also constantly examined and implemented in cooperation with partners from research and industry where appropriate.

C29 THE FOUR PILLARS FOR CLIMATE PROTECTION

 Technological progress	 Improved infrastructure	 Operational measures	 Economic measures
Innovation in aircraft and engine technology Alternative fuels	Better use of airspace Needs-based airport infrastructure Expansion of intermodality	Efficient aircraft sizes Optimum flight routes and speeds	Global market-based system of emissions reduction (CORSA) Voluntary compensation option

In the past decade, the Lufthansa Group has been closely involved with the research, testing and use of sustainable aviation fuel (SAF), i.e. synthetic kerosene made using renewable energy sources. Since then, the Lufthansa Group has worked in partnerships to drive key technologies for producing sustainable aircraft fuels. There is every indication that these fuels will also be needed in the long term, as the development of alternative electric and hydrogen-based propulsion systems for short-haul aircraft is likely to take at least another 15 years, and the development of larger and, in particular, long-haul aircraft is currently not envisaged.

2. IMPROVED INFRASTRUCTURE

The fundamental modernisation and harmonisation of technologies, processes and standards in the European airspace are necessary to realise the potential of airspace infrastructure for greater efficiency. The Lufthansa Group and other airlines, such as those in the “A4E” alliance, have the necessary expertise in this area and have been actively promoting the creation of a reliable and efficient European airspace for years through their participation in committees and projects. The aim is to achieve significant improvements in the punctuality and reliability of aviation, in particular for passengers, in addition to the increased efficiency potential.

The Lufthansa Group also seeks to persuade as many of the passengers as possible who travel via its hubs to make intermodal arrivals or departures to open up additional potential for reducing emissions. By offering appealing and convenient intermodal services, arriving and departing by long-distance train or bus should become just as natural as connecting flights.

3. OPERATIONAL MEASURES

The Lufthansa Group’s operational measures for climate protection comprise the use of efficiently sized aircraft and the optimisation of load factors, as well as reviewing and introducing new flight procedures and navigation technologies, determining optimal routes and speeds, and monitoring the many activities to save fuel.

4. ECONOMIC INSTRUMENTS

Economic measures such as the mandatory CORSIA and voluntary offsetting of CO₂ for climate protection are vitally important as long as sustainable aircraft fuel and sustainable propulsion technologies are not available in sufficient quantities. The Lufthansa Group is continuously expanding the possibilities for offsetting carbon emissions.

Organisational foundations and responsibilities

The Corporate Responsibility department is responsible for the climate protection strategy and is developing appropriate measures, while working closely with the various departments and business units of the Lufthansa Group. To address the growing importance of carbon accounting and environmental regulation and to provide relevant information such as framework assumptions, rules and interpretations to the affected areas and employees, the Corporate Responsibility and Group Controlling areas also established the Emissions Management Committee, where current developments in national and supranational emissions legislation are regularly discussed and their impacts are calculated. In acknowledgement of the importance of sustainable aviation fuels for the Lufthansa Group, the Corporate Responsibility department has established two SAF committees. The core SAF committee (Corporate Responsibility and Fuel Purchasing) defines procurement opportunities and strategic priorities. The broader SAF committee (Corporate Responsibility, Fuel Purchasing and Sales, Lufthansa Cargo and Lufthansa Innovation Hub) jointly promotes sales and emissions-balancing aspects and develops offers that are adapted to the different segments.

Targets

The Lufthansa Group supports the climate protection targets of the aviation sector

According to data from the International Energy Agency (IEA), in 2019 CO₂ emissions from air traffic currently account for around 3% of global carbon emissions from burning fossil fuels.

IATA adopted a resolution for global aviation in October 2021 that commits the global aviation sector (IATA member airlines) to reducing its net carbon emissions to zero by 2050. This commitment is in line with the goal of the Paris Climate Agreement to limit global warming to significantly below 2 degrees Celsius. The Lufthansa Group played a major role in setting the IATA target.

Via the European airline association (A4E), the Lufthansa Group is also involved in the Destination 2050 study – an initiative by five European air transport associations (A4E, ACI EUROPE, ASD, CANSO and ERA) which began in summer 2019. As aviation is generally considered an industry that is “difficult to decarbonise”, the aim of this study was to examine emission reduction potentials, taking into account the current state of the art and science. The focus is on significant reductions by 2030 and achieving carbon neutrality by 2050. The aim is to never exceed the level of emissions recorded in 2019.

Policymakers and industry are also working towards the goal of making flights to and from Europe carbon neutral by the middle of the century as part of the EU Green Deal and the associated “Fit for 55” package of measures. Significant reductions should already be achieved by 2030.

Lufthansa Group expands its own emission reduction targets

As befits its pioneering role, in 2020 the Lufthansa Group defined its own carbon reduction targets, which in some cases are more ambitious. Net emissions are expected to be halved in 2030 compared with 2019. The Lufthansa Group plans to be carbon-neutral by 2050.

In November 2021, the Lufthansa Group further specified its emission reduction targets, made a commitment to science-based targets and submitted an application for validation of these reduction targets for 2030 in accordance with the Aviation Sector Guidance of the Science-based Targets Initiative (SBTi). This initiative has defined science-based targets based on a remaining carbon budget.

The Group also aims to switch to carbon-neutral mobility on the ground in its home markets by 2030.

Emission reduction targets are part of Executive Board remuneration

The Lufthansa Supervisory Board has used emission reduction targets as an element of long-term variable remuneration for the Executive Board of Deutsche Lufthansa AG since 2011. Since the remuneration system was changed in 2019, the Supervisory Board has regularly defined an environmental target as one of the strategic and sustainability targets for the long-term variable remuneration (MVV), which accounts for 15% of target achievement for the MVV (see also the remarks in the remuneration report). As the economic situation remains tense, the Supervisory Board has suspended variable remuneration components for the Executive Board members for financial year 2021. In the spirit of good corporate governance, Executive Board members were nonetheless set specific targets for 2021 and the four-year period from 2021 to 2024. One focus of the long-term targets was again to reduce the fleet’s specific CO₂ emissions per passenger-kilometre flown. ➤ **Remuneration report, p. 271ff.**

Measures

1. TECHNOLOGICAL PROGRESS

Further progress with fleet renewal

Fleet renewal remains the key driver for reducing CO₂ in this decade. Alongside one used aircraft, ten new aircraft went into service with the Lufthansa Group airlines in 2021, including more Airbus A220-300s, A320neos, A321neos and Boeing 777Fs, which are powered by modern engines. The A320neo aircraft is one of the latest and most environmentally friendly aircraft in the world and is much quieter than comparable aircraft types. A total of 55 older aircraft were removed from the Group fleet in exchange. ➤ **Fleet, p. 24ff.**

Even though many projects are still far from being ready for large-scale production, the research and development of new, sustainable technologies in aviation has been very dynamic in recent years. Alongside established manufacturers such as Airbus and Boeing, a number of young companies are making efforts to enrich the aviation market with new ideas and concepts. Alternative fuels, new propulsion systems based on hydrogen and electricity, and new aircraft designs associated with these all play a role in these developments. The Lufthansa Group is monitoring these developments closely and analyzing them on an ongoing basis with respect to their future viability and relevance.

Technical measures are being developed for existing fleet

Measures to technically modify the existing fleet are also constantly examined and implemented where appropriate. By mid 2020, a modified Boeing 747-400 had logged more than 1,500 flight hours demonstrating the effectiveness of a new surface coating developed jointly by Lufthansa Technik and BASF Coatings GmbH. This functional film, known as AeroSHARK, or as sharkskin due its microscopic ribbing, reduces the drag of any aircraft. The approximately 500 square metres of AeroSHARK coating on the modified Boeing 747-400 were calculated to save more than 300 tonnes of fuel per year on regular flights, which translates into more than 900 tonnes of CO₂ emissions.

In May 2021, the decision was made to use the technology for the first time in mass production at a Lufthansa Group airline. Beginning in 2022, Lufthansa Cargo’s entire fleet of Boeing 777 freighters will be retrofitted with AeroSHARK by Lufthansa Technik. At 800 square metres per aircraft, these modifications will be even more extensive, generating cumulative annual savings of more than 4,000 tonnes of fuel and almost 13,000 tonnes of CO₂ for all eleven aircraft.

Lufthansa Technik and BASF are also working on making the further development of AeroSHARK an ongoing process so that this sustainable technology can be used at an even larger scale in the future and can be certified for as many other types of aircraft as possible. To leverage the sustainability potential of this technology on a global scale, Lufthansa Technik plans to market AeroSHARK to airlines outside the Lufthansa Group as well, many of which have already expressed interest in this retrofit.

Increasing the use of sustainable aviation fuel

Aviation will continue to be dependent on sustainable liquid aviation fuels for decades to come. In developing SAF, the Lufthansa Group focuses on synthetic kerosene based on waste materials, ligneous biomass and renewable electrical energy (power-to-liquid – PtL) as well as research into the direct use of sunlight for fuel synthesis.

The partnership with the Swiss Federal Institute of Technology (ETH) Zurich and its two spin-offs Synhelion and Climeworks was intensified in the reporting year. In November 2021, a conference was held in Zurich with representatives of the management board of SWISS and the Lufthansa Group on further cooperation. SWISS signed a letter of intent expressing its interest in becoming the launch customer for Synhelion's solar aviation fuel. The pilot project will be supported by the CleanTech Hub, which was founded by the Lufthansa Group in 2021 and provided with financial resources to promote innovative projects in the field of sustainability.

In the reporting year, the Lufthansa Group became a launching customer for synthetic kerosene from the world's first industrial production facility for PtL fuel in Werlte. In collaboration with a major globally operating customer, Lufthansa Cargo made a commitment to purchase the equivalent of 20 tonnes per year – or about 25,000 litres – of PtL fuel for the next five years. The ability to scale this technology is of paramount importance to the aviation sector. The Lufthansa Group has also supported the Lausitz power-to-X centre of excellence since 2019 and participated as a founding member at the virtual founding event in March 2021.

“Green hydrogen” is vitally important for all synthetic fuels. This is why the Lufthansa Group is taking part in the HySupply initiative launched by the BDI as well as acatech. The aim is to develop a supply chain for green hydrogen from Australia.

The World Economic Forum (WEF) is also driving the market launch of SAF. The Lufthansa Group is a member of the WEF working group Clean Skies for Tomorrow.

As part of the EU's Green Deal and the “Fit for 55” package, a European legislative proposal (“ReFuelEU Aviation”) is being drafted for a progressively increasing SAF blending rate. The objective is to blend 2% SAF into aviation fuels at EU airports from 2025 and 5% SAF from 2030. Within the framework of this legislative proposal, the Lufthansa Group supports a special focus on PtL fuels and the maintenance of competitive neutrality vis-à-vis non-EU airlines. This position is also supported by non-governmental organisations such as Transport & Environment, with which a joint open letter was drafted.

Demand for SAF from corporate customers rose significantly in the reporting year. A major driver for this demand was the nearly 40 cargo flights between Frankfurt and Shanghai that Lufthansa Cargo operated for a customer and whose fuel requirements were completely substituted with SAF. The groundwork for this project was laid in the previous year so that the reduction in emissions associated with SAF use could be passed on to the customer in a targeted and clear manner. The Lufthansa Group has developed a proprietary process for this purpose, which, as part of emissions reporting in accordance with the Greenhouse Gas Protocol, allows Scope 1 emission reductions to be passed on as Scope 3 emission reductions to customers who are willing to pay the additional price for SAF. Emission reduction certificates that are certified by an independent auditor are issued to this end.

Since that time, the Lufthansa Group has been able to offer all customers SAF together with the corresponding reportable Scope 3 emission reductions. In order to safeguard the supply of SAF in the long term, the Lufthansa Group has developed a three-pronged strategy:

1. In the short term, up to USD 250m has been released for the procurement of SAF on the spot market by decision of the Executive Board.
2. In the medium term, options for long-term supply commitments are under consideration around the world. These offer significant production volumes and security of supply from around 2025 onwards.
3. In the long term, the CleanTech Hub established at the Lufthansa Group will provide support for innovative supply concepts with the goal of transforming today's start-ups and developers into tomorrow's suppliers.

2. IMPROVED INFRASTRUCTURE

Single European airspace should reduce emissions

The EU Commission's legislative proposal for the further development of European airspace (SES2+) is intended to help harmonise and optimise European air traffic management. This will be based on the results of the European Single European Sky ATM Research Program (SESAR), a programme that is developing, testing and introducing new technologies, procedures and standards throughout Europe.

The Lufthansa Group has supported SESAR for many years with the clear expectation that measurable operational improvements in air traffic management are implemented. The implementation of these technologies in daily operations is jointly coordinated by the members of the industry consortium SESAR Deployment Manager (SDM). The Lufthansa Group is a member of this consortium and provides local experts. Across Europe, the SDM coordinated 341 projects in the reporting year. The Lufthansa Group is currently participating in 17 of these projects, as in the previous year, and is also actively involved in SESAR research and demonstration projects with various airlines of the Lufthansa Group and Lufthansa Systems as an IT provider. The Lufthansa Group receives funding from the European Union for its active participation in SESAR implementation and demonstration projects. Findings that increase efficiency are implemented at an accelerated pace. In parallel, initial SESAR deployment projects are demonstrating savings in the area of improved flight efficiency through the introduction of the free route airspace concept in European member states. Within selected free route airspaces, air traffic control offers airlines more direct individual flight routes between defined entry and exit points, instead of the usual fixed routes.

Intermodal transport services to Lufthansa Group hubs are being expanded

The Lufthansa Group, in cooperation with the national railway companies (Deutsche Bahn, Österreichische Bundesbahnen and Schweizerische Bundesbahnen) and some bus operators in the home markets, offers a variety of other alternatives for travel to and from the hubs in addition to flights. These intermodal options are integrated into the Lufthansa Group's range of services via a flight number and are treated as largely equivalent to a flight in terms of the service package for the customer.

The joint services on offer are continuously being expanded and optimised. Three national destinations in each country are linked to the hubs in Vienna and Zurich by rail. Expanding the partnership with Deutsche Bahn enabled seven additional destinations to be added to the express rail network in 2021. Lufthansa German Airlines passengers can now book an Express Rail connection as an alternative to their flights on many domestic German destinations from Frankfurt. More than 220 daily connections to and from Frankfurt have been offered since the end of 2021.

To strengthen the appeal of intermodal travel, all intermodal partnerships have worked on making transfers between modes easier and faster for passengers. Since 2021, these measures have included, for example, simplified baggage check-in at the front door for SWISS passengers and priority access to security checks at Frankfurt Airport for Lufthansa Express guests. The Lufthansa Group advises its customers about the special features of the transfer from train to aircraft and vice versa before the journey. Specific announcements are also made on the train and in the aircraft to facilitate a smooth transfer.

3. OPERATIONAL MEASURES

Numerous projects to save fuel significantly reduce carbon emissions

The optimal use of the aircraft fleet to particular routes depending on demand on these routes is an ongoing task in every flight operation, and it leads to the optimisation of the overall passenger load factor of each flight.

In addition, in the financial year 2021, 22 fuel-saving projects were under way across the Group. These projects comprise activities relating to performance and procedures, weight reduction, flight route optimisation and technical developments.

This enabled another 30.4 thousand tonnes of CO₂ emissions to be permanently eliminated in the reporting year. The quantity of kerosene saved amounted to around 9.6 thousand tonnes – this is equivalent to approximately 113 return flights between Munich and New York with an Airbus A350-900 aircraft.

Three of these 22 fuel-saving projects are illustrated by way of example in the following section.

More efficient concepts for take-off and landing are being implemented and the digitalisation of approach technologies advanced

In 2021, Lufthansa German Airlines partnered with German air traffic control (DFS) to save approximately 2,800 tonnes of fuel, which translates into about 8,800 tonnes of CO₂, on approaches to its home bases in Frankfurt and Munich using the Efficient Flight Profile concept (EFP), which was introduced in 2020. This measure optimises lateral and vertical flight efficiency during periods of low traffic volume. Some of the measures can even be used at peak traffic volumes.

A new departure route introduced at Dusseldorf Airport in August 2020 based on satellite navigation technology reduced the fuel consumption of Eurowings aircraft by 11 tonnes in 2021 by shortening the departure route, which prevented 35 tonnes of CO₂ emissions. The Lufthansa Group is collaborating with DFS on various projects to introduce this technology at other airports in Germany as well.

The Lufthansa Group was able to generate additional savings through improvements in flight path planning, which lead to a reduction in the amount of fuel used in refuelling. The optimisation of planned flight paths for arrivals and departures reduced fuel consumption in Frankfurt and Munich by 560 tonnes (around 1,800 tonnes of CO₂) in 2021.

Jointly with DFS, the Lufthansa Group is seeking new possibilities for flight track analysis based on artificial intelligence methods as part of a research and development project. The first-time application of this innovative concept should allow for “greener flying” in the future through the development of new airspace structure measures. The first data analyses were carried out in 2021.

4. ECONOMIC INSTRUMENTS

Economic measures to protect the environment are vitally important as long as sustainable propulsion technologies are not in place and sustainable aircraft fuel is not available in sufficient quantities.

Mandatory offsets of CO₂ emissions

The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which was concluded with the International Civil Aviation Organization (ICAO) in October 2016, has offset growth-related CO₂ emissions in international air traffic by the purchase of certificates since 2021. CORSIA is designed to offset all residual emissions from the aviation sector that exceed the carbon emissions of the base year 2019, as defined by the ICAO. In 2021, which was the first year of the CORSIA pilot phase (2021 to 2023), the Lufthansa Group did not make any CO₂ compensation payments due to the decline in traffic caused by the crisis. Whether and how many CORSIA offsets will be required in 2022 and 2023 depends primarily on how fast air traffic recovers in the states participating in the CORSIA pilot phase.

The EU Emissions Trading Scheme (EU ETS) for air traffic has managed and limited CO₂ emissions by way of certificate trading since 2012. All flights carried out by the Lufthansa Group within the European Economic Area (EEA) are subject to this system. The emissions trading schemes of Switzerland (CH ETS, since January 2020) and the United Kingdom (UK ETS, since January 2021) for flights between the EEA and Switzerland and the United Kingdom impose additional obligations to surrender emission allowances.

The companies in the Lufthansa Group emitted some 3.97 million tonnes of CO₂ under EU ETS, CH ETS and UK ETS in the reporting year. In 2021, the Lufthansa Group expects national registry authorities (including the UK ETS) to allocate approximately 3.87 million emission certificates, corresponding to 3.87 million tonnes of CO₂ emissions, for its companies. For further information on the provisions recognised in connection with the obligation to submit CO₂ emissions certificates to the competent authorities, we refer to [🔗 Notes to the consolidated financial statements, Note 36, p. 208ff.](#)

The European Emissions Trading Scheme is currently being revised, and the Lufthansa Group is also involved in this process at the political level. The project aims to harmonise CORSIA and EU ETS in order to avoid double regulation.

Lufthansa Group voluntarily offsets its employees' business travel

As an additional contribution to protecting the climate, the Lufthansa Group itself has been offsetting the carbon emissions of all employees' business flights around the world since 2019. In 2021, 24,989 tonnes of CO₂ were offset via the climate protection organisation myclimate, with which the Lufthansa Group has been partnering since 2008.

Offsetting measures through economic instruments are to be considered independently of the options for voluntary offsetting by customers. In the reporting year, the Lufthansa Group simplified the process for customers to voluntarily offset their carbon emissions during the booking process and expanded existing programs with business customers.

[🔗 Customer concerns/Product and services, p. 112f.](#)

Other climate protection measures

CleanTech Hub seeks innovative approaches to climate protection

In November 2021, the Lufthansa Group launched the CleanTech Hub with the goal of bundling the latest technologies and advancing sustainable innovations for climate protection. The Lufthansa Group is specifically seeking technology-driven ideas and project partners that can contribute to sustainable aviation. Since November 2021, regular events (pitch days) have offered companies, start-ups and research institutes the opportunity to present their concepts and ideas. If a pitch is received well, the Lufthansa Group will work with the participants to further develop the concepts.

Early testing of the maintenance and ground processes of future generations of aircraft

In 2021, Lufthansa Technik initiated a project funded by the Hanseatic city of Hamburg, together with its partners from industry and research, in which extensive maintenance and ground processes in handling hydrogen technology will be designed and tested over the next two years. In 2022, an Airbus A320 will be converted into a fully functional stationary laboratory and equipped with a liquid hydrogen (LH2) infrastructure. In parallel to this, the German Aerospace Center is creating a new development platform that will provide impetus for the design process of the next generation of aircraft through high-precision virtual models.

In light of this, the main contribution Lufthansa Technik will make to the project will be its operational expertise in the maintenance and modification of commercial aircraft. The company can also incorporate the customer's perspective thanks to its close contacts to airlines around the world.

Lufthansa Group aircraft collect data for climate research

The Lufthansa Group has been involved in various research projects examining the atmosphere and the climate since 1994. Particularly within the framework of the European research infrastructure IAGOS (In-service Aircraft for a Global Observing System), the Lufthansa Group, in close collaboration with its research partners from the Karlsruhe Institute of Technology and the Jülich Research Centre, has equipped selected passenger aircraft with measuring instruments that collect information about the condition of the atmosphere on regular scheduled flights. In future, Lufthansa German Airlines' Airbus A350 "Erfurt" will serve as the new platform for the IAGOS-CARIBIC (Civil Aircraft for the Regular Investigation of the Atmosphere Based on an Instrument Container) measurement system. The conversion process began in March 2021. Additional conversion measures and approval are planned for 2022.

Since the beginning of the cooperation in 1994, data has been collected on more than 30,000 Lufthansa German Airlines flights. This data is freely and openly accessible for global research and is currently used by about 300 organisations worldwide. It helps scientists to acquire new knowledge about climate change and the composition of the atmosphere and to detect long-term changes.

With the key data collected by Lufthansa German Airlines' research aircraft at the beginning of the pandemic, scientists investigated the impact of the global lockdown on air quality and the climate. In a study published in 2021, IAGOS researchers found that the ozone concentration over Frankfurt rose by more than 30% in May 2020 compared with the long-term trend obtained from 27 IAGOS measurements. The researchers conclude that the reduction of ground-level nitrogen oxide sources (road traffic) during the lockdown in Frankfurt led to less ozone depletion than usual. The data also plays a crucial role in an ongoing international study on the impact of pandemic lockdowns on global air quality.

In 2021, the Lufthansa Group, in collaboration with the German Aerospace Center, the DFS, the German Meteorological Service (DWD) and Airbus (and others), has designed another research project on the feasibility of climate-optimised flight routes and applied for funding in the German Federal Aviation Research Programme. The project is designed to identify ways to prevent contrails, whose climate impact was quantified for the first time by major research institutes (such as Manchester Metropolitan University and the German Aerospace Center) in 2020. These findings will be used for further research into mitigation measures and for informing the political debate.

Performance indicator

Absolute CO₂ emissions rise to 13.7 million tonnes; specific CO₂ emissions per passenger-kilometre lower at 101.6 grammes

Absolute CO₂ emissions of Lufthansa Group aircraft in 2021 increased by 20% to 13.7 million tonnes (previous year: 11.4 million tonnes). CO₂ emissions per tonne-kilometre were reduced by 1% to 869 grammes (previous year: 880 grammes). Specific CO₂ emissions per passenger-kilometre were 3% lower than in the previous year at 101.6 grammes (previous year: 105.2 grammes). **↗ T001 Lufthansa Group performance indicators, p. 2.**

The decline in the Group fleet's specific consumption compared with the previous period was mainly due to changes in the route network and the resulting increase in average flight length. Longer flight segments have a better specific consumption because the energy-intensive take-off and landing account for a lower proportion of the total flight length.

ACTIVE NOISE ABATEMENT

Concept

Active noise abatement comprises five areas

Since 2001, the Lufthansa Group has played an active and continuous role in research projects and noise abatement activities organised by discussion forums. This intensive research and development work forms the basis of successful active noise abatement and makes a major contribution to optimising the existing fleet and flight operations. Active noise abatement measures at the Lufthansa Group cover the following five areas: investment in quieter aircraft, noise-reducing technologies for the existing fleet, participation in noise research, development of optimised flight procedures and routes, and dialogue with residents near airports and other interest groups.

Organisational foundations and responsibilities

The Lufthansa Group has a multi-airline expert committee under the direction of the Operations Support Lufthansa Airlines department, which meets regularly to discuss current operational and technical developments on the topic of active noise abatement and works with the Strategic System Partnership Management Group Airlines department. The committee is the central point of contact and stakeholder of the Chief Operations Officer department in relation to airports, air traffic control, handling agents, regulatory and political institutions (e.g. ministries) and industry associations. As the central coordinating unit within the Group on the issue of aircraft noise, it represents the Lufthansa Group in the committees of the Airport and Region Forum and supports the Lufthansa Group's participation in various aircraft noise commissions.

Targets

Aircraft noise to be reduced at source

The Lufthansa Group has numerous ongoing activities and measures intended to achieve a noticeable reduction in aircraft noise. The primary goal is to sustainably reduce aircraft noise at its source and to develop optimised flight procedures together with system partners. This is based on involvement in research and development projects where ideas for new noise abatement measures are tested. Measures are tested and implemented at various locations under the oversight of various noise protection committees and with the collaboration of Lufthansa Group experts.

Measures

1. INVESTMENTS IN MODERN AND THUS QUIETER AIRCRAFT

The best method of reducing aircraft noise at the source is the modernisation of the fleet. The Lufthansa Group modernises its fleet continuously. Aircraft that went into service in 2021, including Airbus A220-300s, A320neos, A321neos and Boeing 777Fs, have modern engines and are much quieter than comparable older aircraft types. ➔ [Fleet, p. 24ff.](#), and [Climate protection/Technological progress/Fleet renewal, p. 102.](#)

2. NOISE-REDUCING TECHNOLOGIES FOR THE EXISTING FLEET

In addition to modernising the fleet, retrofitting existing aircraft also results in measurable noise reduction. At the beginning of 2014, Lufthansa German Airlines became the first airline worldwide to start operations with a new Airbus A320 equipped with noise-reducing vortex generators, thus setting an industry standard. Aircraft with vortex generators are up to four decibels quieter on their approach, so the Company pays lower noise fees in Frankfurt than for comparable aircraft without these components. All aircraft in the A320 family at Lufthansa German Airlines and SWISS were retrofitted with vortex generators in 2015 and 2016.

One aircraft was retrofitted at Austrian Airlines in 2021 as planned. Due to the pandemic, the retrofitting of the expanded fleet of six A320 aircraft is still pending. Retrofitting Eurowings A320 aircraft that have not yet been equipped with vortex generators has been postponed due to the crisis and is scheduled to be completed by the start of the summer flight schedule in March 2023. The modification will be carried out in the course of routine technical maintenance cycles.

3. PARTICIPATION IN NOISE RESEARCH

For many years, the Lufthansa Group has been involved in noise research initiatives such as the one on increasing the efficiency of flight operations (EffFlug), which is funded by the German Federal Ministry for Economic Affairs. Working with experts from the German Aerospace Center, the Lufthansa Group is looking for noise sources that can be eliminated. Such a process was tested in 2019, in which noise measurements from airports were synchronised with the corresponding flight data from a Lufthansa German Airlines approach and then analysed for anomalies by flight noise experts from the German Aerospace Center. This process was further refined by the German Aerospace Center in 2021 and will be tested in 2022 on the basis of additional example cases.

Since 2019, the Low Noise Augmentation System (LNAS) developed by the German Aerospace Center has been tested in a broad study by the Lufthansa Group, in cooperation with the Environment and Neighbourhood House (UNH) in Frankfurt. The LNAS uses aircraft data to recommend optimal configuration and speed. The aim is to examine whether approaches can be made more efficient and quieter while observing safety regulations. A large number of pilots support the testing of the system on a voluntary basis. Due to the crisis, only 350 of the planned 500 LNAS approaches were made by the end of 2021, so the research period was extended to include 2022.

C30 ACTIVE NOISE ABATEMENT



Investments in quieter aircraft

Introduction of the latest aircraft, such as the Airbus A320neo and A350-900
 Retirement of older models

Noise-reducing technologies for the existing fleet

Retrofitting of noise-reducing vortex generators to the existing fleet

Participation in noise research

Continuous collaboration and exchange with partners from research and industry
 Development and analysis of new noise-reduction measures

Development of optimised flight procedures and flight routes

Cooperation with system partners
 Development and testing of new methods
 Use of new navigation technology

Dialogue with residents near airports and other stakeholders

Continuous exchange with residents, as in the Airport and Regional Forum
 Active participation to aircraft noise commissions

4. DEVELOPMENT OF OPTIMISED FLIGHT PROCEDURES AND FLIGHT ROUTES IN COOPERATION WITH SYSTEM PARTNERS

Optimising the vertical flight profile (flight procedures) and horizontal flight management (flight routes) contributes to reducing noise. The Lufthansa Group is active in this area in many ways, with German air traffic control as well as international partners. ➔ **Climate protection, p. 100ff.**

In the European project DREAMS within the framework of the development of a single sky, the Lufthansa Group, together with Eurocontrol, Airbus and other partners, tested steeper approaches with offset landing thresholds at Twente airfield. This is made possible by the new GBAS approach technology, which reduces approach noise because aircraft fly over the surrounding area at a higher altitude. Another sub-project the Lufthansa Group is participating in paved the way for the world's first test of precision approaches under low-visibility conditions and increased glide angles of up to 3.2 degrees in 2021. Tests scheduled for 2022 in Frankfurt will use GPS technology (called GBAS-CAT II) for approach guidance.

This modern satellite-based RNP navigation standard also permits more precise flying to reduce noise and CO₂ emissions. For example, Austrocontrol, Austrian Airlines and Lufthansa German Airlines have jointly developed an innovative RNP approach procedure for the Vienna site, with a shorter flight path. The new procedure was tested in the flight simulator at the end of 2021. In Stuttgart, planning and analyses for a new shortened RNP westbound departure route ("TEDGO" route) continued in the reporting year. Experts from the Lufthansa Group and Eurowings acted in an advisory capacity during the extensive dialogue in the committees. In 2021, the Lufthansa Group worked with German air traffic control to design and implement the trial operation of the segmented approach in Frankfurt. RNP technology is also used in this case.

5. DIALOGUE WITH RESIDENTS NEAR AIRPORTS AND OTHER INTEREST GROUPS

In addition to technical and operating improvements, the Lufthansa Group has been involved for many years in various dialogue forums with residents near airports, including in Frankfurt and Vienna. The experts from the Lufthansa Group contribute to the development of active noise abatement measures in the multilateral working groups. At Frankfurt Airport, Deutsche Lufthansa AG (representing the Lufthansa Group) participates in the Noise Abatement Alliance together with the Hesse state government, Fraport AG, the Airport and Region Forum, German Air Traffic Control and the airline association BARIG. The airline is an influential member of the Active Noise Abatement expert panel and its various sub-working groups. The focus of these activities is on optimising flight procedures.

The Lufthansa Group also works in some of the aircraft noise commissions (Fluglärmmmissionen) required in Germany by the Air Traffic Act (Luftverkehrsgesetz).

Performance indicator

99.6% of the operational Group fleet meet standard for aircraft noise

Improvements in noise abatement from modernising the operational Group fleet can be seen in the number of aircraft that meet or exceed the ten-decibel criterion set by the ICAO Chapter 4 standard. This standard defines noise limits and stipulates that all civil aircraft newly licensed after 2006 must cumulatively fulfil the older Chapter 3 noise limits by a margin of ten decibels or more. As of 30 October 2021 (end of the summer flight schedule), 99.6% of the aircraft – virtually the Group's entire operating fleet – fulfilled this criterion.

WASTE MANAGEMENT

Concept

Lufthansa Group airlines reduce single-use plastic and food waste in line with international guidelines

The Network Airlines and Eurowings are committed to the responsible use of resources and, in particular, to the reduction of single-use plastic and food waste. The concept for comprehensive waste reduction (identification, action planning and assessment) follows the waste hierarchy of EU Directive 2008/98/EC: Reduce – Reuse – Recycle – Replace.

The focus is on the reduction of single-use plastic waste in accordance with the EU Directive 2019/904 and in line with the expectations of customers. This has been pursued for the in-flight products of Lufthansa German Airlines, SWISS and Austrian Airlines since 2019. In addition to reducing single-use plastics, Network Airlines and Eurowings are also introducing measures to avoid in-flight food waste and are laying the groundwork for waste reduction before and after the flight. Due to airline-specific conditions, the relevant regulations, including certain national regulations, for handling catering waste must still be adhered to. Various players along the value chain, such as manufacturers, catering partners, cabin crew and waste disposal companies, are also involved to ensure the reduction of waste is efficient.

Organisational foundations and responsibilities

The program launched in 2019 by Lufthansa German Airlines, SWISS and Austrian Airlines to improve the sustainability of in-flight and lounge offerings was transferred to the Lufthansa Group's line organisations in 2021. This made the concept and the objectives as well as the measures for achieving them binding for Brussels Airlines, Eurowings Discover and Eurowings as well. The Corporate Responsibility department is tasked with anchoring the waste goals in the Lufthansa Group's environmental strategy.

The conception and planning of measures to achieve the objectives and the assessment of their effectiveness are the responsibility of Lufthansa Group product management as well as Network Airlines and Eurowings. Network Airlines and Eurowings use a decentralised approach to implement the measures.

Lufthansa Group product management also participates in the Sustainability and Environment Advisory Council and the Single Use Plastics working group of the industry association IATA. Experiences, challenges and knowledge are regularly discussed through participation in joint events.

Targets

Airlines focus on reducing single-use plastic waste

The Lufthansa Group airlines are committed to fostering the sustainable use of resources in-flight and in the lounges. In 2021, the Executive Board confirmed waste management as a focus area of the Lufthansa Group's ESG objectives. The in-flight and lounge waste reduction targets are currently being revised.

In light of EU Directive 2019/904 and passengers' expectations with regard to the reduction of single-use plastics, Network Airlines and Eurowings are focusing in particular on reducing single-use plastic waste in-flight in their short-term objectives. Lufthansa German Airlines, SWISS and Austrian Airlines identified 370 million used single-use plastic products in 2019. The pandemic prevented the goal of completely replacing or removing them with sustainable alternatives by 2021 from being achieved, so it was extended to 2025.

Measures

The Lufthansa Group continues measures to reduce in-flight single-use plastic waste

1. REDUCE

Lufthansa German Airlines, SWISS and Austrian Airlines changed the food and beverage selection on short-haul flights to purchase-only for Economy Class guests in the 2021 financial year. This has resulted in significantly fewer single-use plastic items being loaded. For example, SWISS has been able to significantly reduce the load of single-use plastic cups on a typical short-haul flight.

2. REUSE

Reusable products, particularly in in-flight products, are a firmly established element of product concepts. The potential for switching to reusable products is examined regularly when products are modified. The load is adjusted if necessary when considering available storage space on board, weight, service times during the flight, and the number of items required.

For example, SWISS implemented the switch to reusable cutlery and plates on short-haul flights for Economy Class guests in the reporting year.

Changes being made to processes for reloading unused items (such as sugar sachets, unopened snacks and unused amenity items) in cooperation with the catering partners were suspended at the beginning of the coronavirus pandemic and will be resumed after the pandemic.

3. RECYCLE

Processes for increasing the use of recyclable products are being developed and implemented in collaboration with suppliers, caterers, cleaning and disposal services.

For example, since the beginning of 2019, Austrian Airlines has been using single-use plastic cups that are recycled with other single-use packaging in a patented process that turns them back into synthetic crude oil. Up to 1 litre of crude oil can be extracted from 1 kilogram of single-use plastic collected.

Between September and October 2021, Lufthansa German Airlines conducted a field trial at the Frankfurt hub to transfer water bottles made of recycled PET that were left in the cabin to a closed cycle for reuse as water bottles in the food sector. This meant that around 5 tonnes of recycled PET were reused for refilling each month. The outcomes will be analysed and reviewed for whether the process can be adopted permanently.

In the standard process, all other beverage bottles that are collected on board by the cabin crew of Lufthansa German Airlines, SWISS and Austrian Airlines are then passed on by the catering partners in accordance with local regulations to be sent to the recycling system.

In preparation for a future recycling loop, cups made of recycled PET were introduced at Lufthansa German Airlines in 2021, which can be included in a recycling process as a result of special official approval given by German authorities. This will affect around 135 million cups per year.

When introducing new products, care is taken to ensure that unmixed recycling can be further increased. One example is the “Onboard Delights” beverage range introduced by Lufthansa German Airlines in spring 2021, which does not use beverage cans. Instead, the beverage bottles used are primarily made of recycled PET.

4. REPLACE

Lufthansa German Airlines promotes the development of new types of materials for in-flight use. Single-use plastic items that today are essential to the Network Airlines’ product and service concepts will be gradually replaced by those made from renewable resources (for example bamboo) or recycled raw materials (for example recycled PET). This approach has already been adopted for the plastic packaging for the children’s toys of Lufthansa German Airlines, SWISS and Austrian Airlines.

A significant share of the fresh food for Economy Class guests on short-haul flights will be offered in packaging made from agricultural waste material, which is produced with 100% renewable energy and is carbon-neutral, when Lufthansa German Airlines and SWISS restructure their food and beverage offerings.

Food covers were switched to recycled PET at Lufthansa German Airlines and Brussels Airlines in the reporting year.

Eurowings’ in-flight magazine has been made of 100% recycled paper since November 2021. The single-use plastic stirrers at Eurowings have also been replaced by wooden stirrers.

The Lufthansa Group launches measures to avoid in-flight food waste

By switching the food and beverage offering on short-haul flights for Economy Class guests to a purchase-only offering, Network Airlines can now use an algorithm to more accurately plan the loading of perishable products for individual flights based on sales figures. Since the introduction of the new concept in spring 2021, the share of discarded volumes in the amount of leftover perishable products had been reduced as follows by September 2021:

- Lufthansa German Airlines by 16 percentage points
- SWISS by 14 percentage points
- Austrian Airlines by 26 percentage points

In future, the option of pre-ordering meals will further optimise the volume of products loaded. The Lufthansa Group plans to introduce this service in 2022.

Measures to reduce in-flight food waste on the last flights of each day were also implemented in 2021. At Eurowings, for example, leftover food is offered at a reduced price, which reduces the amount of food that has to be disposed of. SWISS has tested a similar process. Its permanent introduction in 2022 is still being reviewed.

Methodology for the collection of waste is being developed

Lufthansa German Airlines, SWISS and Austrian Airlines plan to revise the systematic logging of in-flight waste in order to determine waste structures and weights based on the recommendations of the IATA Cabin Waste Manual. The possible use of waste data from the catering and cabin cleaning partners will also be reviewed.

At Lufthansa German Airlines, SWISS and Austrian Airlines, the goals of reducing single-use plastic and regular monitoring will be achieved with the help of article lists for benchmark flights, which will be filled with data from the inventory management systems and the loading lists for these flights. This should also enable an analysis using the categories Reduce, Reuse, Recycle and Replace.

Performance indicators

The reporting year marked the achievement of 71% of the goal of reducing the annual consumption of single-use plastic articles in the in-flight products of Lufthansa German Airlines, SWISS and Austrian Airlines by a total of 370 million single-use items, measured against consumption in 2019.

These 370 million single-use items consist of 144 million single-use plastic items that were required to be replaced by 3 July 2021 under the EU Directive, and 226 million additional single-use plastic items identified by airlines for voluntary replacement.

With the Europe-wide implementation of EU Directive 2019/904, the three airlines have already cut down 74% of the 144 million prohibited individual items. These items have been replaced with more sustainable alternatives (bamboo, wood, reusable). Remaining stocks resulting from the reduced flight schedule during the coronavirus pandemic are still being used in accordance with the law.

To date, 69% of the target of replacing the identified 226 million additional single-use plastic items has been achieved (based on the annual consumption in 2019).

Customer concerns



High customer satisfaction is a key success factor for the Lufthansa Group

Flight safety and the health of passengers always have top priority for the Lufthansa Group. In order to meet this elementary requirement, all airlines in the Lufthansa Group have a comprehensive safety management system. Every two years, independent auditors review the safety standards applied Group-wide in an IATA Operational Safety Audit (IOSA).

A clear focus on customers, operating stability, innovative products and services and a focus on quality are essential for a service provider like the Lufthansa Group. Particularly when dealing with the coronavirus pandemic, these topics are a priority more than ever because long-term customer relations require attentive customer services, straightforward, flexible processes and positive individual travel experiences. In the reporting year, they included measures to boost public trust in the safety of air travel with Lufthansa Group airlines during the coronavirus pandemic. The remaining effects of the pandemic, such as numerous changes to the flight schedule and flight cancellations, did not always allow the Lufthansa Group to meet its high standards of customer service in full. The exceptional situation in the volume of customer service cases resulted in some delays in processing requests for refunds, for instance.

Capital expenditure on a modern Group fleet and the continuous further development of the offerings – including in terms of sustainability and digital service – ensure that flying remains attractive for the customers of the Lufthansa Group, both during and after the coronavirus crisis. Regular surveys of passengers ensure that their needs are included in the development of innovative products and services.

Awards confirm the Lufthansa Group's innovation and quality strategy

Lufthansa German Airlines received several awards at the World Travel Awards in 2021. It was named Europe's leading airline in Economy Class, serving Asia and for its in-flight magazine. The airline also received the Hospitality Award for the best economy snack and the German Design Award for the best packaging design.

Eurowings received the Airline Punctuality Award as the world's most punctual airline for the high-traffic holiday months of July and August 2021. Eurowings was also awarded first place by the Deutsche Gesellschaft für Verbraucherstudien mbH (DtGV) at the German Customer Awards 20/21 in three categories: customer service, customer satisfaction and value for money.

THE LOFT by Brussels Airlines & Lexus at Brussels Airport was named Europe's Leading Airline Lounge 2021 at the renowned World Travel Awards for the third time in a row.

Data protection and data security play an increasingly important role

The secure handling of data in compliance with legislation forms the basis for a trust-based relationship with customers. The Lufthansa Group has a data protection management system that meets the requirements of the European General Data Protection Regulation (GDPR) in the Group companies. The Group has established an organisational structure for data protection that is dedicated to ensuring compliance with the rights of data subjects and the duties of controllers. This entailed creating easily reachable points of contact, both internally and externally, and establishing processes to fulfil information requests by data subjects within the required period, for example. Current information about the processing of personal data is also provided on the Group companies' websites. Measures are also in place for the comprehensive prevention of cyber risks, which have become more important due to the increasing digitalisation of business processes.

➤ **Opportunities and risk report, p. 76ff.**

OPERATIONAL STABILITY

Concept

Reliability and punctuality are key criteria for operating stability

A high level of reliability and punctuality ensures a smooth travel experience for customers. Within the Lufthansa Group, this is monitored continuously by management. In addition to daily reports from the hub control centres, operational performance is also discussed regularly at the Executive Board level.

In the reporting year, the passengers of Lufthansa Group airlines continued to be affected by changes in flight schedules, flight cancellations and delays due to the coronavirus crisis. Reasons included global travel restrictions, the demands of local authorities and required changes to operating processes to enable disinfection and social distancing.

Organisational foundations and responsibilities

The functional responsibility for operational stability lies with the Executive Board's Chief Operations Officer and directly with the airlines of the Lufthansa Group.

At the monthly Operations Board meetings, the Chief Operations Officers of all Lufthansa Group airlines, together with the responsible functional heads of flight operations, ground handling, safety and security, and technical fleet management, provide the Executive Board with regular information. They also discuss and approve the results of their analyses and measures to improve operational stability.

Interdisciplinary performance dialogues are also in place for Lufthansa Group airlines' operational processes in order to discuss current performance and improvement measures.

Targets

To guarantee safe, punctual and reliable flight operations

Operational stability is a prerequisite for high customer satisfaction. The top priority for all Lufthansa Group airlines is safe, punctual and reliable flight operations. Since this cannot be guaranteed by the airlines in the Lufthansa Group alone, work on solutions for further improvements in operational stability is carried out jointly with system partners. This cooperation focused in particular in preparation for the higher-demand summer operations in 2021.

Measures

Numerous measures to ensure operational stability and improve the customer experience

In the reporting year, a special focus was on the structured relaunch of flight operations at the Lufthansa Group within the framework of the Group-wide, interdisciplinary ReStart programme. The programme comprised the recommissioning of almost 500 temporarily grounded aircraft, flexibly updating the flight schedule and making adjustments to necessary processes, such as document checks. The ReStart phase was largely completed by the end of the year. Ongoing issues are further addressed in the line functions. In addition to improving the in-flight customer experience, customer processes on the ground are also a key priority. Processes for verifying documents required by the pandemic, such as vaccination and test certificates, will be continually automated in accordance with valid local, national and international regulations, which should lead to an increase in operational stability.

Wide-ranging initiatives launched with system partners

Together with system partners such as airport operators and German air traffic control, the Lufthansa Group airlines are working hard on solutions to ensure that the demands made by the coronavirus pandemic of security checks or in the observance of minimum social distancing are met throughout the entire travel process. For example, in regular joint events with the major German airports, summer operations in 2021 were prepared based on capacity planning.

Performance indicator

Departure punctuality at Lufthansa Group airlines below target but better than pre-crisis level

The main performance indicator for judging operational stability is the airlines' departure punctuality. As is common internationally, all flights taxiing to the runway no later than 15 minutes after the planned departure time are defined as punctual. The departure punctuality target for the passenger airlines in the Lufthansa Group is 85% and was not achieved in the reporting year.

The annual average departure punctuality was 81.3%, which is 5.3 percentage points above the pre-crisis year 2019 and still 7.3 percentage points below the previous year. The improvement compared with the pre-crisis year can be attributed, among other things, to the continued lower volume of flights, which resulted in the decongestion of the air traffic control system. Modifications to ground processes as a result of the pandemic, significant fluctuations in passenger load factors and staff shortages in the ground services provided by system partners did have an adverse effect on departure punctuality, however.

PRODUCT AND SERVICES

Concept

Product and service development focuses on customer needs

Focus on the customer is an essential factor in the success of a service company like the Lufthansa Group. For this reason, regular customer surveys are used to continuously review all products and services along the travel chain to measure their concrete benefit to the customer. Questions cover improvements to seats, sustainability topics and new in-flight and ground products and services. Digitalisation, individualisation and sustainability aspects play an increasingly important role in better meeting differentiated customer needs. The travel experience for passengers should become even more convenient, especially through greater personalisation of the products and services along the entire travel chain. This includes, in particular, personalised information for the customer and the flexibility to rebook flights and rules on goodwill gestures introduced as a result of the coronavirus pandemic.

Findings from timely customer involvement form the basis for strategic decisions

Passengers are involved at the early conceptual phase of product and service design and development, as with the development of new seating concepts or meals, for instance. The Lufthansa Group's online customer panel makes it possible to receive feedback on specific questions very quickly and to gain a better understanding of passenger expectations and requirements.

The Network Airlines in the Lufthansa Group track customer satisfaction continually using Passenger Satisfaction Tracking (PST) and in-depth surveys to obtain information about the travel experience of their passengers that is as granular as possible. Customer satisfaction data is tracked separately for different service aspects along the entire travel chain. The results are made available to the responsible department and management on a monthly basis and are used to derive measures, among other things. To reflect dynamic changes in customer expectations especially during the pandemic, customer feedback has been factored into service adjustments at a higher frequency than before.

Organisational foundations and responsibilities

Responsibility for products and services for Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines is pooled centrally and reports are addressed to the Executive Board's Chief Customer Officer. Each airline has a person in charge with the same portfolio of responsibilities.

The Executive Board's Chief Customer Officer also has functional responsibility for the brand management of Eurowings. Responsibility for implementing the in-flight and ground products lies with the Executive Board's Chief Customer Officer.

Representatives from both Executive Board functions meet regularly in the Customer Commercial Board to discuss and make decisions on customer-oriented topics and on an annual basis regarding the product project portfolio.

Targets

Raising customer satisfaction is an integral part of Group strategy

Customer needs play a vital role for ensuring the long-term success and profitability of the Lufthansa Group. The customer strategy for all airlines in the Lufthansa Group has the objective of increasing customer satisfaction. Understanding and meeting the individual needs of customers along the entire travel chain is a prerequisite for this. The Net Promoter

Score (NPS), which is derived from the passenger's willingness to recommend, is used to measure performance. A target of 60 is set for the NPS for the Network Airlines and 45 for Eurowings.

Measures

Customer value will be implemented as a customer satisfaction metric

In future, twelve selected customer KPIs, for example on the topic of sustainable travel, will constitute customer value. Follow-up measures are to be developed by year-end 2022 on the basis of these findings. In a second step, they will be analysed to gain a better understanding of the customer and identify the customers' greatest "pain points", i.e. what annoys them most. Another example is the "Smart Dialogue and Communication", which measures customer satisfaction with communication with the Lufthansa Group and indicates potential for improvement.

Range of measures implemented for a smooth customer experience during the pandemic

Aviation is one of the sectors worst affected by the coronavirus pandemic. This makes it all the more important to reinforce trust in flying as a safe means of travel. Since the beginning of the coronavirus pandemic, comprehensive hygiene and safety measures have been developed on the ground and in-flight, and continued compliance and development of these measures is being ensured. Key standards were developed jointly by the airlines and central product management. These include the obligatory wearing of face masks, which was initiated early on; the filtering of cabin air and increased ventilation of aircraft, including on the ground; working towards digital track-and-trace procedures; and physical distancing, both on the ground and during boarding/disembarking. Customer feedback was continuously collected and evaluated during this process.

The availability and presentation of travel information has also been continuously improved and developed. Dedicated web pages, for example, allow passengers to search for user-specific travel policies for their departures and destinations and to see which travel restrictions apply. Enhanced service measures make travelling under pandemic conditions even easier. Extensive control measures required as a result of the pandemic have been introduced to improve customer satisfaction with punctuality. These measures include, for example, the implementation of the Health & Entry Support Centers for digital document verification in April 2021, online check-in and travel information (information on flight changes and updates on entry requirements for the flight), and the drive-through test centre located directly at Frankfurt Airport since June 2021. Passengers making use of these pre-screenings can move quickly and conveniently through the airport security checks.

Lufthansa German Airlines, SWISS, Austrian Airlines and Eurowings have offered optional additional insurance services for flight bookings since November 2020. If they take out insurance, passengers receive compensation in the event of a coronavirus infection if they are required to quarantine at their destination, and are also covered in the event of illness, necessary treatment or emergency medical repatriation. Lufthansa German Airlines, SWISS and Austrian Airlines have also offered the purchase and reservation of coronavirus tests for selected destinations via their web portals since May 2021.

The measures and restrictions introduced are regularly reassessed according to the course of the pandemic. A number of lounges and the First Class Terminal in Frankfurt have been reopened, the limousine service has been restarted in some cases, and in-flight services have been customised and expanded.

Against the background of the pandemic, the Network Airlines in the Lufthansa Group have adjusted their fare structure in order to offer passengers more flexibility. All tickets with Lufthansa German Airlines, SWISS, Austrian Airlines and Brussels Airlines can be rebooked as often as needed. This applies worldwide for bookings on short-, medium- and long-haul routes in all booking classes.

New products and services continuously improve the travel experience

The Lufthansa Group invests continuously in new aircraft, products and services to keep improving the travel experience for its passengers. For instance, from 2023 Lufthansa German Airlines plans to introduce a completely new Business Class featuring optimal sleeping comfort and more private space, along with more individual seating options for passengers.

The digitalisation and innovation initiatives already under way were pursued further by the Lufthansa Group in the reporting year in order to develop new products and services. At the Lufthansa Innovation Hub, the Company drives the systematic use of the innovative online business model for the airlines in the Lufthansa Group and develops digital solutions along the travel chain for passengers and tour operators. The aim is to provide passengers with intuitive services right where they want them: from check-in and digital luggage receipts to dynamic and situation-based information and service offers and biometric services.

As a pilot initiative, one SWISS Airbus A320 has been equipped with EAN (European Aviation Network) broadband internet technology since the summer of 2021 to improve the connectivity of passengers in-flight and to allow them to use instant messaging. In 2021, customers benefited from enhanced usability thanks to the roll-out of new operating software, including the new FlyNet Portal, on the Airbus A320 aircraft, which are equipped with broadband Internet access by Lufthansa German Airlines and Austrian Airlines.

The self-compensation tool developed by Eurowings enables passengers to automatically check possible claims for compensation in cases of delays and cancellations, independently and without a service hotline, and to apply for compensation if appropriate.

Customer-facing employees made aware of customer satisfaction

Cabin crew at Lufthansa German Airlines were again provided with awareness training in the area of customer orientation in 2021. This was embedded in both voluntary, digital events and mandatory training courses. Employees in Customer Service were trained mainly through virtual workshops on the topic of customer feedback handling.

Dynamic development of refund requests continues

Travel restrictions and warnings continued to change in 2021, resulting in a high level of refund obligations due to necessary changes in flight schedules and flight cancellations. The Group has succeeded in keeping backlogs low by introducing automation measures and increasing staffing levels. Particularly in the second half-year, it reduced the average processing time for refunds to pre-crisis levels, so there was no backlog of refunds at year-end 2021. However, following the extreme congestion and delays in 2020, there were also a high number of complaints, increasing inspections by the regulatory authorities and the processing and clarification of some complex individual cases in 2021. The airlines in the Lufthansa Group refunded customers around EUR 1.6bn in 2021.

Increasing demand for sustainable products and services

The Lufthansa Group is responding in various ways to customers' wishes as expressed in surveys for sustainability aspects to play a greater role in products and services. The focus is on sustainable catering, intermodal travel and easy access to carbon offsets for the flight.

Demand-oriented catering and responsible product selection are being expanded

Customers consider the reduction of single-use plastics in-flight, cooperation with sustainable partners and the regional origin of the products offered to play an important role. Since May 2021, Network Airlines has offered a new in-flight food and beverage service for purchase that focuses on quality and sustainability: The goal is to minimise waste through more demand-oriented production and smart load planning as well as responsible cooperation with selected partners (➤ **Environmental concerns/Waste management, p. 108ff.**). In cooperation with one of the best-known German coffee brands, one of the products Lufthansa German Airlines offers is a coffee from the Dano region in Ethiopia, where this partner is economically, socially and ecologically committed.

On Austrian Airlines flights, for example, passengers are offered water from a Lower Austrian brand whose products are 100% carbon-neutral. SWISS is committed to using regional ingredients with short supply chains and cooperates with partners such as a Geneva cooperative that processes agricultural residues for its tomato juice to avoid food waste.

Intermodal services offer sustainable alternative forms of travel to the hubs of the Lufthansa Group

To strengthen the appeal of intermodal travel, all intermodal partnerships have worked on optimising processes and especially on making transfers between modes easier and faster for passengers.

The Lufthansa Group, in cooperation with the national railway companies and some bus operators in the home markets, also offers a variety of other options for travel to and from the hubs in addition to flights. These intermodal options are integrated into the Lufthansa Group's range of services via a flight number and are treated as largely equivalent to a flight in terms of the service package for the customer. ➤ **Environmental concerns/Intermodal transport, p. 104.**

Voluntary offsetting or reduction of CO₂ emissions

The Lufthansa Group enables its passengers to voluntarily offset or reduce the carbon emissions generated by their flights. The Lufthansa Group has partnered with the well-known carbon offset provider myclimate and with Climate Austria for Austria for more than ten years. Business customers also have the option of automatically offsetting the emissions of flights within Europe and within Germany via myclimate using the Corporate Value Fares programme. Private customers of the Lufthansa Group have the option of offsetting or reducing their emissions through the Compensaid platform.

Carbon emissions generated by flights can also be offset by purchasing sustainable fuels (SAF), in addition to offsetting through a portfolio of high-quality carbon offset projects from myclimate. Passengers are free to combine these two options in any transaction. The Lufthansa Group only uses certificates for its carbon offsets that meet the highest quality standards (CDM Gold Standard and Plan Vivo). Austrian Airlines and its partner Climate Austria also use some of the funds for national offset projects that have been certified by the Austrian Environment Ministry.

By directly engaging customers with easy access to climate protection measures, the Lufthansa Group encourages the transformation of the industry and is striving to increase the level of participation among its passengers. The integration of a direct link to the Compensaid compensation platform in the flight booking process of all Lufthansa Group airlines was completed for private customers in 2021. As of the start of 2022, Eurowings plans to fully integrate the Compensaid platform into the booking process, which will allow customers to offset their emissions directly. This new functionality is also being developed in parallel at the Network Airlines for introduction in 2022.

The principle of reducing the carbon impact for individual air transport services was transferred to the Logistics business segment in 2021. Lufthansa Cargo customers can offset individual shipments through climate projects with the Sustainable Choices product, or reduce CO₂ emissions in combination with SAF.

Performance indicator

Net Promoter Score below target

The leading indicator of customer satisfaction at the Network Airlines and at Eurowings is the Net Promoter Score (NPS), which is based on the monthly analysis of around 17,000 passengers (average in 2021). In 2021, the NPS was 49 for the Network Airlines, which was below the target of 60. This is due to the steep increase in flight operations and corresponding passenger numbers, particularly from the second quarter of 2021. Combined with mandatory measures resulting from the pandemic, such as extensive document checks, this had an adverse effect on processes and punctuality and so on customer satisfaction. The NPS at Eurowings was 47 in 2021, above the target of 45.

The NPS is a component of the target agreement and the variable remuneration of the Executive Board. ➤ **Remuneration report, p. 271ff.**

Employee concerns



Employees are a company's most important asset. Employees are one of the most important factors for success, especially in this phase of significant expansion of business activities after the crisis-related downturn and the transformation of the Lufthansa Group. Employee concerns are thus a central focus of the Lufthansa Group's personnel strategy.

During the ongoing coronavirus pandemic, the Lufthansa Group is positioning itself as an attractive and modern employer. On the one hand, this is to strengthen employee loyalty and, on the other hand, to be perceived as an employer that is able to attract talent from outside the Company.

Changes within the aviation sector and structural transformations in today's working world have a direct impact on the employees of the Lufthansa Group. These developments demonstrate clearly that the continuous development of employee skills and knowledge is essential for economic success. The Lufthansa Group makes use of extensive training and continuing education opportunities to ensure the Company's ability to transform itself in the future.

Employee health and occupational safety also continue to be key areas of action for the Lufthansa Group, especially against the backdrop of the ongoing coronavirus pandemic. The Lufthansa Group uses preventive measures and takes a holistic approach to maintaining its employees' constant, long-term ability to work.

In addition, the Lufthansa Group promotes the strengthening of diversity and equal opportunities for employees in its strategic orientation in order to further promote creativity, flexibility and the ability to innovate and to minimize legal liability risks. Various initiatives, such as increasing the quota of women in management and the long-established organisational foundation of the equal opportunities commissioner, are used to promote gender equality and to position the Company as an employer with integrity and responsibility.

Organisational foundations and responsibilities

Employee concerns are bundled in the various specialist areas within the Executive Board function of the Chief HR & Legal Officer. Close cooperation among all departments facilitates the development of sustainable measures to improve action relating to employee concerns. At the same time, the Chief HR & Legal Officer is responsible for ensuring that the measures developed are implemented in all departments and within the subsidiaries through the HR Committee, which comprises the function's top HR senior executives and the Chief Human Resources Officers of the Lufthansa Group's largest companies. The implementation of the measures can be continuously monitored through direct reporting channels within the Executive Board function.

ATTRACTIVENESS AS AN EMPLOYER

Concept

Being an attractive employer is highly relevant for the Lufthansa Group

The success of the Lufthansa Group depends largely on the competence, the enthusiasm, the commitment and the ideas of its employees. At a time when the flight programme is significantly reduced due to the pandemic, it is particularly important to keep employee morale high, to have an underlying personnel strategy, and to take steps to ensure the Company remains an attractive employer. This is particularly important for employees who were on short-time work in 2021. The willingness of these employees to work is a decisive factor in the economic recovery at a time during which business activities have resumed at a higher level. Various initiatives were also carried out to enable successful reintegration of employees after short-time work. The criteria for qualifying as an attractive employer have changed fundamentally in the current situation and are particularly relevant for existing staff. Employee retention and attractiveness measures will be further developed to ensure that employee loyalty is maintained during reduced business operations and scaled-down flight programme in 2021. At the same time, the needs of the workforce are very different, since the Group comprises more than 172 nationalities.

Unrestricted freedom of association is an established feature of the Lufthansa Group

The Lufthansa Group has a long tradition of working with its labour union partners in the works councils and trade unions, as well as in the Supervisory Board with its co-determination rules. This practice is aimed at acting collectively based on mutual interests. The joint search for solutions in the interest of the companies involved and their employees is based on an understanding of how valuable freedom of association is, forming part of the corporate culture as well as being enshrined in the German constitution.

Working and employment conditions for employees and managers are flexible and are adapted continually

The Lufthansa Group has helped its employees to work flexibly for many years, both in terms of when and where they work. When personal interactions, including those at work, had to be reduced to a minimum as a result of the coronavirus outbreak, this was achieved very rapidly thanks to the existing framework for remote work and the near ubiquity of mobile computing devices.

Flexible working time models have been an important element in the Lufthansa Group for many years in supporting as well as possible the balance between work and family life. Job adverts, also for management positions, offer the opportunity of part-time work and shared leadership. This means that someone has the opportunity to share a management position with another manager who also works part time. In addition, managers and non-payscale employees can take sabbaticals.

Organisational foundations and responsibilities

The overall topic of employer attractiveness is primarily the responsibility of the two areas of HR Policies, Services & Digitalisation and HR Management Executives, Leadership and Cultural Development. Both areas report directly to the Chief HR & Legal Officer and are responsible for maintaining and further strengthening the Lufthansa Group's position as an attractive employer. Within the areas, the topics Compensation and Benefits, Employer Branding, Talent Management and Human Resources Marketing, which have a significant influence on employer attractiveness, are foundational.

Targets

Lufthansa Group strives to become more attractive as an employer

Attractiveness as an employer is considered from both an internal and an external perspective. In view of the widespread recruitment freeze due to the difficult economic situation, the perception of existing employees is mainly relevant for the reporting year. It is precisely in the context of the coronavirus pandemic that the employees in the Lufthansa Group make a decisive contribution to the satisfaction of passengers and thus to the success of the Company. Employees, some of whom are still on short-time work, also have to be motivated to resume their commitment to the Company once short-time work comes to an end. This is vital to ensure a rapid and high-quality resumption of business operations. One important goal is therefore to increase the motivation of existing employees and improve the internal employer attractiveness at the same time. In addition, the Lufthansa Group aims to establish itself again as an attractive national and international employer.

Measures

Information and transparency for the workforce

Since the beginning of the coronavirus pandemic, the Executive Board of the Lufthansa Group has continuously kept the entire workforce up to date on current developments by means of webcasts and podcasts. The Board members and managing directors of the individual subsidiaries have also held regular live online meetings with their workforces, with questions from employees expressly encouraged. In line with applicable health rules, the first employee information events have again been offered in hybrid form (mix of face-to-face and webcast) since autumn 2021. The latest developments and background information were made available to the entire workforce in German and English via the very popular intranet and a news app that can also be used on private devices. The purpose of this is to provide employees with continuous and transparent information about current developments and goals, and to promote loyalty to the Company, especially in times of working from home and short-time work.

Managers were also asked to stay in permanent contact with their staff, regardless of whether they were working from home or on short-time work, in order to identify personal needs and concerns and respond to them. The managers were also able to download specific daily information on their mobile devices using a special app for managers.

Various groups were set up on Yammer, an enterprise social network platform with exclusive access for Lufthansa Group employees, in order to stay in touch when working from home or to share information about different topics in the context of short-time work. These include initiatives to coordinate the social engagement of employees on short-time work. Over 60,000 employees in the Lufthansa Group have access to the platform.

Salary cuts and redundancies should be arranged in a socially responsible way

The Lufthansa Group uses additional payments to reduce the net salary losses for its employees who are on short-time work.

In Germany the reduction of 10,000 positions compared with the headcount at year-end 2020 has either already taken place, or is contractually agreed for the years 2022 and thereafter. This includes departures for age reasons. New recruitment at Eurowings and Eurowings Discover is not included. Outside Germany too, all the job reduction targets in the “ReNew” restructuring programme were met by year-end 2021. The successful implementation of structural measures depends heavily on effective cooperation between employers, the collective bargaining partners and co-determination within the Company. In particular, intensive discussions on these subjects are held with trade unions and works councils on an ongoing basis. Crisis agreements have been concluded with the trade unions for the years 2020 and 2021 and in some cases beyond that. Various initiatives such as the voluntary programme “now!”, which offers employees of Deutsche Lufthansa AG benefits such as professional reorientation outside the Lufthansa Group, made a major contribution to the socially responsible reduction of jobs in the reporting year. Various offers could be made within this programme to accommodate the individual needs of employees who are close to retirement and those who are not. Approximately 4,500 employees (1,800 ground staff, 400 cockpit staff and 900 cabin crew at Deutsche Lufthansa AG and 1,400 employees at Lufthansa Technik AG) had decided to leave the Group in the context of voluntary redundancy programmes as of the reporting date 31 December 2021. 800 employees of the Lufthansa Group left in the course of the reporting year.

Uniform performance and potential assessment ensures the retention of talent

To ensure that employees have the opportunity to shape their career within the Group in line with their individual talents and interests, there is a standard process for identifying top performance and high potential for most of the administrative staff. This was not completed in 2021 for the assessment year 2020 in many companies because of short-time work. However, starting from 2022, the process for identifying top

performance and high potential for the majority of administrative employees and for senior executives will return to a fully regular schedule. A structured talent retention programme has been established to avoid losing this talent. These employees receive close support and are involved in various special projects, even during the pandemic.

Even though the internal reorganisation within the Group and the associated reduction of positions meant it was difficult to maintain staff development by means of job rotation, promotions, or specific support for female managers during the reporting year, talented employees were approached individually to work on projects related to the crisis and to develop their skills on the job. These programmes – especially the apprenticeship and trainee programmes – will be reactivated as the economy continues to recover.

Performance indicators

Engagement Index is down – dedication is up

The Engagement Index also provides information about the Company’s attractiveness as an employer. This has been tracked by the voluntary annual employee survey, “involve me!” since 2015, and enables a comparison with employers in many different sectors. It measures the extent to which employees identify with the Company, as well as their commitment and willingness to recommend the Company to others. The survey was carried out again in 2021, despite and also because of the coronavirus pandemic. With the exception of the LSG group, all major Group companies were included. Whereas the scope of the employee survey was reduced in the previous year, the 2021 survey was detailed and comprehensive. This alternation between comprehensive and shorter surveys corresponds to past practice.

The results are measured on a scale from 1 (best) to 5 (worst). In the reporting year, the Engagement Index value was 2.3 and decreased by 0.3 compared with the previous year’s value of 2.0. The decline is being driven by redundancies, restructuring and the cost-cutting measures required to maintain competitiveness. However, the survey showed that employees’ willingness to work increased compared with 2020.

The results of the employee survey are presented to the Supervisory Board and the Executive Board, where they are discussed in workshops. As a rule, these results affect the targets and the remuneration of the Executive Board. The senior executives of the Lufthansa Group and the business segments will use the results of the survey as a basis for deriving measures together with their teams with the aim of improving the Engagement Index.

Labour union partners are firmly established at the Lufthansa Group

For the Lufthansa Group, it goes without saying that no one suffers any positive or negative discrimination because they are a member of a trade union or not. The Lufthansa Group enables all employees to join or form a trade union. Of 60,517 Lufthansa Group employees in Germany (as of 31 December 2021), some 83% benefit directly from collective bargaining arrangements. The remaining 17% are largely managers and non-payscale employees in senior positions. However, many of the rules for these non-payscale employees are also based on the collective bargaining agreements.

Employer ranking reflects Lufthansa Group companies' attractiveness

To position itself as an employer that attracts new talents, the Lufthansa Group places particular emphasis on the opinions of young people in its employer rankings. In the 2021 reporting year, Deutsche Lufthansa ranked 13th among economics students in the Trendence Institute Ranking and 9th in the Universum Global Ranking (previous year: 6th and 7th). In engineering, the Company ranked 13th and 10th (previous year: 11th and 9th). In view of the significant economic challenges that the air transport industry is facing, the Lufthansa Group nevertheless considers this result to be satisfactory.

DIVERSITY AND EQUAL OPPORTUNITIES

Concept

Diversity and equal opportunities are key elements of the HR strategy

Diversity and equal opportunities make an organisation more flexible and creative, and it also emphasises the respect it shows for all employees. These are central elements of the Lufthansa Group's strategic personnel orientation. They are indispensable for the Group's global and cross-generational positioning as an employer that acts responsibly and with integrity – today and in the future. This fulfils both legal requirements and creates the basic conditions for the Group to remain innovative and capable of change.

The Lufthansa Group supports work-life balance

The Lufthansa Group uses a broad portfolio of activities to make it easier for employees to combine work and family and to care for loved ones. At the Frankfurt and Munich locations,

for example, the Lufthansa Group offers Company-subsidised childcare to support employees with children under the age of three. Throughout Germany, employees have access to a family service portal where they can search for day-care centres in the vicinity and find information about other forms of childcare from the cooperation partners of the Company. In Germany, this includes help in finding carers, ad hoc and regular daycare places for children, and the use of parent-and-child offices if a need arises. Caregivers also have a wide range of counselling options, such as lectures and webinars, as well as free telephone counselling sessions.

Inclusion of people with disabilities is part of social responsibility

For the Lufthansa Group, employment and inclusion of people with disabilities is not only a legal obligation, it also fulfils a social responsibility. This is why the Group is committed to treating people with disabilities fairly and considerately. Providing targeted support for their professional development is a matter of course for the management boards, Human Resources management and representatives of disabled employees, who meet regularly to discuss further steps to include people with disabilities. Other ways of supporting them are also advanced, such as placing orders with workshops for disabled people, and the partnership with the National Paralympic Committee Germany.

Organisational foundations and responsibilities

The HR Policies, Governance and Legal department is responsible for managing legal issues associated with the topic of diversity and equal opportunity as well as the Group's political and strategic positioning. This includes such aspects as mandatory training and the establishment of binding governance for human resources departments. These issues are also continuously developed by the equal opportunities commissioner, who is assigned to this area. In particular, the focus is on gender equality, work-life balance and promoting a working environment that is free of discrimination.

The HR Management Executives, Leadership & Cultural Development department is responsible for operational implementation with regard to the development of the corporate culture. Both departments report directly to the Chief HR & Legal Officer.

Targets

The Lufthansa Group positions itself as a company of integrity

The Lufthansa Group addresses diversity and equal opportunities using a variety of approaches. The revised German Act on Equal Participation of Men and Women in Executive Positions in the Public and Private Sectors (FüPoG II) stipulates that when the executive board of a listed company subject to co-determination has more than three members, at least one must be a woman and at least one must be a man. Deutsche Lufthansa AG meets this requirement. To comply with the FüPoG in 2016, Deutsche Lufthansa AG also set the following targets for women managers below the level of the Executive Board as of 31 December 2021: 20% at management level 1 and 30% at management level 2. At the end of the target period, the Executive Board again set targets for the proportion of women at the two management levels below the Executive Board of Deutsche Lufthansa AG. They are 25.7% for the first management level and 30.6% for the second management level. The deadline for achieving the new targets was set for 31 December 2025.

In addition to the statutory targets for Deutsche Lufthansa AG, the Lufthansa Group has set another target on a voluntary basis. By 2025, the Lufthansa Group aims to increase the proportion of women managers to 25% (as of 31 December 2021: 18.7%). Management refers here to the managers at Leadership Circle level.

In addition to the general fulfilment of legal requirements, the Lufthansa Group strives to tap the full potential of all employees, particularly by positioning the Lufthansa Group as an employer that acts with integrity and responsibility. This effort includes minimising liability risks and strengthening the zero-tolerance policy within a work environment that is free of discrimination and harassment.

Measures

Gender equality is promoted by a wide range of measures

The Lufthansa Group introduced gender-neutral language throughout the Group in June 2021 to take all genders into account in both internal and external communication. Various supporting measures had already been put in place in the run-up to this. Group Communications, in cooperation with the equal opportunities commissioner, held several internal informational events on the new guidelines and the correct

use of gender-neutral language. A dedicated email address for questions about the application of gender-neutral language has been set up, and employees can find additional tools via an intranet page, in addition to general information and background information. For example, this includes a glossary of everyday business terms and their gender-neutral alternatives, as well as a continuously updated FAQs.

Even at a time of crisis, endeavours continued to achieve greater awareness and sensitivity towards this whole subject. In the context of cooperation with public, cross-divisional agencies, Deutsche Lufthansa AG was also selected by the German Federal Anti-Discrimination Agency as a best practice example for the issue of Sexual Harassment.

Proportion of women in management positions shall be increased

Within the Executive Board project “Female Leadership Boost”, the Lufthansa Group has set itself the task of sustainably establishing the topic of gender diversity in its leadership culture. The project includes awareness training for all senior executives of the Lufthansa Group as well as a broad portfolio of individual development measures for talented women, in addition to a fixed percentage of women on shortlists for management positions.

Support for LGBTI concerns

The LGBTI employee network “Diversify” (LGBTI = lesbian, gay, bisexual, transgender, intersex) acts as a contact and mediator to foster a working environment that is free of discrimination and where all employees can develop their talents, regardless of their sexual orientation, identity or origin. This network also actively advocates for the interests of the community and promotes the development and implementation of policies and guidelines to prevent discrimination. It also encourages internal and external exchanges of experience and provides advice on new business ideas and projects relating to the LGBTI target group. In addition to social media campaigns on IDAHOBIT (International Day Against Homophobia, Biphobia, Interphobia and Transphobia) under the hashtag #QUEERatWORK and on Christopher Street Day, in-house and external online lectures and panel discussions on the topic of LGBTI and sexual orientation were organised with the participation of invited representatives from business and politics. The rainbow flag was hoisted in front of the Group headquarters in Frankfurt and at Munich Airport from May to July 2021 as a sign of the Lufthansa Group’s support. An in-house fundraising campaign was also held in December in support of the German AIDS Foundation.

Establishing new business networks to give diversity a personal touch

The coronavirus pandemic has shown that staying connected and sharing personal experiences has a significant impact on our day-to-day well-being. Many new initiatives and employee networks have been established within the Lufthansa Group during this time in support of the goals of diversity and equal opportunity. Examples include the #CourageUp network, which focuses on minimizing discrimination in the workplace on the basis of ethnic origin, and Lufthansa Technik's Female Network. The new Group-wide Lufthansa Power Up Network acts as a multiplier, providing a common technical platform for the mutual exchange of knowledge and support with the aim of raising awareness of the programmes beyond the scope of the respective divisions and Group companies and giving diversity within the Company a visible identity as the most important goal.

Performance indicators

Targets for proportion of women managers nearly achieved

The target set in 2016 for management level 1 was met with a share of women of 20.5%. At management level 2, Deutsche Lufthansa AG narrowly missed the target, with a current share of women at 26.9%. The target was not met because of the extensive restructuring activities, the reduction in management positions and new appointments.

People from 172 nations work for the Group today.

TRANSFORMATION CAPABILITY

Concept

Multiple changes call for continuous transformation process

Structural transformations will produce increasing changes in jobs and content at ever shorter intervals. Consequently, there will be a permanent need for transformation. Demographic trends are intensifying this effect. Digitalisation and an increasing level of automation using artificial intelligence are progressively supplanting the cognitive abilities of humans in various professions and job profiles.

To adapt to this development, companies are well advised to establish a continuous transformation process for their workforce, focusing, in general, on achieving future viability and performance. This should be accomplished through targeted training, the development of the ability to adapt and learn,

and the transfer of knowledge. The Lufthansa Group considers transformation capability an important topic due to the downsizing of the Company and the changed requirements for sustainability in order to maintain the competitiveness and future viability of the Company.

Transformation support and training established as routine processes

Well educated and committed employees are indispensable for the sustainable business success of the Lufthansa Group. Because it is not possible to simply draw on knowledge acquired at one point in time to sustain an entire career, employees have to expand their knowledge and abilities and keep them up to date at all times.

Employees are offered regular professional training courses, particularly in safety-related areas. At the same time, a separate department has been created to evaluate the impact of the current transformation on the future roles and competence profiles of employees in all professional groups in a structured process, and to accompany the change process.

In this context, a process was established that is intended to enable administrative staff in particular to analyse the future viability of their own competencies, and to compare them with the current and future requirements of their tasks. All the employees in the Lufthansa Group have access to over 15,000 innovative learning opportunities from LinkedIn Learning. The online learning programme can be used on a voluntary basis, also by employees on short-time work. With the return of employees from short-time work, the existing learning programme will be expanded to include additional training opportunities during 2022.

The Lufthansa Group CAMPUS offers targeted strategic activities for ongoing cultural and organisational development with a special focus on the challenges of operations that remain below pre-crisis levels. Qualification courses for managers and top management support a modern corporate culture of collaboration and assist with organisational changes. Established partnerships with leading international business schools will be reactivated as business picks up again.

Routine training courses are fundamental part of the job for cockpit and cabin crew

Regular training is obligatory for cockpit and cabin crew in the Lufthansa Group. It is provided by Lufthansa Aviation Training, which continuously develops and optimises the training courses. As one example, virtual reality technology has been used to improve training elements for flight attendants. No new cockpit staff training is taking place at present.

Developing working environments

Mobility and flexibility are key building blocks for modern working environments. As of 31 December 2021, about 54,000 employees of the Lufthansa Group currently have access to cloud-based Office software. This is 9,000 more than in the previous year due to the inclusion of various subsidiaries. In addition to hardware, cloud-based software is an important basis for remote working and flexible working.

All Lufthansa Group employees are offered modern net-working tools for communicating information and working together. They focus on efficient working methods across national borders and hierarchical levels, and empower individual end users.

Organisational foundations and responsibilities

The Workforce Transformation and Learning Management units work together to address the issue of transformation capability. Both units are assigned to the Group-wide HR Policies, Services & Digitalisation department, which pools the topics and reports directly to the Chief HR & Legal Officer. The topic is supported by the HR Management Executives, Leadership and Cultural Development department.

Targets

Pursuing ongoing development of staff skill sets

The ongoing changes in market conditions and the restructuring through which the entire aviation sector is adapting to the altered market conditions place high demands on the ability of employees and companies to transform. The aim is for employees to continuously develop the knowledge and skills they have acquired during their training and professional life. The Lufthansa Group offers administrative and operational employees a wide range of training opportunities. At the same time, employees must be willing and able to deal constructively with this process of permanent change.

Measures

Developing the Company's transformation capability

In 2021, various initiatives and ideas were developed to further improve the Lufthansa Group's transformation capability. In one initiative, an IT tool will be used in 2022 to record

the number of training courses carried out for all employees to ensure data transparency, which will make it possible to measure success and identify targeted follow-up measures. In another, a structured assessment of employee skills is intended to create a basis for offering individualised training opportunities and appropriate jobs.

The CanDo! platform was developed in the reporting year to strengthen collaboration and agile working within the Lufthansa Group as an internal skills platform. The purpose of the platform is to promote the exchange of knowledge and experience among different employees and experts within the Lufthansa Group and to encourage interdisciplinary work on projects and topics. The platform is currently in the pilot phase.

Apprenticeship as Service Management Professional continues

The Service Management Professional apprenticeship for training Lufthansa German Airlines cabin crew continued successfully in 2021, albeit in reduced form due to the coronavirus pandemic. It is recognised as an additional professional qualification by the Chamber of Industry and Commerce (IHK). The programme covers professional service know-how, basic business knowledge, intercultural communication and project management and promotes the employability and development opportunities of employees within the Lufthansa Group. The state qualification recognises the value of the profession of flight attendant and opens up new career paths (e.g. purser), while at the same time promoting individual personal development. In 2021, 581 employees successfully completed the qualification programme. Since the start of the programme, 1,170 employees have successfully completed the training to become Service Management Professionals.

Performance indicators

Detailed survey provides comprehensive information about capacity for transformation

Since 2019, the Lufthansa Group's general and digital transformation abilities can be determined by the comprehensive employee survey "involve me!", which is conducted every year. The necessary detailed survey is carried out every two years. The results of the survey from 2021 allow management to identify specific fields of action and initiate specific measures that lay the groundwork for the Lufthansa Group's capacity for transformation and prepare staff for relevant changes.

HEALTH AND SAFETY AT WORK

Concept

Occupational health and safety are material action areas

Occupational health and safety have been central action areas at the Lufthansa Group for several decades. As an operating company, the health of employees is particularly important for the commercial success of the Lufthansa Group.

The close networking between the occupational safety function and the Medical Services, including psychosocial counselling and health management, with all other business units of the Lufthansa Group is designed to ensure a rapid response and the effective development and implementation of preventive approaches for long-term employee health.

The Medical Services act as a comprehensive centre of excellence at the three sites in Hamburg, Frankfurt and Munich and are easily accessible to employees and senior executives. New information and exchange formats have been developed on a big scale during the coronavirus pandemic that allow digital accessibility as well. The Medical Services of SWISS and Austrian Airlines cooperate closely.

The occupational safety function consistently implements preventive measures to avoid accidents, health risks and occupational illnesses. In the Group companies in Germany, the Group's occupational safety experts review all professional activities using risk assessments and regular safety inspections. For many years, psychological stress at work has been assessed using a procedure developed by the University of Heidelberg and adapted for the Lufthansa Group.

Specific guidelines make managers aware of their responsibility for occupational safety. Managers must deal with this directly when they are appointed to their position. This is checked in an automatic process.

Medical Services managed as holistic centres of excellence

The Medical Services at Lufthansa German Airlines, SWISS and Austrian Airlines are holistic centres of excellence. Even when airline operations have been scaled back, they offer the full range of services for aviation and occupational medicine, vaccinations and travel medicine, outpatient care, a comprehensive social and medical advisory service and other preventive and healthcare treatments. Along with occupational health and aviation medical qualifications, a lot of doctors have other complementary specialist qualifications that are used in the context of the weekly case review conferences. Transnational meetings are also held by the

heads of the medical centres at Lufthansa German Airlines, SWISS and Austrian Airlines. The authorisation for further training of occupational medicine specialists ensures a steady flow of new talent and guarantees their expertise within the Lufthansa Group.

Both the Medical Services and the Psychosocial Centre have a certified quality management system in accordance with ISO 9001:2015.

As a globally operating company, the Lufthansa Group attaches particular importance to providing expert advice to employees from all areas in Germany and abroad and to administering both required and recommended vaccinations. An example of prevention through vaccination is the flu vaccine, which was offered to employees of Lufthansa German Airlines, SWISS and Austrian Airlines in 2021 between October and November as part of the employer's duty of care.

Lufthansa German Airlines' worldwide network of physicians makes it possible to provide medical care for cockpit and cabin crews on assignments abroad. The schedule of medical care services provided during foreign assignments is currently being revised in order to ensure even more efficient care for the flight staff.

The range of medical offers is supplemented by the optimisation of socio-medical counselling for occupational reintegration management processes. The Medical Services also work with employer and employee representatives to support the integration of employees with health-related restrictions.

In various areas of responsibility, the Medical Services provide advice to decision-makers, committees and employee representatives concerning all issues of occupational health and safety.

Psychosocial counselling provides stability in difficult situations

Psychological and psychosocial factors have an important influence on health, safety and productivity at work. Psychological stress and crises are part of life and cannot always be separated from an employee's professional life.

The Lufthansa Group has long offered individual counselling at in-house, confidential psychosocial counselling centres so that employees experiencing difficult circumstances can regain their stability as quickly as possible.

In addition to virtual services, employees, managers and teams at the Medical Services & Health Management sites can find quick and confidential help on professional and private issues or issues with teamwork.

In the counselling centres networked with the external help system and specialists, these counsellors work together with those seeking guidance to develop sustainable individual paths and approaches to solutions.

Health Management helps to deal with health challenges

The aim of the Lufthansa Group's Health Management is to bring about conditions conducive to health, to exert a positive sustainable influence on corporate culture and to support and encourage employees and managers to adopt healthy lifestyles.

Health officers in the individual Group companies identify needs specific to target groups and implement health promotion offers. Group-wide interventions and the strategic development of health management are headed by Lufthansa Group Health Management.

Organisational foundations and responsibilities

Occupational safety and health is jointly managed by the Occupational Safety and Medical Services & Health Management departments, which report directly to the Chief HR & Legal Officer. The central steering body for all issues concerning health and safety in the Lufthansa Group is the Occupational Safety Committee, which monitors the implementation of all aspects of health and safety across the Group. The minimum standards that have been adopted there are binding throughout the entire Lufthansa Group. This will be fed back to the individual companies through their own occupational safety coordinators.

The occupational safety specialists required by law in Germany are assigned centrally to the Occupational Safety function for the majority of the Lufthansa Group's companies. The other Group companies in Germany and worldwide are responsible for providing the necessary specialists themselves, in accordance with local laws.

Participation in occupational health and safety committees provides close networking between employer concerns and employee concerns, on which the Medical Services and Group Occupational Health and Safety provide objective, professionally independent advice.

This organisational structure enabled a very fast and highly effective response to the global spread of the coronavirus.

Targets

Employee health and preventing work accidents remain core areas of focus

The core responsibility of the Medical Services & Health Management department is to maintain and improve the health and working capacity of the Lufthansa Group's employees and thus support its business activities and reliable flight operations. Occupational health and safety also has the goal of preventing accidents at work and occupational illnesses through preventive action and, if they nonetheless occur, of drawing the necessary conclusions from accidents to prevent them from happening again, to the extent possible.

Special focus on the prevention of coronavirus infections among staff

Since the beginning of the coronavirus pandemic, the main aim of the Medical Services has been to reduce the risk of exposure for employees in all work areas to a minimum and to prevent staff from inadvertently infecting their colleagues or customers.

Measures

Various measures create the conditions for ongoing prevention of coronavirus infections

In the second year of the pandemic, the focus continued to be on providing a wide range of information on new scientific findings, for example regarding the development of tests and vaccine approvals, as well as recommendations for action to prevent infection, together with the further development and adaptation of the protection strategy and how work-spaces are used. A regular, twelve-episode podcast with company-related information for employees on the pandemic was made available starting in January 2021. A live programme on the topic was also offered in September 2021, during which participants could ask questions anonymously and receive answers directly, as well as via the email box provided and managed by Group doctors. The specific regulatory requirements to be implemented in the corporate environment present the participants in the working group with a high level of consulting expenses when implementing the measures. In November 2021, for example, the protective measures required by regulations had to be transferred to the business conditions of the Lufthansa Group.

Employees and managers receive further support through a specific digital range of health promotion services. For example, a number of voluntary webinars address the special circumstances of the pandemic and the business situation and provide participants with concrete tools for action and ways of managing the situation.

The Medical Services and Group Health & Safety are in regular contact with external agencies like the Robert-Koch Institute and local authorities and public health offices to apprise themselves of the latest developments, government recommendations and scientific findings and factor these into the Company's own strategy.

Lufthansa Group supports national vaccination strategies and offers coronavirus vaccines to employees

One special development in the reporting year was the establishment of three vaccination centres in Hamburg, Frankfurt and Munich for the coronavirus vaccination by the Medical Services of Deutsche Lufthansa. The vaccination centres complemented the structures created within the framework of the national vaccination strategy and promoted the vaccination of the population. More than 14,000 employees of the Lufthansa Group in Germany were vaccinated between June and August 2021. Depending on the legal situation in Switzerland and Austria, employees at SWISS and Austrian Airlines were also offered vaccinations. In December 2021, the Lufthansa Group also offered a booster vaccination for its employees in Germany.

The Lufthansa Group's commitment to addressing the coronavirus pandemic can be clearly seen through external publications and lectures as well as by the fact that the Group won the German Human Resources Management Award 2021 in the category of occupational health management.

Psychosocial counselling and occupational health management strengthen managers and employees in the crisis

Online courses on health promotion and stress prevention were made available to overcome the health challenges posed by the coronavirus pandemic. Psychosocial Counselling offered additional information on preventive measures in the form of newsletters and podcasts on psychosocial topics.

Further development of occupational safety

Extensive training materials and several web-based training courses were developed and introduced on a large scale in the reporting year to ensure a high standard of instruction across the Group in the area of occupational safety and health. Issues related to working from home, which is particularly important in the fight to control infections, were also discussed.

During the reporting year, a company-wide international survey on the state of occupational safety in the Lufthansa Group was prepared for other areas; it will be conducted in 2022 as business operations return to normal.

In addition, work began on creating more transparency at the Group level regarding occupational injuries in the various parts of the Lufthansa Group. These efforts will initially be rolled out only to some of the companies. In subsequent years, additional companies will be gradually integrated into the data collection process.

Performance indicators

Health Index as a key indicator for employee health declined slightly year-on-year

In the reporting year, the Health Index was again tracked through the "involve me!" employee survey. Despite the unusual situation confronting the Company, the value fell only slightly to 2.3 compared with 2.2 in the previous year. The results are measured on a scale from 1 (best) to 5 (worst). With the exception of the LSG group, all major Group companies were included in the reporting year.

Only employees on active service, i.e. those working at least 20% of their regular hours and not completely furloughed, were asked about their health in an occupational context. This ensures that the answers can be compared on a like-for-like basis.

In addition to the assessment of the Health Index, work factors closely related to the Health Index were again analysed in the reporting year. All executives and the health managers of the individual Group companies receive a separate health report on the results concerning their fields of responsibility. The report contains a selection of specific recommendations and supporting measures. In addition, Health Management employees are available to provide further analysis of the report and advice.

Accident figures enable effectiveness audits

In 2021, the accident figures were initially collected for relevant companies that are insured in Germany by the largest employers' liability insurance association (BG-Verkehr) and that employ a total of 48% of the Lufthansa Group's employees worldwide and 83% of its employees in Germany. All events that resulted in downtime of at least one calendar day are included in this indicator. This translates into 3.7 work-related injuries per one million hours worked. Other companies will be included in the figures over time.

Social concerns



Concept

Lufthansa Group is committed to social issues

As an international aviation company, social responsibility is an important topic for the Lufthansa Group. This also applies in the particularly challenging circumstances caused by the global coronavirus pandemic. The Lufthansa Group connects people, cultures and economies in the most sustainable way possible. Credible corporate citizenship aligned with the Group's core competencies enhances its image, increases the loyalty of its employees and strengthens the trust of its customers.

Voluntary work by employees

The focus of the activities is on social and humanitarian projects, pooled and managed by the help alliance, the Lufthansa Group's aid organisation. This focus enables the efficient and targeted use of available funds. help alliance works with local partners who have many years of experience in development cooperation. The employees of the Lufthansa Group who work as volunteers in help alliance projects and local help alliance communities all over the world are at the heart of the help alliance.

In 2021, the Lufthansa Group covered all of the costs of administration, fundraising and communication for help alliance. This ensures that 100% of all other donations are used to fund project work. This also applies to voluntary donations made via salary deduction by employees of the Lufthansa Group.

Professional and rapid emergency aid in humanitarian crises and catastrophes is also an established element of the Lufthansa Group's corporate citizenship concept. Lufthansa Cargo cooperates with well-known aid organisations.

Organisational foundations and responsibilities

help alliance is a non-profit entity (gGmbH) held by the Lufthansa Group and based in Frankfurt am Main. The help alliance team in Frankfurt manages global aid projects and coordinates cooperation with project leaders, local volunteering communities and partner organisations on the ground. The help alliance staff also develop and implement

fundraising measures and communicate the work of the aid organisation to the public. The importance of the help alliance is emphasised by the fact that the company reports to the Executive Board's Chief Customer Officer. There is close cooperation with the Corporate Responsibility department, whose management is responsible for participation.

Targets

A contribution to sustainable social development

The main objective of help alliance is to provide disadvantaged young people access to education and empower them to lead a self-sufficient life. The charitable activities and projects are designed to make a contribution to the sustainable development of society that reflects the importance and size of the Lufthansa Group and is transparent, credible and verifiable all at the same time. Projects are continuously assessed to ensure that help alliance's work contributes to sustainable development.

Measures

help alliance reacted quickly to the changed situation and developed new digital fundraising platforms, among other things, to ensure a stable financial situation. Despite the massive impact of the coronavirus pandemic, the quickly adapted fundraising system made it possible for help alliance to fund seven new projects in 2021: five in Europe and two in Africa.

Expansion of local volunteering communities

In 2021, help alliance continued to build up local volunteering communities at various locations of the Lufthansa Group. By 2020, the existing communities in Hamburg, Frankfurt and Munich had already grown to include communities in India and Europe. Professional onboarding of the communities and their targeted networking with each other means that there are currently more than 15 communities in all regions of the world, with more than 3,000 volunteers working on social and environmental issues. Volunteering empowers and motivates employees of the Lufthansa Group to establish contacts at the local level and to actively participate in doing good together, while at the same time being connected globally and exchanging ideas with like-minded people

worldwide. The role of help alliance consists in bringing together Lufthansa Group employees who would like to engage in volunteer work and guiding them as a sparring partner and expert consultant in the area of civic engagement to create a self-organised community. help alliance and different local communities have jointly initiated several projects as well as global actions, including two large clean-up campaigns (#CommunityCleanups).

Lufthansa Cargo supports global vaccine distribution by UNICEF

In the reporting year, Lufthansa Cargo and other airlines signed an agreement with UNICEF to support the priority delivery of coronavirus vaccines, essential medicines, medical equipment and other important relief supplies to fight the pandemic. Enhanced by the freight capacities of the available flights of Lufthansa German Airlines, Austrian Airlines, SWISS, Brussels Airlines, and Eurowings, Lufthansa Cargo and SWISS, with its Swiss WorldCargo division, are two of the airlines that transported the vaccines around the globe.

Performance indicator

Help for disadvantaged people

In 2021, help alliance was responsible for 48 aid projects in some 20 countries with a total project volume of EUR 2.7m. 87% of the funds were used for educational projects. Approximately 40,000 disadvantaged people around the world received help through these projects.

In addition, Lufthansa Group employees at 15 locations have participated in local volunteering communities.

Impact assessment of corporate citizenship published

Projects are continuously assessed to ensure that help alliance's work contributes to sustainable development. The detailed results of an impact assessment are published on the website of the Lufthansa Group in the annual activity report of help alliance.

Business ethics and compliance



Responsible conduct in compliance with legislation and respect for human rights are key elements of the Lufthansa Group's corporate culture. As a participant in the UN Global Compact, the Lufthansa Group attaches great importance to aligning its business with the internationally acknowledged principles laid down in the Compact. The Lufthansa Group is convinced that sustainable economic success can only be achieved through business practices that are value-oriented and based on integrity. Business management based on values, integrity and a sense of responsibility sustainably strengthens the loyalty of employees, customers, investors and business partners to the Company.

The Code of Conduct provides a framework for acting with integrity

Acting with integrity and in accordance with internationally acknowledged values and standards requires that all board members, senior executives and employees comply with applicable laws, internal regulations and voluntary commitments at all times. By adopting a Code of Conduct, the Executive Board of Deutsche Lufthansa AG has created a framework through which all business decisions are made. The key principles of the Code of Conduct include compliance with the rules of fair competition, fighting corruption and bribery, respect for human rights and compliance with

labour and social standards. These principles constitute the foundation of the Lufthansa Group's value system and define guidelines for the actions of its boards, senior executives and employees. The Code of Conduct is available on the Lufthansa Group website.

COMPLIANCE MANAGEMENT

Concept

Central compliance management system helps ensure compliance requirements are met

The Lufthansa Group has a central compliance management system to complete the framework provided by the Code of Conduct and to maintain a clear system of rules that enables and supports the boards, senior executives and employees to make decisions that comply with the rules at all times. The Compliance Management System follows the auditing standard of the Institute of Public Auditors in Germany (IDW PS 980) and is based on the pillars of compliance culture, compliance targets, identification of compliance risks, compliance programme, compliance organisation, compliance communication and compliance monitoring.

The Compliance Management System is continually developed and optimised, taking into consideration the specific risks relevant to the Lufthansa Group's business, and we are increasingly looking at and introducing application possibilities for system-based and digital support solutions. It is currently made up of the following elements: Integrity (Anti-Corruption), Capital Market Compliance, Competition Compliance, Embargo Compliance, Export Compliance, Outside Staff Compliance and Money Laundering Compliance. Each module includes one or more guidelines that support the boards, senior executives and employees in making decisions that comply with the rules.

Fighting corruption and bribery is an integral part of the Compliance Management System

Its global operations mean that the Lufthansa Group is obliged to comply with national anti-corruption legislation around the world, in some cases with extraterritorially applicable anti-corruption and anti-bribery laws. Breaches of these legislative requirements hinder fair competition and jeopardise confidence in the integrity of economic entities as well as the state, its authorities and representatives. That is why fighting corruption and bribery is a priority for the Lufthansa Group's compliance efforts. The Lufthansa Group has established rules in several guidelines for compliant conduct with business partners and government representatives as well as its own conduct to avoid conflicts of interest.

The Lufthansa Group's Compliance Management System is based on the above-mentioned pillars and takes various approaches with reference to the individual elements to ensure that its boards, senior executives and employees act in accordance with the law and the rules. The Lufthansa Group's boards and senior executives communicate regularly on these approaches. Their expectations regarding the integrity of all business decisions and all business actions of employees are expressed consistently.

All Group companies worldwide were assessed for corruption risks

All Group companies were assessed for corruption and antitrust risks during a compliance risk assessment carried out in 2018. The measures derived from the results of the compliance risk assessment to prevent the identified risks from occurring were collected centrally and implemented together in the individual Group companies. Ongoing implementation was delayed by the consequences of the coronavirus pandemic.

Advisory services are an integral part of the Compliance Management System

Advisory services are an integral part of the Compliance Management System. Any employee can contact the local Compliance Managers or the Group Compliance Office with questions related to compliance at any time.

Answers to questions on how to deal with business partners and public officials, as well as on proper conduct in situations where there may be a conflict of interest can be found on a Group Compliance Office app, which helps employees comply with the applicable guidelines even on business trips and on an ad hoc basis. Overall, the advisory services contribute to making decisions in the Lufthansa Group that are in compliance with the rules.

Web-based compliance training increases risk awareness

Where relevant, all boards, senior executives and employees in relevant areas or functions are required to complete web-based compliance training in the compliance modules of Capital Market Compliance, Competition Compliance, Outside Staff Compliance or Integrity (Anti-Corruption). The objective is to raise awareness of potential compliance risks, to identify alternative courses of action that comply with the law and regulations, and to provide contacts for any advice that may be required. Participants must pass a test at the end of the training in order to receive the required certificate. The training courses are designed to be completed when joining the Lufthansa Group and then every two years after that. If the training courses are not completed within the given deadlines, the participants will be sent a reminder and, if they fail to complete the training on a timely basis after receipt, their supervisors will be informed. This escalation process was temporarily suspended in 2021 due to the coronavirus crisis.

Risk-based business partner due diligence aims to ensure integrity of suppliers and service providers

Risk-based business partner due diligence is intended to ensure the integrity of suppliers and service providers. During the business partner audit, compliance screenings are conducted by the responsible employees in order to identify at an early stage any compliance risks that could arise from cooperation with external business partners. Depending on the result, various measures, including the avoidance or termination of a business relationship, may be necessary for dealings with the business partner.

Ombudsman system enables suspected offences to be reported confidentially

The Lufthansa Group set up an ombudsman system to enable information to be provided confidentially and, if requested, anonymously, about possible compliance violations, including potential breaches of anti-corruption legislation and regulations. An external, independent lawyer who is not an employee of the Lufthansa Group acts as the ombudsperson. Whistle-blowers can provide information to the ombudsperson by phone, in writing or in person. The ombudsperson's contact information is available on the Lufthansa Group website.

The Internal Audit department audits the effectiveness and appropriateness of the Compliance Management System

The Compliance Management System is monitored during audits that are regularly performed by the Internal Audit department to examine effectiveness and suitability.

Organisational foundations and responsibilities

The Group-wide implementation, development and communication of the Lufthansa Group Compliance Management System is the responsibility of the Group Compliance Office, which is part of the central Legal department. The head of the Legal department and Chief Compliance Officer reports directly to the Chief HR & Legal Officer and presents two Compliance Reports per year to the Executive Board and Supervisory Board's Audit Committee and one per year to the Supervisory Board. The Executive Board has created a web of committees, consisting of a Group Compliance Committee, central compliance committees in the main subsidiaries and local compliance committees as needed to provide support with steering and implementing the central Compliance Management System across all companies. The Group Compliance Office is supported by a worldwide network of compliance managers at the Group companies.

Targets

Compliance Management System aims to ensure rules-compliant conduct and prevent unlawful conduct

The Compliance Management System aims to ensure rules-compliant conduct and prevent unlawful conduct across the Group. Violations of the law can result, in particular, in criminal penalties, fines, damages and reputational damage for the companies concerned, as well as personal criminal and labour law consequences for the employees concerned, the responsible senior executives and the boards.

➤ **Opportunities and risk report, p. 76ff.**

Measures

Electronic whistle-blower system complements the existing ombudsman system

In 2021, the Lufthansa Group set up an electronic whistle-blower system to complement the existing ombudsman system in order to facilitate the submission of confidential and, if requested, anonymous tips about possible compliance violations. Whistle-blowers can provide information in writing at any time via the electronic whistle-blower system, which is available in nine languages. The electronic whistle-blower system is available on the Lufthansa Group website.

Any information received is assessed for plausibility using an established procedure. If there is actually a suspicion of a compliance violation, the tip will be investigated by the Group Compliance Office in cooperation with Corporate Business Security under strict observance of confidentiality and control by the responsible Compliance Committee.

Business partner due diligence and risk assessment approach to be refined

The ongoing development of the previous requirements for business partner due diligence and the planned Group-wide implementation in the reporting year have been delayed due to the effects of the coronavirus pandemic and will be continued in 2022.

The Group Compliance Office began revising the risk assessment concept in 2021 in order to regularly survey and assess compliance risks for the Lufthansa Group in the future. Preparations for conducting ongoing risk assessments will begin in 2022 on this basis.

Performance indicators

The Lufthansa Group will analyse and implement suitable indicators in line with its targets.

RESPECT FOR HUMAN RIGHTS

Concept

Respect for human rights is a key issue for the Lufthansa Group

As an employer, the Lufthansa Group directly contributes to the livelihoods of more than 105,000 employees and their families worldwide. Its value chain also includes a large number of business partners whose employees contribute indirectly to the Lufthansa Group's business success and may be dependent on it. This means that it shares responsibility for the concerns of its own workforce and indirectly also for those of the employees along the value chain. This is also reflected in working conditions at the Group companies, the guarantee of freedom of association and assembly, rules to ensure gender equality and the inclusion of minorities as a matter of course. It is also demonstrated in the expectation expressed in the Supplier Code of Conduct that the business partners included in the value chain should also adhere to the same principles.

In this connection, the following internationally recognised standards are among those that are significant for the Lufthansa Group:

- United Nations' Universal Declaration of Human Rights
- Fundamental principles and core work standards of the International Labour Organization (ILO)
- Ten principles of the UN Global Compact
- UN's guiding principles regarding business and human rights
- Sustainable Development Goals (SDGs)
- National Action Plan for Business and Human Rights (NAP)
- OECD Guidelines for Multinational Enterprises
- IATA Resolution against Trafficking in Persons

The German National Action Plan on Business and Human Rights (NAP) provides a framework for measures related to human rights

With regard to protecting human rights, the Lufthansa Group is guided by the recommendations of the National Action Plan for Business and Human Rights (NAP) adopted by the German Federal Government in late 2016. With regard to corporate respect for human rights, the Federal Government expects all enterprises to comply with human rights due diligence and to respect human rights along their supply and value chains. The NAP describes five core elements of due diligence in the field of human rights. These core elements comprise a policy statement, procedure for identifying actual or potential adverse impacts on human rights, measures and effectiveness audits, reporting and a grievance mechanism.

C31 CORE ELEMENTS OF HUMAN RIGHTS DUE DILIGENCE

- 1 Human Rights Policy Statement
- 2 Procedures for the identification of actual or potential adverse impact on human rights
- 3 Measures to ward off potentially adverse impacts and review the effectiveness of these measures
- 4 Reporting
- 5 Grievance mechanism

The Group's procurement policy and Supplier Code of Conduct state that the Lufthansa Group expects its suppliers to respect human rights. Supplier contracts should contain obligations and provisions for terminating the contract if they are breached. ➤ **Responsible supply chain management, p. 133f.**

The ongoing development of the management approach will be reported on in detail

As part of its efforts to create transparency about the further development of its management approach to respecting human rights and in order to meet its reporting obligations, the Lufthansa Group publishes a declaration in accordance with the UK Modern Slavery Act 2015 in addition to an annual progress report as a participant in the UN Global Compact. The declaration as required by the UK Modern Slavery Act is available on the Lufthansa Group's website. The Lufthansa Group regularly reviews whether it will also be subject to reporting obligations under other regulations.

The Lufthansa Group develops management approach for addressing human trafficking

As a signatory to the IATA Resolution against Trafficking in Persons, ensuring an environment that is free from modern slavery and human trafficking is a matter of course for the Lufthansa Group, however, the legal prosecution of human trafficking is the responsibility of governments and national law enforcement agencies. Nevertheless, the Lufthansa Group is aware of the importance of this topic and recognises that as an aviation company it can play a significant role in identifying potential criminal offences. It has therefore implemented a reporting process for flagging suspected cases of human trafficking that has been approved by the authorities.

In accordance with IATA recommendations, the Lufthansa Group has integrated the topic into regular training for flight personnel. These employee groups are made particularly aware of potential signs of human rights violations. Ongoing regular training sessions have been suspended due to the effects of the coronavirus pandemic. Steering and developing the management approach is the responsibility of the Anti-Human Trafficking Task Force, in which all passenger airlines in the Lufthansa Group and the relevant Group Functions are represented.

Awareness programmes for target groups of managers and employees

Based on an analysis carried out by Verisk Maplecroft, an advisory company, an overview was drawn up of all Group companies operating in countries where the risk of human rights abuses is particularly high. This country overview is updated annually. Based on this overview, the managers and Human Resources departments at Group companies in these countries should be made aware of their duty of care to avoid human rights abuses. A corresponding annex has been successively added to the employment contracts with these managers.

In addition, awareness is heightened by means of intranet communications on the topic to all the employees and senior executives in the Group. This includes a statement by the Chief HR & Legal Officer emphasising the responsibility of the Lufthansa Group as a global company to respect human rights. Further information on this topic is available.

Processes for reporting human rights violations have been implemented

The companies are obliged to identify human rights risks and the type and number of suspicious incidents. Individual complaints can be made also by third parties to the external ombudsperson – confidentially if so desired.

Employees of the Lufthansa Group can also report to their manager, Human Resources management or the employee representative. A works agreement with regard to procedures for grievances is already in place for all employees in Germany. It is used for many different kinds of complaints and can also be used for to complaints regarding human rights violations.

“Zero tolerance” for cases of sexual harassment

Respect for one another is particularly important to the Lufthansa Group. This includes creating the conditions for a working environment for all employees that is free of discrimination, harassment and unequal treatment. The Lufthansa Group expects that this principle is reflected globally in the conduct of all employees towards one another. It is implemented by means of extensive communication and mandatory web-based training for managers on the General Act on Equal Treatment, which also addresses sexual harassment in the work environment. The diverse support programme for employees affected by sexual harassment was evaluated and continued accordingly, following the incorporation of user suggestions.

Organisational foundations and responsibilities

The human rights working group’s regular meetings serve to communicate general information and develop a uniform, Group-wide position and strategy. In the reporting year, the working group was coordinated by the Group Compliance Office, which reports to the central legal department under the Chief HR & Legal Officer of the Executive Board and was responsible for managing the topic of human rights in the Lufthansa Group in 2021. The Group Compliance Office coordinated closely with the departments Corporate Responsibility, Procurement Lufthansa Group and Corporate HR Steering & Labor Relations. In addition, selected contacts advise, support and follow up on the topic at the core companies in the Lufthansa Group.

The Group Compliance Office reports regularly on developments to the Executive Board as part of the resolution on the annual declaration under the UK Modern Slavery Act 2015 and as part of compliance reporting.

Targets

Human rights abuses are to be avoided

The ultimate objective of the management approach is to ensure that human rights are respected worldwide to the extent that this lies within the Lufthansa Group’s sphere of influence and responsibility, i.e. in particular in the companies of the Lufthansa Group and their supply chain. At the same time, human rights violations in the Lufthansa Group and its supply chain must be avoided by means of organisational and process-based measures.

Measures

Preparations for the German Corporate Due Diligence in Supply Chains Act are being made

The German Corporate Due Diligence in Supply Chains Act (Lieferkettensorgfaltspflichtengesetz – LkSG), passed in the reporting year, establishes far-reaching due diligence obligations for various companies in the Lufthansa Group starting on 1 January 2023. These obligations are intended to ensure that human rights are respected throughout the supply chain. Obligations imposed under the LkSG include the establishment of an effective risk management system for compliance with due diligence obligations. In addition to an ongoing risk analysis, this system must include, among other elements, the establishment of preventive measures as well as the adoption of remedial actions in the event of a breach, a complaints mechanism and reporting obligations. The central functions of Corporate Responsibility, Procurement Lufthansa Group, Corporate HR Steering & Labor Relations and the Group Compliance Office are working closely with each other to develop and establish such a risk management system by the time the due diligence requirements take effect for the Lufthansa Group. In the reporting year, cooperation focused in particular on the preliminary clarification of legal issues in the context of the new law, preparation of the future organisational structure for implementation and on preparatory measures for the required risk analysis. In 2021, Procurement Lufthansa Group set up a project to implement the due diligence obligations of the LkSG in the external supply chain.

➤ **Responsible supply chain management, p. 133f.**

Performance indicator

The Lufthansa Group will analyse and implement suitable indicators in line with its targets.

RESPONSIBLE POLITICAL ENGAGEMENT

Concept

Lufthansa Group strives for responsible political engagement

The Lufthansa Group also strives to voice its legitimate interests at the political level and to discuss them with representatives of the various national and international authorities and institutions, and to provide specific information on concrete issues. Depending on the occasion and the topic, this is done at the Company or Group level or in consultation with other companies or interest groups.

The Group's political engagement focuses on transport (market access and traffic rights), climate policy and fair competition. Positions are also formulated on developments at the regional and local level that are relevant to the Lufthansa Group, and shared with the responsible authorities. Recommendations for action are frequently put forward in close cooperation with the industry associations IATA, A4E and BDL as well as other bodies such as the BDI, BDA and the Forum Nachhaltige Entwicklung der Deutschen Wirtschaft e.V. (econsense).

Organisational foundations and responsibilities

The central department Corporate International Relations and Government Affairs, which reports directly to the Chief Executive Officer, is responsible for representing the political interests of the Lufthansa Group. It has offices in Berlin, Frankfurt and Brussels as well as liaison offices in Washington, Moscow and Beijing. In addition, the principal foreign companies of the Lufthansa Group coordinate their own responsibilities for national political issues with the central department.

Targets

Lufthansa Group aims to safeguard its interests

The Lufthansa Group seeks to identify political developments that are relevant for the Group and its subsidiaries at an early stage, to formulate positions and to introduce recommendations for action into the political decision-making process. The aim is to safeguard the interests of the Lufthansa Group in national and international regulations to protect its competitiveness and economic viability.

Measures

Focus on regular exchange and transparency

Lufthansa Group employees who work in the Corporate International Relations and Government Affairs department maintain frequent dialogue with ministries and members of parliament at the state and federal level as well as with representatives of the various EU institutions. This includes supplying facts and figures and working through the issues, some of which are complex. The Lufthansa Group also contributes to legislative processes to protect the Company's interests.

The Lufthansa Group attaches great importance to transparency in its political engagement, and it has been reported in the EU Transparency Register since 2008 under the number 0714344663-32. The Lufthansa Group regularly publishes its position on current political issues and upcoming decisions in its Policy Brief, which is addressed to political decision-makers but is also accessible to the general public. Six issues of the Policy Brief were published in the reporting year and are available on the Company's website.

Responsible supply chain management



Concept

Sustainability in the supply chain firmly established in the Company

Taking sustainability aspects in the supply chain into account is an important element of responsible production. This means that, in addition to economic aspects, impacts on the environment and society are taken into consideration during the procurement process. To meet the standards the Lufthansa Group sets for the sustainability of its own products, the Lufthansa Group relies on close collaboration with suppliers who share and implement these standards. This also forms part of the Lufthansa Group's Code of Conduct, which is available on the Lufthansa Group website.

The Group procurement policy includes the obligation to assume social and environmental responsibility

The obligation to assume social and environmental responsibility is a key element of the Group procurement policy. The policy is to be understood as an overriding specification for all procurement units at the Group companies. In addition, it serves as a handbook for buyers and all employees with contacts in the procurement markets. Appropriate training is available to all employees and is mandatory for the management level. Among other considerations, it requires that these obligations be included in contracts with suppliers:

- to comply with the ten principles of the UN Global Compact,
- to comply with the four basic principles of the International Labour Organisation (ILO),
- the right to consent to announced and unannounced audits by companies of the Lufthansa Group,
- to accept the termination of the contract in the event that these contractual obligations are breached.

By imposing these obligations, the Lufthansa Group endeavours to ensure responsible practices by its direct suppliers and so to meet its own standards for corporate responsibility.

The Lufthansa Group's expectations of its suppliers in terms of social, environmental and ethical responsibility are summarised in the Supplier Code of Conduct, which can be found on the Lufthansa Group website.

Risks are identified

To identify the type and level of supplier risks, the procurement units responsible for product groups carried out a risk assessment for the suppliers. The risk assessment is included in the result of Group risk management.

The procurement process also includes supplier screening to identify risks during the onboarding process so that appropriate measures can be taken. To ensure compliance with Group standards, suppliers are subject to a comprehensive screening process (Business Partner Due Diligence – BPDD) before being contracted. If a supplier falls into a risk category (e.g. due to the country or product group), such a screening is carried out, including consultation with external sources if necessary. The screening process is designed to help identify potential problems, determine what mitigating measures are required, or prohibit cooperation with the supplier in question.

Organisational foundations and responsibilities

The purchasing units in the Lufthansa Group are organised into a single reporting line. They report to the Chief Financial Officer via their respective purchasing managers. In some cases they are centralised, especially for airline-specific actions such as purchasing aircraft or kerosene, and in others, they are decentralised throughout the Group companies (for specific products). Reporting lines are based on responsibilities for different product groups and Group companies. Defining product groups optimises their function by pooling know-how. The Governance, Processes and Sustainability Procurement department was established in 2020 to reflect the growing importance of sustainability. The department, which focuses on the topic of sustainability in purchasing and in the supply chain across the Group, reports directly to the Lufthansa Group's purchasing management function.

The process-based matrix organisation makes it easier to establish sustainability standards because standardised processes and IT systems are increasingly used. Defining responsibilities within the Group also facilitates efficient collaboration. The goal is also to improve the enforcement of sustainability standards.

Targets

The Lufthansa Group expects suppliers to adhere to guidelines

The Lufthansa Group aims for the suppliers of the Group to comply fully with current law, guidelines and regulations concerning fair competition, integrity and responsible practices. The Lufthansa Group seeks to fulfil its due diligence obligations and ensure from the start that no business relationships are entered into with persons or companies that do not act in an ethically sound manner and in compliance with the law. The measures are designed to help identify and screen risky business partners in order to detect, minimise and prevent potential risks in the upstream supply chain. If there are valid reasons, a contractual relationship will not be established or an existing contractual relationship will be terminated.

Measures

Requirements are integrated into supplier contracts

The implementation of the required obligations in supplier contracts was included in the target agreement between the product group managers and the purchasing managers in the Group companies in order to ensure that the required obligations are included in supplier contracts. A monitoring system was also set up during the reporting period to ensure implementation. The results of implementation form part of the performance evaluation for the managers in question.

The Lufthansa Group prepares to implement the German Corporate Due Diligence in Supply Chains Act

For the upstream supply chain, a project was launched in 2021 for the Group-wide, uniform and timely implementation of the requirements under the German Corporate Due Diligence

in Supply Chains Act (Lieferkettensorgfaltspflichtengesetz – LkSG) under the leadership of Group purchasing. The focus here is on determining the necessary adaptations of the existing risk management system to the focus on human rights and related environmental aspects under the LkSG.

A working group consisting of members of the Procurement Lufthansa Group, Group Compliance Office and Corporate Responsibility departments is working on a detailed concept to expand the established risk management system. The working group focused on the requirements of the LkSG and transparently presented the human rights risks mentioned in the law. A structured, initial risk analysis of the direct suppliers will also be used to determine which further implementation measures are required.

The Lufthansa Group's procurement management is confirmed by EcoVadis

In order to demonstrate its sustainability and responsibility towards its customers, the Lufthansa Group participates in EcoVadis, a sustainability assessment platform for global supply chains. In August 2021, the commitment of the Lufthansa Group was reconfirmed for a further year when it received "Silver Status". The procurement processes are also more highly rated than comparable companies in the EcoVadis rating.

Performance indicator

The Lufthansa Group will analyse and implement suitable indicators in line with its targets.

First-time applicability of the EU Taxonomy Regulation (EU) 2020/852



First-time applicability of the EU Taxonomy Regulation (EU) 2020/852

Pursuant to Article 8 of Regulation (EU) 2020/852 of 18 June 2020 establishing a framework to facilitate sustainable investment and amending Regulation EU 2019/2088, Deutsche Lufthansa AG is required to disclose how and to what extent the Lufthansa Group's activities are associated with environmentally sustainable economic activities pursuant to Articles 3 and 9.

Together with the reporting requirements of Delegated Regulation (EU) 2021/2178 published in the Official Journal of the EU on 10 December 2021, Delegated Regulation (EU) 2021/2139 published in the Official Journal of the European Union on 9 December 2021 forms the basis for the first-time publication of taxonomy information.

For financial year 2021, only the share of taxonomy-eligible and the share of non-taxonomy-eligible economic activities in terms of revenues, capital expenditures (CapEx) and operating expenditures (OpEx) as well as supplementary qualitative information are required to be published.

Process

Based on the regulations and delegated regulations in force as of the balance sheet date, the economic activities of the companies covered by the combined non-financial declaration have been analysed to determine whether there are taxonomy-eligible economic activities within the meaning of Article 1 No. 5 of the Supplement to Regulation (EU) 2020/852 of 6 July 2021. Both external revenue-generating and internal economic activities were examined.

The analysis of whether and to what extent taxonomy-eligible economic activities exist is based on the economic activities described in Annex 1 (“climate change mitigation”) and Annex 2 (“climate change adaptation”) of the Supplements to Regulation (EU) 2020/852 of 4 June 2021. The economic activities listed there were first analysed at the company level for their relevance to the Lufthansa Group on the basis of the business purpose of the individual companies. Following that, the share of revenues, CapEx and OpEx of the identified economic activities in relation to the total activities of the group was determined in accordance with the current requirements of the EU taxonomy.

Results

The main economic activities of the Lufthansa Group, the air transport of passengers and freight, were not yet covered by the EU Taxonomy Regulation in the reporting year. As a result, the share of taxonomy-eligible economic activities of the Lufthansa Group in total external revenues amounts to about 2%, in CapEx and OpEx within the meaning of the regulation to about 2% and about 4% respectively.

The Company believes that disclosures should only be included as part of the group management report if they are necessary for an understanding of the Group’s course of business, position and expected development.

This interpretation corresponds to a variant interpretation that the Accounting Standards Committee of Germany also presented in its submission to the European Commission on various issues in connection with the application of Article 8 of the EU Taxonomy Regulation of 7 December 2021.

As the identified share of taxonomy-eligible economic activities within the Group is not considered material in terms of revenues, CapEx and OpEx, reporting is waived.

Summary

The Lufthansa Group believes the responsible and sustainable approach to resources, the environment, customers, employees and suppliers remains an indispensable condition for the acceptance of the Lufthansa Group’s business model, its attractiveness to its stakeholders and ultimately also for its long-term financial stability.

In the financial year 2021, despite the constraints imposed by the pandemic, the Lufthansa Group implemented a variety of measures and applied concepts to strengthen the positive effects of its business activities and further reduce

negative effects wherever possible. These measures are designed to consolidate its position as a leading player in the airline industry, including in terms of corporate responsibility.

This combined non-financial declaration is based on the GRI Standards 2016. The information in this declaration relates to the disclosures and management approaches mentioned in the GRI Content Index, ↗ p. 288. The Lufthansa Group’s contributions to the United Nations global agenda are summarised in the content index Sustainable Development Goals (SDG), ↗ p. 289ff.

Forecast

Lufthansa Group anticipates a significant increase in demand over the course of the year. | Capacity expected to increase to more than 70% of its pre-crisis level in 2022. | Improvement in revenue and Adjusted EBIT expected.

MACROECONOMIC OUTLOOK

Economic and sector-specific developments can have a significant influence on the operating and financial performance of the Lufthansa Group. The following forecast for the course of business is therefore based on assumptions about the development of the wider economy and the sector. These assumptions are described below. The Lufthansa Group continually monitors the development of this operating environment so that it can respond as quickly and comprehensively as possible to any changes.

T051 GPD DEVELOPMENT¹⁾

Forecast 2021 to 2025 compared with the previous year

in %	2021	2022	2023	2024	2025
World	5.6	4.2	3.4	3.1	3.1
Europe	5.6	3.7	2.4	1.7	1.6
Germany	2.7	3.8	2.5	1.4	1.4
North America	5.6	4.1	2.5	2.5	2.4
South America ²⁾	6.4	2.3	2.7	2.8	2.8
Asia/Pacific	6.0	4.8	4.5	4.4	4.4
China	8.1	5.4	5.3	5.2	5.2
Middle East	3.5	5.5	3.9	3.4	2.9
Africa	4.0	3.7	3.9	3.8	4.0

Source: Global Insight World Overview as of 18 Jan 2022.

¹⁾ Forecast.

²⁾ Excluding Venezuela.

Further recovery of the global economy expected, despite uncertainties

According to data from Global Insight, global economic growth of 4.2% is expected for 2022, compared with growth of 5.6% the year before. Growth of 3.7% is forecast for Europe (previous year: 5.6%). The German economy is expected to

grow slightly faster at 3.8% (previous year: 2.7%). The development of the conflict between Russia and Ukraine, the consequences of which are not reflected in the Global Insight forecast, could, however, have a negative impact on the performance of the global economy in 2022.

Inflation risks put interest and foreign exchange markets under pressure

As in the second half of 2021, inflation will remain one of the main drivers of currency movements in 2022. Ongoing supply shortages and higher energy costs are expected to keep the inflation rate high. The coronavirus pandemic and virus variants that may be resistant to the vaccine will remain a risk to the world economy and foreign exchange markets. Analysts expect the euro to strengthen slightly against the US dollar on average in 2022, and to move sideways against the other major currencies.

Rising inflation is putting pressure on the European Central Bank and may initiate a tightening of monetary policy in the euro zone in 2022. The available instruments include the reduction or even termination of net bond purchases and an increase in the base rate. The US Federal Reserve has already initiated a change in monetary policy. Analysts are expecting at least four interest rate increases from the end of the first quarter.

Conflict in Ukraine causes rise in oil price

The conflict between Russia and Ukraine triggered a significant increase in the oil price in the beginning of the year. The spot price on 15 February 2022 was USD 93.28/barrel. Prices are nevertheless expected to fall again slightly in the medium term. As of 15 February 2022, futures contracts for delivery in December 2022 were trading at USD 82.86/barrel, and for delivery in December 2023 at USD 77.54/barrel. Market participants assume that volatility will remain high because of the conflict in Ukraine.

SECTOR OUTLOOK

After the disruption caused by Omicron in the first quarter, an increase in passenger traffic is expected

The International Air Transport Association (IATA) predicts that global passenger traffic – measured by global revenue passenger-kilometres – will grow year-on-year by 51% in 2022. This would bring passenger traffic up to 61% of its pre-crisis level.

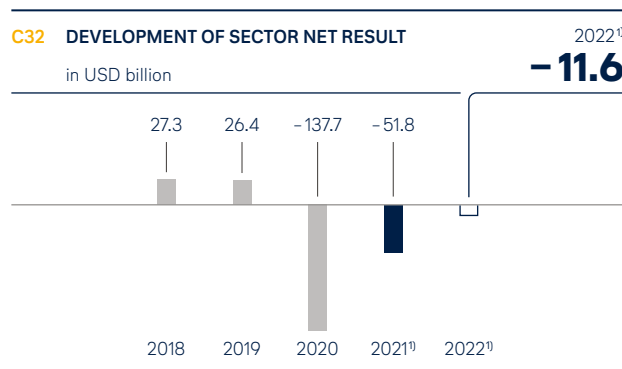
The expectation is that the spread of the new Omicron virus variant, which seems to have displaced the previously dominant and more dangerous variants and to cause less serious illness, will contribute to a global recovery in passenger transport. Under these circumstances, some countries are starting to ease the travel restrictions introduced in the crisis, especially as recent studies suggest that they have no significant effect on infection rates.

In its forecast for 2022, IATA expects significant regional differences in terms of revenue passenger-kilometres. North America is expected to have the fastest recovery, with demand reaching 81% of its pre-crisis level (previous year: 60%), followed by Latin America with 71% (previous year: 48%), Europe with 59% (previous year: 36%), Asia/Pacific with 53% (previous year: 34%), the Middle East with 45% (previous year: 25%), and Africa with 42% (previous year: 33%).

Financial analysts specialising in the sector predict that short-haul tourist traffic in the European market will recover significantly and more strongly than other market segments, after a subdued first quarter. Demand in the traditional travel periods around Easter and in the summer months is expected to be almost back to the pre-crisis level. Travel restrictions are predicted to burden demand to a much lesser degree than was the case in 2021.

Business travel and long-haul routes are expected to grow at a lower rate than tourist traffic. While demand on routes to North America is predicted to be strong, the timing of further opening in Asia remains unclear. China is particularly important for business travel and its restrictive “zero-Covid” strategy continues to weigh on revenue. Analysts anticipate that this strategy will remain in place until the end of 2022. For business travel in particular, it is also expected that the growing acceptance of digital communication formats will be party at the expense of physical travel.

In terms of yields, IATA is expecting a year-on-year increase of 10.0% in 2022 (previous year: increase of 2.0%). The industry is expected to report a net loss of USD 11.6bn (previous year: loss of USD 51.8bn).



¹⁾ Forecast.

Source: IATA Airline Industry Economic Performance (10/2021).

Airfreight to grow further in 2022

Global airfreight traffic, as measured in global revenue cargo tonne-kilometres, increased by 18% in 2021 due to global supply chain problems and a shortage of transport capacity on shipping routes. IATA is expecting this growth to continue in 2022, though at 5% it is lower than the previous year.

Yields in the cargo business are forecast to decline by 8.0% in 2022 (previous year: increase of 15.0%).

Further recovery expected for Aviation Services

As air traffic recovers, demand is also expected to recover for aircraft maintenance, repair and overhaul services (MRO), albeit slowly and with regional differences. The consultancy firm ICF predicts average growth of 8% in 2022 compared with the previous year. The strong rebound of 35% in the EMEA region in 2021 will not continue in 2022, but will remain virtually flat with expected growth of 1%. Apart from China, the Asian region is still highly restricted, so growth here is also forecast to be rather subdued at 6%. Only the Americas region is expected to expand by a solid 18%. The main driver is strong demand for flights within the continent. Some airlines are even now operating significantly above pre-crisis levels.

The airline catering market is highly dependent on air traffic and thereby on applicable travel restrictions. Though a relaxation of restrictions quickly triggered an upturn – as in the second half of 2021 in the USA and European countries – the global rise in infection rates due to the Omicron variant and the highly restrictive opening policies of many Asian countries show that the recovery is fragile. Revenue in 2022 will stay low as a result, with a gradual increase only expected in later years. The resulting production overcapacities are increasing pricing and consolidation pressure in the classical catering segment. The increasing digitalisation on board and the potential it creates for individualised passenger choices requires airline caterers to adapt their competences.

CHANGES IN BUSINESS AND ORGANISATION

The Lufthansa Group regularly reviews its organisational structure and adapts it to any changes in the business environment. Opportunities to increase efficiency are seized in all of the Lufthansa Group's segments and are reflected in the planning.

The focus in the 2022 financial year will be on the further optimisation of the functional process organisation (matrix organisation). Decisions are to be taken faster, processes sped up and collaboration simplified. The clear allocation of responsibility across all Group functions, business units and shared service centres will help to achieve this aim. In this context, the development towards an airline management holding company will also be advanced. This entails greater organisational independence for Lufthansa German Airlines, primarily by separating it from Group functions. ➔ **Group strategy, p. 16ff.**

CHANGES IN REPORTING

Segment reporting and various key performance indicators to be modified from 2022

Following the changes in responsibilities in the Executive Board of Deutsche Lufthansa AG, the commercial and operational integration of Network Airlines and Eurowings was increased in order to realise further synergies. From the financial year 2022 onwards, financial reporting will reflect

this development by combining the passenger airlines of the Lufthansa Group in one segment. This will comprise the current segments Network Airlines and Eurowings.

In the 2021 financial year, revenue in this business segment would have amounted to EUR 9,194m and Adjusted EBIT to EUR -3,722m.

The Executive Board has also decided to align the definition of the performance indicator Adjusted EBIT to the presentation by main competitors. Restructuring expenses in the form of severance payments and significant costs for legal procedures and company transactions not arising in the normal course of business will be eliminated in the adjustment of EBIT from 2022 onwards. This is intended to ensure that the indicator captures the Company's recurring financial performance as accurately as possible. The Lufthansa Group will continue to present a reconciliation between EBIT and Adjusted EBIT in its financial reports that are published on a quarterly basis.

Restructuring expenses that will no longer be included in Adjusted EBIT came to EUR 581m in the 2021 financial year (previous year: EUR 233m) and extraordinary legal costs to EUR 103m (previous year: EUR 0m). On the basis of the new definition, i.e. including these additional adjustments, Adjusted EBIT for the Lufthansa Group would have come to EUR -1,665m in 2021.

The definition of Adjusted ROCE will also be changed. From 2022, the capital base is to be adjusted for the Group's cash and cash equivalents. The new calculation method matches that of direct competitors and thereby enables a better comparison between the performance indicators. The medium-term target of Adjusted ROCE above 10% was already set using the new definition. Cash and cash equivalents came to EUR 7,666m at the end of 2021. On the basis of the new definition, the Lufthansa Group's Adjusted ROCE in 2021 would have been -10.4%.

Moreover, in the future, the definition of Adjusted free cash flow will be changed so that cash inflows and outflows from the sale and acquisition of companies or individual business units which are allocated to investing activities will not be recognised. This helps the Company ensure that the indicator captures the Company's recurring financial performance as accurately as possible. The transition would have led to no material change in the Adjusted free cash flow in 2021.

Finally, the Company will disclose contributions and refunds from the plan assets in cash flow from operating activities. The reason for the transition is the Company's intention to finance current pension payments that are also reported in cash flow from operating activities completely through refunds from the plan assets in the future. This means that in the future, all cash flows that are related to pensions will be shown as part of cash flow from operating activities.

The following forecast already incorporates the planned changes.

OUTLOOK LUFTHANSA GROUP

Group assumes that recovery will continue

The Group assumes it will be able to continue the recovery that began last year, throughout 2022. It bases this expectation above all on the recovery of demand, which has become apparent since the beginning of the year in the form of significantly higher new bookings, and on progress with implementing the cost reduction programme across the Group.

Uncertainty remains high

The Lufthansa Group assumes that customer demand will remain influenced by developments of the pandemic and the resulting changes in travel restrictions. The Ukraine conflict could also affect the Group's recovery. In view of these uncertainties, the Group assumes that customers will continue to book at very short notice. The Group's entire financial outlook is therefore subject to a high degree of forecast uncertainty.

In view of this uncertainty, the Group airlines are focusing on ensuring a high degree of operational flexibility in order to be able to adjust flight capacities to various demand scenarios, also at short notice.

Gradual capacity expansion planned

The Lufthansa Group assumes that demand will increase significantly over the year, so that flight capacity can be expanded accordingly over the course of 2022. The expectation is that capacity expansion will be driven largely by short-haul tourist routes in Europe. The Lufthansa Group is also expecting further recovery on long-haul routes and in the business travel segment, although at a lower level. Overall, the Lufthansa Group anticipates that available capacity for the passenger airlines in 2022 will be above 70% of its pre-crisis level, subject to the development of the Ukraine conflict.

Lufthansa Group revenue expected to rise

Revenue is expected to go up year-on-year in 2022, primarily as a result of the further recovery at the passenger airlines. Revenue is not expected to reach its pre-crisis level in 2022, however.

Lufthansa Group expects an improvement in Adjusted EBIT in 2022

Supported by the progress in implementing the cost-cutting programme, the Lufthansa Group expects Adjusted EBIT to improve in 2022 compared with the previous year. The Company assumes that there will be no circumstances requiring major adjustments, i.e. a divergence between Adjusted EBIT and EBIT in the 2022 financial year. The performance of Adjusted ROCE will depend above all on the extent of the improvement in Adjusted EBIT. This means that both a positive or negative Adjusted ROCE are possible.

Adjusted free cash flow expected to improve

The Lufthansa Group expects cash flow from operating activities to be higher than last year, driven by the forecast earnings improvement, strict management of receivables and liabilities, and the absence of cash outflows in connection with the payment of deferred tax liabilities in the previous year.

Gross capital expenditure of around EUR 2.5bn is expected, mostly for investment in aircraft. The investment volume will be limited by the successful renegotiation of delivery time-tables and payment schedules for aircraft, as well as the use of lease agreements.

Thus, the group predicts that Adjusted free cash flow will improve year-on-year in 2022. The extent of the improvement in Adjusted free cash flow will determine the change in net indebtedness. Both an increase and a reduction in net indebtedness compared with the previous year are possible.

The planned financing activities mainly serve to repay maturing liabilities. The aim is to ensure that liquidity of EUR 6bn to EUR 8bn is available at all times. Taking into account the liquidity available at year-end, the Lufthansa Group therefore assumes that the Company's solvency is assured beyond the end of 2022.

Adjusted EBIT margin above 8% and Adjusted ROCE above 10% in the medium term

In addition to its forecast for 2022, the Lufthansa Group's medium-term targets include an Adjusted EBIT margin of more than 8% from 2024 onwards. The Adjusted ROCE should also be at least 10% from 2024.

Reduction in carbon emissions per passenger-kilometre expected

The Lufthansa Group aims to continue its progress in reducing its environmental impact in 2022. A higher passenger load factor and effects from the ongoing modernisation of the fleet are expected to have a positive impact on specific CO₂ emissions per passenger-kilometre. The Lufthansa Group therefore expects specific carbon emissions to decline year-on-year.

OVERALL STATEMENT BY THE EXECUTIVE BOARD ON THE EXPECTED DEVELOPMENT OF THE LUFTHANSA GROUP

People have a great desire to travel. We therefore expect demand to increase significantly over the course of the year. We have also adapted to the structural changes in the market environment, reduced our structural costs and used financing activities to strengthen our balance sheet in 2021. This has prepared us well to continue our recovery in a market environment that will remain challenging. We are therefore expecting further improvements in Adjusted EBIT and Adjusted free cash flow, and we expect to continue or accelerate the economic recovery that began last year throughout 2022.

The outlook for the Company nonetheless remains subject to considerable uncertainty. Despite encouraging progress made in the fight against the pandemic, it is not yet fully clear whether and to what extent restrictions will be lifted. The beginning of the year will remain affected by the spread of the Omicron variant. The military conflict between Russia and Ukraine and its political and economic consequences represent an additional risk.

Building on the progress expected for 2022, the Executive Board confirms the targets set for 2024. It is convinced that the Company's liquidity at year-end 2021 and the ongoing measures to cut costs and transform the Lufthansa Group will secure the company's existence beyond the forecast period, even if its actual performance falls short of the forecast presented in this report.

T052 FORECAST FOR SIGNIFICANT KPIS

		Result 2021	Forecast for 2022 ¹⁾
Available seat-kilometres	million	145,139	more than 70% of the level of 2019
Revenue	€m	16,811	above previous year
Adjusted EBIT	€m	-2,349	improvement compared with previous year
Cash flow from operating activities	€m	618	above previous year
Capital expenditure (gross)	€m	1,329	around 2,500
Adjusted free cash flow	€m	-855	improvement compared with previous year
Net indebtedness	€m	9,023	dependent on development of Adjusted free cash flow
Adjusted ROCE	%	-7.5	dependent on development of Adjusted EBIT
Specific CO ₂ emissions	grammes	101.6	below previous year

¹⁾ Under consideration of definitional changes. ➤ Changes in reporting, p. 138.

Corporate Governance

SUPERVISORY BOARD AND EXECUTIVE BOARD

Supervisory Board

Karl-Ludwig Kley

Former Chairman of the Executive Board Merck KGaA
Chairman

Christine Behle

Deputy Chairwoman of the trade union ver.di
Employee representative¹⁾
Deputy Chairwoman

Alexander Behrens

Flight attendant
Employee representative¹⁾

Jörg Cebulla

Flight captain
Employee representative

Erich Clementi

Deputy Chairman of the Supervisory Board E.ON SE

Thomas Enders

Member in various Supervisory Boards

Jürgen Jennerke

Chairman of General Works Council Lufthansa Cargo/
Works Council member on leave in absence – ver.di section
Employee representative

Michael Kerkloh

Former Chairman of the Executive Board Flughafen München GmbH²⁾

Carsten Knobel

Chairman of the Executive Board and CEO
Henkel AG & Co. KGaA

Holger Benjamin Koch

Senior Director Airport/ Industry Charges & Commercial Provider Management
Employee representative

Harald Krüger

Former Chairman of the Executive Board Bayerische Motorenwerke Aktiengesellschaft (BMW AG)

Birgit Rohleder

Teamlead IT Application Management Airport Services
Employee representative

Miriam Sapiro

Managing Director & Vice Chairwoman (Public Affairs), Sard Verbinden & Co., USA

Ilja Schulz

Flight captain and member of the Cockpit pilots' union
Employee representative¹⁾

Britta Seeger

Member of the Executive Board Daimler AG (since 4 May 2021)

Birgit Spineux

Purser/Employee representative on leave in absence
Employee representative

Astrid Stange

Former member of the Management Board AXA Group S.A.

Olivia Stelz

Purser/Employee representative on leave in absence
Employee representative

Stephan Sturm

Chairman of the Executive Board Fresenius Management SE (until 4 May 2021)

Angela Titzrath

Chairwoman of the Executive Board Hamburger Hafen und Logistik AG²⁾

Klaus Winkler

Engine mechanic
Employee representative

Honorary Chairman**Dipl.-Ing. Jürgen Weber**

Former Chairman of the Supervisory Board Deutsche Lufthansa AG

¹⁾ Trade union representative in accordance with Section 7 Paragraph 2 Co-determination Act (MitbestG).

²⁾ Member designated by the WSF in accordance with framework agreement.

Executive Board

(Structure since 1 January 2021)

Carsten Spohr

Chairman of the Executive Board
Chief Executive Officer

Harry Hohmeister

Member of the Executive Board
Chief Commercial Officer

Michael Niggemann

Member of the Executive Board
Chief HR & Legal Officer

Christina Foerster

Member of the Executive Board
Chief Customer Officer

Detlef Kayser

Member of the Executive Board
Chief Operations Officer

Remco Steenbergen

Member of the Executive Board
Chief Financial Officer

MANDATES

Other mandates of the Supervisory Board members of Deutsche Lufthansa AG

(As of 31 December 2021)

Karl-Ludwig Kley

- a) BMW AG³⁾ (Deputy Chairman, until 12 May 2021)
- E.ON SE³⁾ (Chairman)

Jürgen Jennerke

- a) Lufthansa Cargo AG (Deputy Chairman)

Stephan Sturm

- a) Fresenius Kabi AG¹⁾ (Chairman)
- Fresenius Medical Care Management AG¹⁾ (Chairman)
- b) VAMED AG²⁾, Austria (Chairman, since 8 July 2021)

Christine Behle

- a) BREMER LAGERHAUS-GESELLSCHAFT – Aktiengesellschaft von 1877 –³⁾ (Deputy Chairwoman)

Harald Krüger

- a) Deutsche Telekom AG³⁾

Angela Titzrath

- a) Evonik Industries AG³⁾
- Talanx AG³⁾
- b) Metrans a.s., Czech Republic

Jörg Cebulla

- a) Sparda-Bank Hessen eG
- b) Albatros Versicherungsdienste GmbH

Miriam Sapiro

- b) Project HOPE, USA

Britta Seeger

- a) Mercedes-AMG GmbH¹⁾ (since 30 November 2021)
- Mercedes-Benz Mobility AG¹⁾
- b) Beijing Mercedes-Benz Sales Service Co., Ltd., China
- Mercedes-Benz (China) Ltd.²⁾, China (Deputy Chairman)
- Mercedes-Benz Formula E Ltd.²⁾, United Kingdom
- Mercedes-Benz South Africa Ltd.²⁾, South Africa
- smart Automobile Co. Ltd.²⁾, China

Erich Clementi

- a) E.ON SE³⁾ (Deputy Chairman)

Thomas Enders

- a) Knorr Bremse AG³⁾
- b) Liliium NV³⁾, Netherlands (Chairman)
- Linde plc³⁾, Republic of Ireland

a) Membership of supervisory boards required by law.

b) Membership of comparable supervisory bodies at companies in Germany and abroad.

¹⁾ Group mandate in accordance with Section 100 Paragraph 2 Sentence 2 AktG.

²⁾ Other group mandate.

³⁾ Publicly listed company.

Mandates of the Executive Board members of Deutsche Lufthansa AG (As of 31 December 2021)

Carsten Spohr

- a) Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft³⁾

Christina Foerster

- a) Eurowings GmbH¹⁾
(until 31 May 2021)
LSG Lufthansa Service Holding AG¹⁾
(until 30 May 2021)
Lufthansa AirPlus
Servicekarten GmbH¹⁾
(Chairwoman, until 30 June 2021)
- b) Austrian Airlines AG²⁾, Austria
(Chairwoman)
Kulinary Holding AG, Switzerland
SN Airholding SA/NV²⁾, Belgium
(Chairwoman)
Swiss International Air Lines AG²⁾,
Switzerland

Harry Hohmeister

- a) Eurowings GmbH¹⁾
(Chairman, since 11 June 2021)
Lufthansa Cargo AG¹⁾
(Chairman, until 26 May 2021)
- b) Aircraft Maintenance
and Engineering Corporation
(AMECO), China
(until 9 May 2021)
Günes Ekspres Havacilik A.S.
(SunExpress), Turkey

Detlef Kayser

- a) Lufthansa Technik AG¹⁾ (Chairman)
LSG Lufthansa Service Holding AG¹⁾
(Chairman)
- b) Austrian Airlines AG²⁾, Austria
(Deputy Chairman,
until 17 June 2021)
Swiss International Air Lines AG²⁾,
Switzerland (until 15 July 2021)

Michael Niggemann

- a) Lufthansa Cargo AG¹⁾
(Chairman, since 7 June 2021)

Remco Steenbergen

- a) Lufthansa AirPlus
Servicekarten GmbH¹⁾
(Chairman, since 1 July 2021)
- b) Swiss International Air Lines AG²⁾,
Switzerland (since 15 July 2021)

C33 SUPERVISORY BOARD COMMITTEES

as of 31 Dec 2021

Steering Committee	Audit Committee	Nomination Committee	Arbitration Committee in accordance with Section 27 Paragraph 3 Co-determination Act (MitbestG)
<p>Karl-Ludwig Kley, Chairman</p> <p>Christine Behle, Deputy Chairwoman</p> <p>Thomas Enders</p> <p>Ilja Schulz</p>	<p>Stephan Sturm, Chairman (until 4 May 2021)</p> <p>Harald Krüger, Chairman (since 4 May 2021)</p> <p>Alexander Behrens</p> <p>Jörg Cebulla</p> <p>Michael Kerkloh</p> <p>Carsten Knobel</p> <p>Klaus Winkler</p>	<p>Karl-Ludwig Kley, Chairman</p> <p>Thomas Enders</p> <p>Harald Krüger</p>	<p>Karl-Ludwig Kley, Chairman</p> <p>Christine Behle, Deputy Chairwoman</p> <p>Thomas Enders</p> <p>Ilja Schulz</p>
Six meetings in 2021	Six meetings in 2021	One meeting in 2021	No meetings in 2021

a) Membership of supervisory boards required by law.

b) Membership of comparable supervisory bodies at companies in Germany and abroad.

¹⁾ Group mandate in accordance with Section 100 Paragraph 2 Sentence 2 AktG.

²⁾ Other group mandate.

³⁾ Publicly listed company.

DISCLOSURES IN ACCORDANCE WITH SECTION 289A PARAGRAPH 1 HGB AND SECTION 315A PARAGRAPH 1 HGB

Composition of issued capital, types of shares, rights and duties

Deutsche Lufthansa AG's issued capital amounts to EUR 3,060,443,248.64 and is divided into 1,195,485,644 registered shares. Each share corresponds to EUR 2.56 of the issued capital. The transfer of shares requires the Company's authorisation (restriction of transferability). The Company may only withhold authorisation if registering the new shareholder in the share register could jeopardise the maintenance of air traffic rights. This did not occur in the financial year 2021. Shareholders exercise their rights and cast their votes at the Annual General Meeting in accordance with statutory regulations and the Company's Articles of Association. Each share is entitled to one vote.

Voting and share transfer restrictions

To preserve international air traffic rights and air traffic rights to fly to various international destinations, the proportion of German/European shareholders must be at least 50% of the Company's issued capital. If the proportion of foreign shareholders reaches 40%, Deutsche Lufthansa AG is granted special permission under Section 4 Paragraph 1 German Aviation Compliance Documentation Act (LuftNaSiG) together with Section 71 Paragraph 1 No. 1 German Stock Corporation Act (AktG) to buy back its own shares. If the proportion of foreign shareholders in the share register reaches 45%, the Company is authorised, subject to Supervisory Board approval, to increase issued capital by up to 10% by issuing new shares for payment in cash without subscription rights for existing shareholders (Section 4 Paragraphs 2 and 3 LuftNaSiG together with Section 4 Paragraph 3 of the Articles of Association). If the proportion of foreign shareholders approaches the 50% threshold, the Company is entitled to withhold authorisation to register new foreign shareholders in the share register (Section 5 Paragraph 1 of the Articles of Association). Furthermore, the Company is authorised, according to Section 5 Paragraph 2 LuftNaSiG and subject to the approval of the Supervisory Board, to require the most recently registered shareholders to sell their shares. From the fourth day after this requirement has been published, the shareholders concerned can no longer exercise the rights conferred by the shares concerned. If they do not comply with the requirement within four weeks, the Company is entitled after a further notice period of three weeks to declare the shares to be forfeited and to compensate the shareholders accordingly. On 31 December 2021, foreign shareholders held 12.2% of the shares in the shareholders' register of the Company. No steps were taken in 2021 to limit the percentage of foreign shareholders. Detailed information on the German Aviation Compliance Documentation Act (LuftNaSiG) and the quarterly update on our shareholder structure can be found at www.lufthansa-group.com/investor-relations.

The annual share investment programmes for employees and managers have time-based restrictions on trading in shares, particularly lock-up periods of up to four years.

Direct or indirect shareholdings with more than 10% of voting rights

As of 31 December 2021, the Company had received the following notification of direct or indirect shareholdings with more than 10 % of voting rights:

- Economic Stabilisation Fund (ESF) 14.09% (notified on 7 October 2021)

Holders of shares with special controlling rights

The Company has no shares that confer special controlling rights. The ESF has special shareholder rights, however, such as veto rights over certain types of financing and Supervisory Board seats. Additional information about the special rights of the ESF can be found at <https://investor-relations.lufthansagroup.com/en/corporate-governance/stabilization-packages.html>.

Control of voting rights for employee shares when control rights are exercised indirectly

Where the Company issues shares to its staff as part of its employee programmes, these shares are transferred to the employees directly. The staff beneficiaries can exercise the controlling rights that accrue to them from the employee shares directly in the same way as other shareholders, in accordance with statutory regulations and the provisions of the Articles of Association.

Statutory regulations and provisions of the Company's Articles of Association on the appointment and dismissal of members of the Executive Board and amendments to the Company's Articles of Association

The Supervisory Board appoints the members of the Executive Board and decides how many members there should be. The Supervisory Board can revoke appointments for membership and to the position of Chairman of the Executive Board for good reason. All amendments to the Articles of Association must be approved by resolution of an Annual General Meeting, with a majority of at least three quarters of the issued capital present. The Supervisory Board is authorised to adopt changes to the Articles of Association that only relate to wording (Section 11 Paragraph 4 of the Articles of Association). Furthermore, the Supervisory Board is entitled to amend Section 4 of the Articles of Association if authorised capital is exercised or expires.

Rights of the Executive Board to issue or repurchase shares

As of 31 December 2021, Deutsche Lufthansa AG had Authorised Capital A amounting to EUR 450,000,000.00 and Authorised Capital B amounting to EUR 22,362,168.32:

A resolution passed at the Annual General Meeting on 7 May 2019 authorised the Executive Board until 6 May 2024, subject to approval by the Supervisory Board, to increase the Company's issued capital by up to EUR 450,000,000.00 by issuing new registered shares on one or more occasions for payment in cash or in kind (Authorised Capital A). No use was made of this authorisation in the reporting period.

A resolution passed by the Annual General Meeting on 7 May 2019 authorised the Executive Board until 6 May 2024, subject to approval by the Supervisory Board, to increase the Company's issued capital on one or more occasions by up to EUR 30,000,000.00 by issuing new registered shares to employees (Authorised Capital B) for payment in cash. Existing shareholders' subscription rights are excluded. The Company made no use of this authorisation in the reporting period.

A resolution passed at the Annual General Meeting on 5 May 2020 authorised the Executive Board until 4 May 2025, subject to approval by the Supervisory Board, to issue bearer or registered convertible bonds, bond/warrant packages, profit sharing rights or participating bonds (or combinations of these instruments) for a total nominal value of up to EUR 1,500,000,000. A convertible bond was issued for EUR 600,000,000 in November 2020. This used up a large part of the existing authorisation to grant shares to the holders or creditors of the bond, and to increase the Company's share capital by up to EUR 122,417,728 by issuing up to 47,819,425 new registered shares. The convertible bond issued in November 2020 entitles the bearer to convert up to 46,296,296 shares, increasing share capital by up to EUR 118,518,518. The contingent capital increase will only take place to the extent that the holders or creditors of conversion and/or option rights, or those with a conversion obligation from convertible bonds, bond/warrant packages, profit-sharing rights or participating bonds (or any combination of these instruments) issued by the Company or its Group companies pursuant to the authorisation given at the Annual General Meeting for the period 5 May 2020 to 4 May 2025 exercise

their conversion or option rights, or if the holders or creditors of convertible bonds meet their conversion obligations or, if the Company exercises its option, Company shares are granted in lieu of payment of all or part of the amount in cash due, to the extent that a cash compensation is not granted or the Company's treasury shares are not used for settling the obligation. The new shares are entitled to share in profits from the beginning of the reporting year in which they are issued by the exercise of conversion or option rights, by meeting a conversion obligation, or by the issue of rights to sell shares. The Executive Board is authorised to determine the further details of the way in which the contingent capital increase is to be carried out.

The Company's contingent capital was increased by up to EUR 102,014,776.32, divided into up to 39,849,522 registered shares, by resolution of the extraordinary Annual General Meeting on 25 June 2020 (Contingent Capital 2020/II). The new shares are entitled to profits from the beginning of the financial year in which they are issued. Notwithstanding Section 60 paragraph 2 of the German Stock Corporation Act (AktG), and to the extent permitted by law, the Executive Board may determine that new shares for a completed financial year also participate in the profits. The contingent capital increase serves to provide shares for the exercise of conversion rights granted to the Economic Stabilisation Fund (ESF) as a silent shareholder in the company for Silent Participation II-A by resolution of the extraordinary Annual General Meeting on 25 June 2020 in the event of a takeover (as defined below). This condition ceases to apply, however, if the ESF sells the Silent Participation II-A to a third party (as defined below), so that the Silent Participation II-A can be converted at any time after it has been transferred to the third party or parties; the scope of this conversion right is restricted to 39,849,522 shares. A third party is any natural or legal person with the exception of (i) the German federal state or one or more regional states, (ii) any other German regional authority and (iii) an entity or public agency belonging directly to the federal or a regional state. The new shares are issued at EUR 2.56 per share. The contingent capital increase will only take place to the extent that the ESF (or a third party after the Silent Participation II-A has been assigned) exercises the conversion right. The Executive Board is authorised to define further details of the contingent capital increase and its implementation with the approval of the Supervisory Board.

The Company's contingent capital was increased by up to EUR 897,985,223.68, divided into up to 350,775,478 registered shares, by resolution of the extraordinary Annual General Meeting on 25 June 2020 (Contingent Capital 2020/III). The new shares are entitled to profits from the beginning of the financial year in which they are issued. Notwithstanding Section 60 paragraph 2 of the German Stock Corporation Act (AktG), and to the extent permitted by law, the Executive Board may determine that new shares for a completed financial year also participate in the profits. The contingent capital increase serves to provide shares for the exercise of conversion rights granted to the ESF of the Federal Republic of Germany as a silent shareholder in the company for antidilution and/or coupon protection (each as defined below) for Silent Participation II-B by resolution of the extraordinary Annual General Meeting on 25 June 2020.

- In the event of a capital increase by the Company, “antidilution” refers to cases that protect the ESF from dilution (x) of its increased equity interest of 25% plus one share following conversion of the Silent Participation II-A in the event of a takeover (as defined below), unless the ESF has waived its right to antidilution (as defined below), or (y) that protect its equity interest of 20% in the event of a capital increase without subscription rights, unless i) the ESF is offered an investment in the capital increase without subscription rights or ii) the ESF has waived its right to antidilution (as defined below).
- “Coupon protection” refers to cases in which the accrued coupon on the Silent Participation I (x) is not paid for any financial year up to and including 2023 and (y) if the accrued coupon on the Silent Participation I is again not paid for financial years 2024 and 2025, unless the Silent Participation II-A has been converted. In the case of coupon protection, the conversion right is limited to 5% of share capital after conversion in each of the cases (x) and (y).
- A takeover is deemed to have occurred if a decision is published to make a takeover offer pursuant to Section 10 Securities Acquisition and Takeover Act (WpÜG) or if control is acquired pursuant to Section 35 in combination with Section 29 WpÜG.
- Antidilution is waived if the ESF i) does not exercise its subscription right in the course of a capital measure by the Company with subscription rights or ii) does not participate in the offer of a capital increase without subscription rights or iii) has sold one or more of the shares in its equity interest.

If the conversion right is exercised to protect against dilution (as defined above), the new shares will be issued at the current market price on the conversion date, less 10 %. If the conversion right is exercised to protect the coupon (as defined above), they are issued at the current market price on the conversion date, less 5.25 %. The contingent capital increase will only take place if the ESF makes use of its conversion right. The conversion rights expire if Silent Participation II-B is assigned to a third party. The Executive Board is authorised to define further details of the contingent capital increase and its implementation with the approval of the Supervisory Board.

Deutsche Lufthansa AG is entitled to repurchase shares and to sell repurchased shares in those cases defined in Section 71 AktG. In addition, the Company is authorised by resolutions of the Annual General Meeting on 7 May 2019 to buy back its own shares until 6 May 2024. The resolutions can be used, among other things, to issue shares for the settlement of employee share programmes and to expand the financing alternatives in the event that another company or an equity stake in a company is acquired. The proportion of shares acquired on the basis of this authorisation, along with any other Lufthansa shares that the Company has already acquired and still holds, must at no time amount to more than 10% of issued capital.

However, Deutsche Lufthansa AG is forbidden from buying back shares, unless they are shares held by the ESF, until the end of the stabilisation measures.

Further information on authorised capital, contingent capital and share buy-backs ➔ **Consolidated financial statements, note 33, p. 197ff.**

Important Company agreements subject to a change-of-control clause in the event of a takeover offer

The EMTN programme operated by the Company to issue bonds includes a change-of-control clause, according to which holders of bonds issued thereunder can demand redemption of the bond in the event of a change of control. The change of control is tied to the concepts of control, which are defined in detail in the EMTN programme, and of a rating downgrade resulting from the change of control within a change-of-control period. The following bonds are currently outstanding under this programme:

- EUR 500m bond maturing on 6 September 2024
- EUR 1,000m bond maturing on 29 May 2026
- EUR 750m bond maturing on 11 February 2025
- EUR 850m bond maturing on 11 February 2028
- EUR 500m bond maturing on 14 July 2024
- EUR 500m bond maturing on 14 July 2029
- EUR 900m bond maturing on 16 May 2027
- EUR 600m bond maturing on 16 November 2023

In August 2015, Deutsche Lufthansa AG issued a hybrid bond for EUR 500m, due on 12 August 2075, which also includes the change-of-control clause described above. Furthermore, Deutsche Lufthansa AG has issued borrower's note loans that include similar change-of-control clauses. As of 31 December 2021, a total of EUR 1,558m was still outstanding.

In November 2020, Deutsche Lufthansa AG issued a convertible bond for EUR 600m, due on 17 November 2025. The terms of the bond include a change-of-control clause that adjusts the conversion price and entitles the creditors to early repayment of the loan in the event of a change of control. A change of control occurs if one or more persons acquire control of Deutsche Lufthansa AG or if, in the event of a mandatory offer for ordinary shares, a situation occurs in which ordinary shares collectively hold more than 50% of the voting rights in Deutsche Lufthansa AG.

Compensation agreements with Executive Board members or employees in the event of a takeover offer

In the event of a change of control at Deutsche Lufthansa AG defined more precisely in the employment contract, the Executive Board members and the Company are entitled to terminate the contract within six months of this change of control.

If the contract ends because the special termination right is exercised or the contract is revoked amicably within six months of and in connection with the change of control, the Executive Board member is entitled to compensation for remuneration outstanding for the remainder of the contract. The termination payment may not exceed 150% of the contractually agreed cap on severance pay of two years' remuneration. For new and repeat appointments after 1 January 2020, the Company will follow the recommendation of the German Corporate Governance Code as amended on 16 December 2019 and also apply the cap on severance pay to the event of a change of control. ➔ **Remuneration report, p. 271ff.**

DECLARATION ON CORPORATE GOVERNANCE IN ACCORDANCE WITH SECTION 289F HGB AND SECTION 315D HGB

The declaration on corporate governance required for listed companies in accordance with Section 289f HGB and Section 315d HGB has been issued and made publicly available on the Company's website at ➔ www.lufthansagroup.com/corporate_governance_declaration.

Notes to the individual financial statements of Deutsche Lufthansa AG (HGB)

Revenue of Deutsche Lufthansa AG up by 21% to EUR 5,164m.
| Net profit of EUR -2,310m. | Total assets climb to EUR 34,780m.

The financial statements of Deutsche Lufthansa AG have been prepared in accordance with the German Commercial Code (HGB), the supplementary provisions of the German Stock Corporation Act (AktG) and the Articles of Association, and have been audited by Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Eschborn/Frankfurt am Main. They are published in the Federal Gazette. The financial statements are permanently available online. <http://investor-relations.lufthansagroup.com/en/financial-reports.html>.

In this annual report, the management report for Deutsche Lufthansa AG has been combined with the management report for the Lufthansa Group. Deutsche Lufthansa AG and its results comprise the flight operations of Lufthansa German Airlines as well as the Group headquarters with the central functions for Corporate Development, Finance and Controlling, Communications, Public Affairs, Human Resources, Legal and Compliance, as well as Data Security, Safety and Procurement. The economic environment for Deutsche Lufthansa AG is essentially the same as for the Group. [➤ Macroeconomic situation, p. 33f.; Sector developments, p. 34f.; Course of business, p. 36ff.](#)

EARNINGS POSITION

Deutsche Lufthansa AG reports a net loss for the financial year 2021 of EUR -2,310m (previous year: EUR -780m). Non-recurring income from the realisation of a book gain lifted the result the previous year. The earnings position remained dominated by the severe restrictions to flight operations resulting from the pandemic. A positive financial result and income from the recognition of deferred taxes reduced Deutsche Lufthansa AG's operating loss.

Revenue and income

23 million passengers transported

Deutsche Lufthansa AG carried 23 million passengers in 2021; 31% more than in the previous year (previous year: 18 million). This is around one third of the pre-crisis figure. Capacity rose by 30% and sales increased by 27%. The passenger load factor decreased by 1.7 percentage points to 60.4%. Traffic revenue went up by 28% to EUR 4,480m (previous year: EUR 3,502m).

Operating income down by 46%

Revenue went up by 21% to EUR 5,164m in 2021 (previous year: EUR 4,280m). Total operating income declined by 46% to EUR 6,039m (previous year: EUR 11,105m). The fall in operating income is mainly the result of the book gain of EUR 5,608m realised the previous year in connection with the capital contribution at AirTrust AG.

Expenses

Operating expenses down by 13%

Operating expenses came to EUR 9,362m in the reporting year and were therefore 13% lower than in the previous year (previous year: EUR 10,765m).

The decline is mainly due to the absence of the previous year's extraordinary effects. These relate to impairment losses of EUR 674m on several aircraft, as well as the overhedging of fuel prices by EUR 467m due to the fall in traffic as a result of the pandemic, which was recognised in other operating expenses.

The cost of materials and services sank year-on-year by 6% to EUR 4,776m (previous year: EUR 5,071m). Fuel expenses went up by 20% to EUR 1,153m mainly due to pricing (previous year: EUR 959m). Fuel expenses were 50% higher than the previous year's figure after adjustment for fuel hedging.

The costs of purchased services decreased by 11% to EUR 3,589m (previous year: EUR 4,050m). This is partly due to the decline in expenses for external MRO services, which decreased year-on-year by 10% to EUR 923m primarily because of fewer maintenance inspections (previous year: EUR 1,025m). At the same time, expenses for operating leases declined year-on-year by 41% to EUR 737m (previous year: EUR 1,246m). The decline is principally the result of the provision for impending losses of EUR 337m recognised the previous year for onerous contracts in connection with aircraft leases. Charter expenses declined year-on-year by 12% to EUR 367m (previous year: EUR 417m). This decline is largely due to the fact that from 2021 Eurowings Discover has operated some of the tourist long-haul services chartered by Deutsche Lufthansa AG from Brussels Airlines and Sun-Express the previous year.

The increase in flight operations year-on-year caused fees and charges to rise by 22% to EUR 874m (previous year: EUR 719m). The increase was offset by price and exchange rate movements.

Staff costs rose by 9% to EUR 2,408m (previous year: EUR 2,217m), mainly due to non-recurring expenses of EUR 321m for restructuring and severance payments (previous year: EUR 68m), which were based on new or existing redundancy agreements. In the context of short-time work, EUR 419m was received in reimbursement of wage-replacement benefits and social security contributions paid (previous year: EUR 430m).

Depreciation, amortisation and impairment losses declined year-on-year by 65% to EUR 398m (previous year: EUR 1,135m). The decline comes mainly from last year's impairment losses on several mostly four-engine aircraft models which are being permanently retired or transferred to long-term parking mode.

Other operating expenses of EUR 1,780m were 24% down on the year (previous year: EUR 2,342m). This decline stems from the absence of expenses of EUR 467m for fuel hedging the previous year and a significant fall of EUR 207m in expenses for exchange rate losses. It was offset by higher expenses for legal risks in the reporting year.

Earnings performance

Result from operating activities down to EUR -3,323m

The result from operating activities decreased by EUR 3,663m to EUR -3,323m in the financial year 2021 (previous year: EUR 340m). Adjusted EBIT, calculated as for the Group, came to EUR -2,318m in the financial year (previous year: EUR -5,421m). Reconciliation items of EUR 21m in the reporting year were not material, in contrast to the previous year's figure (EUR -4,808m).

Financial result positive at EUR 351m

The financial result climbed by EUR 2,466m to EUR 351m (previous year: EUR -2,115m). It was made up of the result from equity investments of EUR 1,008m (previous year: EUR -806m), net interest of EUR -634m (previous year: EUR 1,162m) and other financial items of EUR -23m (previous year: EUR 147m).

T053 TRENDS IN TRAFFIC REGIONS OF DEUTSCHE LUFTHANSA AG

	Traffic revenue		Number of passengers		Available seat-kilometres		Revenue seat-kilometres		Passenger load factor	
	2021 in €m	Change in %	2021 in thousands	Change in %	2021 in millions	Change in %	2021 in millions	Change in %	2021 in %	Change in pts
Europe	2,111	39	18,215	34	25,920	39	17,939	57	69.2	8.2
America	1,446	27	2,660	30	36,020	37	20,590	29	5.2	-3.7
Asia/Pacific	443	-17	602	-40	8,793	-28	4,333	-45	49.3	-15.5
Middle East/Africa	480	55	1,584	74	11,628	93	6,904	75	59.4	-6.1
Total	4,480	28	23,061	31	82,361	30	49,766	27	60.4	-1.7

The result from equity investments includes profit and loss transfers of EUR 673m (previous year: EUR -1,146m) and other investment income of EUR 335m (previous year: EUR 340m). The significant increase is mainly due to the fact that the earnings of Lufthansa Cargo AG almost doubled to EUR 1,284m (previous year: EUR 650m) and losses were reduced significantly at Eurowings GmbH, Lufthansa Technik AG and LSG Lufthansa Service Holding AG. The Eurowings segment's earnings came to EUR -352m (previous year: EUR -861m), the loss at Lufthansa Technik AG came to EUR -97m (previous year: EUR -631m) and the loss at LSG Lufthansa Service Holding AG came to EUR -94m (previous year: EUR -266m). Whereas Lufthansa Commercial Holding GmbH reported a higher loss than the previous year of EUR -144m (previous year: EUR -77m), Lufthansa CityLine GmbH contributed positive earnings of EUR 5m (previous year: EUR -67m), as did Miles & More GmbH with EUR 55m (previous year: EUR 94m) and Delvag AG with EUR 16m (previous year: EUR 12m). Other income from investments included the dividends from Austrian leasing companies of EUR 334m (previous year: EUR 334m).

Net interest came to EUR -634m in the financial year (previous year: EUR -1,162m). It declined by EUR 1,178m (previous year: EUR 651m) because of a reduction in the discount rate used to measure pension provisions of 1.9% (previous year: 2.3%). It was offset by the significantly better year-on-year market valuation of EUR 724m for the pension assets used to fund retirement benefit obligations (previous year: EUR -361m).

Impairment losses of EUR 23m on investments and current securities recognised in the financial result were significantly lower than in the previous year (EUR 147m). These consist of write-downs of EUR 14m on current securities whose market value had fallen, as well as an additional write-down on the remaining training loans for junior pilots (EUR 9m) that was required in connection with current litigation.

**T054 INCOME STATEMENT FOR DEUTSCHE LUFTHANSA AG
IN ACCORDANCE WITH HGB**

in €m	2021	2020
Traffic revenue	4,480	3,502
Other revenue	684	778
Total revenue	5,164	4,280
Other operating income	875	6,825
Cost of materials and services	-4,776	-5,071
Staff costs	-2,408	-2,217
Depreciation, amortisation and impairment	-398	-1,135
Other operating expenses	-1,780	-2,342
Result from operating activities	-3,323	340
Result from other equity investments	1,008	-806
Net interest	-634	-1,162
Impairment on investments and current securities	-23	-147
Financial result	351	-2,115
Current income taxes	-8	-51
Deferred income taxes	701	1,065
Earnings after taxes	-2,279	-761
Other taxes	-31	-19
Net profit/loss for the year	-2,310	-780
Profit brought forward from the previous year	-780	298
Transfers to retained earnings	-	-298
Distributable earnings	-3,090	-780

Loss for the year comes to EUR -2,310m

The operating result and financial result add up to EUR -2,972m (previous year: EUR -1,775m). In the reporting year, expenses for income taxes for previous years of EUR 8m were more than offset by deferred tax income of EUR 701m. Expenses of EUR 31m were incurred in the financial year for other taxes. The total net loss for 2021 therefore came to EUR -2,310m (previous year: EUR -780m). Adding the net loss of EUR -780m carried forward from the previous year produces a net loss for financial year 2021 as reported in the commercial balance sheet of EUR -3,090m (previous year: EUR -780m).

FINANCIAL POSITION

Cash flow

Liquidity of EUR 4,101m

The significant improvement of EUR 2,524m in cash flow from operating activities to EUR -1,755m (previous year: EUR -4,279m) is largely due to the increase in customer demand. Cash flow from investing activities came to EUR -323m as of the reporting date (previous year: EUR 426m). The result from equity investments (EUR 1,008m) and loan and capital repayments by affiliated companies (EUR 1,247m) was offset by investments in various securities (EUR 1,430m) and in physical and long-term financial assets (EUR 1,015m). Cash flow from financing activities came to EUR 2,729m in the financial year (previous year: EUR 4,760m) and resulted largely from the capital increase without the contribution in kind (EUR 1,880m), the drawdown of the Silent Participation I agreed with the ESF (EUR 1,500m) and the issue of various bonds (EUR 4,100m). It was offset by the repayment of ESF and KfW stabilisation measures (EUR 3,218m) and various borrower's note loans and short-term borrowing (EUR 1,882m). Total cash and cash equivalents therefore came to EUR 983m (previous year: EUR -1,635m). Current securities rose by EUR 1,428m to EUR 5,084m (previous year: EUR 3,656m). Liquidity thereby increased overall by EUR 2,080m to EUR 4,101m (previous year: EUR 2,021m).

NET ASSETS

Total assets up by EUR 2,508m

Total assets as of 31 December 2021 climbed by EUR 2,508m or 8% to EUR 34,780m (31 December 2020: EUR 32,272m). Non-current assets accounted for 64% of total assets at year-end (31 December 2020: 71%).

Assets

Non-current assets down by EUR 680m

Non-current assets declined by EUR 680m or 3% to EUR 22,357m (31 December 2020: EUR 23,037m). Aircraft were up by EUR 109m compared with the previous year's level mainly due to investing activities which exceeded the amount of depreciation. Non-current financial assets decreased compared to 31 December 2020 by EUR 738m. New and increased loans to affiliated companies (EUR 60m) were offset in the financial year 2021 by repayments of EUR 915m.

Current assets increase by EUR 2,476m

Current assets rose by 42% to EUR 8,431m (31 December 2020: EUR 5,955m). The increase stems mainly from significantly larger securities positions and bank balances than the previous year's level.

Deferred tax assets up by EUR 701m

Deferred tax assets went up in the reporting year by 22% to EUR 3,908m (31 December 2020: EUR 3,207m). EUR 487m of the increase in deferred tax assets stems from higher temporary differences, mostly in connection with pension provisions. In addition, deferred tax assets of EUR 222m were recognised on tax loss carry-forwards in the reporting year.

T055 BALANCE SHEET FOR DEUTSCHE LUFTHANSA AG IN ACCORDANCE WITH HGB

in €m	31 Dec 2021	31 Dec 2020
Assets		
Intangible assets	348	385
Aircraft	5,892	5,783
Property, plant and other equipment	55	69
Financial investments	16,062	16,800
Non-current assets	22,357	23,037
Inventories	114	111
Trade receivables	229	102
Other receivables	1,525	1,299
Securities	5,084	3,655
Cash and cash equivalents	1,479	788
Current assets	8,431	5,955
Prepaid expenses	84	73
Deferred tax assets	3,908	3,207
Excess of plan assets over provisions for pensions	0	-
Total assets	34,780	32,272
Shareholders' equity and liabilities		
Issued capital	3,060	1,530
Capital reserve	1,010	378
Retained earnings	6,498	6,498
Distributable earnings	-3,090	-780
Shareholders' equity	7,478	7,626
Provisions	8,485	6,864
Bonds	6,804	2,827
Liabilities to banks	1,813	4,215
Payables to affiliated companies	4,641	4,659
Other liabilities	5,542	6,067
Liabilities and provisions	18,800	17,768
Deferred income	17	14
Total shareholders' equity and liabilities	34,780	32,272

Shareholders' equity and liabilities

Equity still in excess of EUR 7bn

The loss of EUR -2,310m compared to 31 December 2020, offset by the capital increase of EUR 2,162m, meant that shareholders' equity decreased year-on-year by 2% and came to EUR 7,478m on the reporting date (31 December 2020: EUR 7,626m). Since total assets also increased, the equity ratio declined by 2.1 percentage points to 21.5% (31 December 2020: 23.6%). The information required according to Section 160 Paragraph 1 No. 2 AktG on the portfolio development of treasury shares is provided in the Notes [➤ Note 33, p. 197ff.](#)

Non-current liabilities increase by EUR 3,101m

The Company's non-current liabilities rose by 26% in the 2021 financial year to EUR 15,084m (31 December 2020: EUR 11,983m). This is mainly due to the issue of several bonds.

The increase in shareholders' equity and non-current liabilities and provisions, accompanied by an increase in total assets, meant that non-current funding accounted for a larger proportion of total assets of 65% (31 December 2020: 61%). Non-current funds cover 101% of non-current assets (31 December 2020: 85%).

Current liabilities down by EUR 445m

At EUR 12,218m, current liabilities were EUR 445m below last year's figure (31 December 2020: EUR 12,663m). This is mainly due to the repayment of several borrower's note loans and short-term borrowing in the previous year. By contrast, the provision for unused flight documents increased.

Net debt down by EUR 1,032m

Net debt declined by EUR 1,032m to EUR 6,211m (31 December 2020: EUR 7,243m) mainly due to the repayment of ESF and KfW stabilisation measures (EUR 2,000m) and various borrower's note loans and short-term borrowing (EUR 1,882m). The securities portfolio also increased compared to 31 December 2020 by EUR 1,429m. It was offset primarily by the issue of several bonds (EUR 4,100m).

OTHER DISCLOSURES

Risk report

Business at Deutsche Lufthansa AG is subject to essentially the same risks and opportunities as business at the Network Airlines segment as presented in the consolidated financial statements. Deutsche Lufthansa AG is exposed to the risks of its equity investments and subsidiaries in proportion to its respective equity stakes. [➤ Network Airlines business segment, p. 53ff.](#)

Supplementary report

The main events taking place after the reporting date are those described in the consolidated financial statements pertaining to the Network Airlines business segment.

Forecast

Future business performance at Deutsche Lufthansa AG is subject to essentially the same factors as Lufthansa German Airlines as presented in the consolidated financial statements. Deutsche Lufthansa AG is exposed to the performance of its equity investments and subsidiaries in proportion to its respective equity stakes.

Further information on anticipated macroeconomic developments and the performance of the segments, as well as the assumptions on which the Group forecast is based, can be found in the [➤ Forecast, p. 136ff.](#)

CONSOLIDATED FINANCIAL STATEMENTS

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Consolidated income statement for the financial year 2021

T056 CONSOLIDATED INCOME STATEMENT

in €m	Notes	2021	2020
Traffic revenue	4	11,876	9,078
Other revenue	5	4,935	4,511
Total revenue		16,811	13,589
Changes in inventories and work performed by entity and capitalised	6	109	175
Other operating income ¹⁾	7	1,602	1,897
Cost of materials and services	8	-8,946	-8,453
Staff costs	9	-6,328	-6,436
Depreciation, amortisation and impairment ²⁾	10	-2,351	-4,389
Other operating expenses ³⁾	11	-3,215	-3,472
Profit/loss from operating activities		-2,318	-7,089
Result of equity investments accounted for using the equity method	12	-22	-276
Result of other equity investments	12	24	12
Interest income	13	-6	83
Interest expenses	13	-435	-417
Other financial items	14	151	-944
Financial result		-288	-1,542
Profit/loss before income taxes		-2,606	-8,631
Income taxes	15	413	1,865
Profit/loss after income taxes		-2,193	-6,766
Profit/loss attributable to non-controlling interests		-2	-41
Net profit/loss attributable to shareholders of Deutsche Lufthansa AG		-2,191	-6,725
Basic/diluted earnings per share in €	16	-2.99	-12.51

¹⁾ This includes EUR 117m (previous year: EUR 36m) from write-backs on non-current receivables and the reversal of write-downs on current receivables.

²⁾ This includes EUR 9m (previous year: EUR 19m) for the recognition of write-downs on current receivables.

³⁾ This includes EUR 73m (previous year: EUR 251m) for the recognition of loss allowances on receivables.

Statement of comprehensive income for the financial year 2021

T057 STATEMENT OF COMPREHENSIVE INCOME

in €m	2021	2020
Profit/loss after income taxes	-2,193	-6,766
Other comprehensive income		
Other comprehensive income with subsequent reclassification to the income statement		
Differences from currency translation	193	-107
Subsequent measurement of financial assets and liabilities at fair value without effect on profit and loss	-27	-29
Subsequent measurement of hedges – cash flow hedge reserve	1,009	-655
Subsequent measurement of hedges – costs of hedging	96	143
Other comprehensive income from investments accounted for using the equity method	7	4
Other expenses and income recognised directly in equity	-1	-4
Income taxes on items in other comprehensive income	-244	125
	1,033	-523
Other comprehensive income without subsequent reclassification to the income statement		
Revaluation of defined-benefit pension plans	2,933	-2,584
Other comprehensive income from investments accounted for using the equity method	-	-
Subsequent measurement of financial assets at fair value	2	1
Other expenses and income recognised directly in equity	-	-
Income taxes on items in other comprehensive income	-566	622
	2,369	-1,961
Other comprehensive income after income taxes	3,402	-2,484
Total comprehensive income	1,209	-9,250
Comprehensive income attributable to non-controlling interests	-1	48
Comprehensive income attributable to shareholders of Deutsche Lufthansa AG	1,208	-9,202

Further details on the statement of comprehensive income can be found in [Note 34, p. 199f.](#)

Consolidated statement of financial position as of 31 December 2021

T058 CONSOLIDATED STATEMENT OF FINANCIAL POSITION – ASSETS

in €m	Notes	31 Dec 2021	31 Dec 2020
Intangible assets with an indefinite useful life ¹⁾	17	1,189	1,169
Other intangible assets	18	419	469
Aircraft and reserve engines	19 22	15,318	15,842
Repairable spare parts for aircraft	20	1,847	1,823
Property, plant and other equipment ²⁾	21 22	3,354	3,671
Investments accounted for using the equity method	23	434	403
Other equity investments	24 45	245	252
Non-current securities	24 45	38	54
Loans and receivables	25 45	525	440
Derivative financial instruments	45	894	363
Deferred charges and prepaid expenses	29	74	91
Effective income tax receivables		65	34
Deferred tax assets	15	4,661	4,833
Non-current assets		29,063	29,444
Inventories	26	675	726
Contract assets	27	179	142
Trade receivables and other receivables	28 45	3,686	2,843
Derivative financial instruments	45	542	260
Deferred charges and prepaid expenses	29	208	193
Effective income tax receivables		249	282
Securities	30 45	5,359	3,654
Cash and cash equivalents	31 45	2,307	1,806
Assets held for sale	32	270	134
Current assets		13,475	10,040
Total assets		42,538	39,484

¹⁾ Including Goodwill.

²⁾ This includes investment properties valued at EUR 30m (as of 31 December 2020: EUR 0m).

T059 CONSOLIDATED STATEMENT OF FINANCIAL POSITION – SHAREHOLDERS' EQUITY AND LIABILITIES

in €m	Notes	31 Dec 2021	31 Dec 2020
Issued capital	33	3,060	1,530
Capital reserve	34	956	378
Retained earnings	34	491	4,868
Other neutral reserves	34	2,134	1,296
Net profit/loss		-2,191	-6,725
Equity attributable to shareholders of Deutsche Lufthansa AG		4,450	1,347
Non-controlling interests		40	40
Shareholders' equity		4,490	1,387
Pension provisions	35	6,676	9,531
Other provisions	36	703	558
Borrowings	37 45	15,041	12,252
Contract liabilities	38	30	36
Other financial liabilities		67	86
Advance payments received, deferred income and other non-financial liabilities	39	30	33
Derivative financial instruments	45	290	457
Deferred tax liabilities	15	529	485
Non-current provisions and liabilities		23,366	23,438
Other provisions	36	1,255	831
Borrowings	37 45	1,629	3,116
Trade payables and other financial liabilities	41 45	4,186	3,321
Liabilities from unused flight documents	40	3,340	2,064
Other contract liabilities	40	2,609	2,977
Advance payments received, deferred income and other non-financial liabilities	42	648	1,295
Derivative financial instruments	45	247	366
Effective income tax obligations		705	689
Liabilities in connection with assets held for sale	32	63	-
Current provisions and liabilities		14,682	14,659
Total shareholders' equity and liabilities		42,538	39,484

Consolidated statement of changes in shareholders' equity as of 31 December 2021

T060 CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

	Issued capital	Capital reserve	Silent Participation I	Fair value measurement of financial instruments	Currency differences	Revaluation reserve (due to business combinations)	Other neutral reserves	Total other neutral reserves	Retained earnings	Net profit/loss	Equity attributable to shareholders of Deutsche Lufthansa AG	Minority interests	Total shareholders' equity
in €m													
As of 31 Dec 2019	1,224	378	-	624	503	236	352	1,715	5,617	1,213	10,147	109	10,256
Capital increases/reductions	306	-	-	-	-	-	-	-	-	-	306	-	306
Reclassifications	-	-	-	-	-	-	-	-	1,213	-1,213	-	-	-
Dividends to Lufthansa shareholders/minorities	-	-	-	-	-	-	-	-	-	-	-	-21	-21
Transactions with minority interests	-	-	-	-	-	-	-	-	-	-	-	-	-
Group/minority net result	-	-	-	-	-	-	-	-	-	-6,725	-6,725	-41	-6,766
Other expenses and income recognised directly in equity	-	-	-	-415	-107	-	7	-515	-1,962	-	-2,477	-7	-2,484
Hedging results reclassified from non-financial assets to acquisition costs	-	-	-	96	-	-	-	96	-	-	96	-	96
As of 31 Dec 2020	1,530	378	-	305	396	236	359	1,296	4,868	-6,725	1,347	40	1,387
Capital increases/reductions ¹⁾	1,328	498	282	-	-	-	-	-	-	-	2,108	-	2,108
Reclassifications	202	80	-282	-	-	-	-	-	-6,744	6,744	-	-	-
Dividends to Lufthansa shareholders/minorities	-	-	-	-	-	-	-	-	-	-19	-19	-	-19
Transactions with minority interests	-	-	-	-	-	-	-	-	-	-	-	-	-
Group/minority net result	-	-	-	-	-	-	-	-	-	-2,191	-2,191	-2	-2,193
Other expenses and income recognised directly in equity	-	-	-	836	193	-	4	1,033	2,367	-	3,400	2	3,402
Hedging results reclassified from non-financial assets to acquisition costs	-	-	-	-195	-	-	-	-195	-	-	-195	-	-195
As of 31 Dec 2021	3,060	956	-	946	589	236	363	2,134	491	-2,191	4,450	40	4,490

¹⁾ The amount in the Silent Participation I column is presented as a net figure and consists of an equity contribution of EUR 1,500m and an equity repayment of EUR 1,218m.

Consolidated cash flow statement for the financial year 2021

T061 CONSOLIDATED CASH FLOW STATEMENT

in €m	Notes	2021	2020
Cash and cash equivalents 1 Jan		1,804	1,431
Net profit/loss before income taxes		-2,606	-8,631
Depreciation, amortisation and impairment losses on non-current assets (net of reversals)		2,288	4,393
Depreciation, amortisation and impairment losses on current assets (net of reversals)		-33	159
Net proceeds on disposal of non-current assets	7 11	30	9
Result of equity investments	12	-2	264
Net interest	13	441	334
Income tax payments/reimbursements		-101	81
Significant non-cash-relevant expenses/income		-484	212
Change in trade working capital		1,347	-683
Change in other assets/shareholders' equity and liabilities		-262	1,534
Net cash from/used in operating activities		618	-2,328
Capital expenditure for property, plant and equipment and intangible assets	17 18 19 21 22	-1,318	-1,249
Capital expenditure for financial investments	24 25	-11	-24
Additions/loss to repairable spare parts for aircraft	20	21	276
Proceeds from disposal of non-consolidated equity investments		-	3
Proceeds from disposal of consolidated equity investments	49	2	-218
Cash outflows for acquisitions/capital increases of/at non-consolidated equity investments	23 24 45	-27	-39
Cash outflows for acquisitions of consolidated equity investments	49	-	-
Proceeds from disposal of intangible assets, property, plant and equipment and other financial investments		190	166
Interest income		-3	66
Dividends received		27	57
Net cash from/used in investing activities		-1,119	-962
Purchase of securities/fund investments		-9,367	-10,678
Disposal of securities/fund investments		7,462	9,298
Net cash from/used in investing and cash management activities		-3,024	-2,342
Capital increase/equity contributions	33 34	3,309	306
Capital reduction/equity repayments		-1,218	-
Non-current borrowing		6,144	6,738
Repayment of non-current borrowing		-5,070	-1,724
Dividends paid		-19	-21
Interest paid		-272	-223
Net cash from/used in financing activities		2,874	5,076
Net increase/decrease in cash and cash equivalents		468	406
Changes due to currency translation differences		33	-33
Cash and cash equivalents as of 31 Dec¹⁾	31	2,305	1,804
Securities	30	5,359	3,654
Liquidity		7,664	5,458
Net increase/decrease in liquidity		2,206	2,073

¹⁾ The difference between the bank balances and cash-in-hand shown in the statement of financial position comes from fixed-term deposits of EUR 2m with terms of four to twelve months (previous year: EUR 2m).

Notes to the consolidated financial statements

Deutsche Lufthansa AG 2021

GENERAL REMARKS

1 Company information

The Lufthansa Group is a global aviation group whose subsidiaries and equity investments were organised into five operating segments in financial year 2021: Network Airlines, Eurowings, Logistics, MRO and Catering.

Deutsche Lufthansa AG has its headquarters in Cologne, Germany, and is filed in the Commercial Register of Cologne District Court under HRB 2168.

The declaration on the German Corporate Governance Code required by Section 161 of the German Stock Corporation Act (AktG) was issued and made available to shareholders on the internet at www.lufthansagroup.com/declaration-of-compliance.

The consolidated financial statements of Deutsche Lufthansa AG, Cologne, and its subsidiaries have been prepared in accordance with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB), taking account of interpretations by the IFRS Interpretations Committee as applicable in the European Union (EU).

The commercial law provisions of Section 315e Paragraph 1 of the German Commercial Code (HGB) have also been applied. All IFRSs issued by the IASB in effect at the time that these financial statements were prepared and applied by Deutsche Lufthansa AG have been adopted by the European Commission for application in the EU. The consolidated financial statements of Deutsche Lufthansa AG are prepared in millions of euros. Its financial year is the calendar year.

The accounting policies applied in the previous year have been retained. The “Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16, Interest Rate Benchmark Reform – Phase 2”, were applied early in financial year 2020.

The Executive Board of Deutsche Lufthansa AG prepared and approved the 2021 consolidated financial statements for publication on 25 February 2022. These consolidated financial statements were examined and approved by the Supervisory Board of Deutsche Lufthansa AG in its meeting on 2 March 2022.

2 Going concern

The business activities of the Lufthansa Group companies were again impacted by the effects of the coronavirus pandemic in 2021 and the related far-reaching tightening of international travel restrictions and quarantine regulations worldwide. The situation was significantly better than the previous year, however. Positive developments in the MRO and Catering segments, which both generated positive Adjusted EBIT, and the cargo business, which again generated record earnings, were nevertheless only partly able to offset the results of the passenger business, which remained negative.

The strongly reduced volume of business continues to affect liquidity. However, a positive operating cash flow figure was achieved in the reporting period, particularly due to increased cash flows from ticket sales. In addition, the Group has successfully and repeatedly raised funds on capital markets since the second half of 2020, which not only cover its medium-term financing needs but also enabled the full repayment of the stabilisation measures received in Germany.

The stabilisation measures were applied for, negotiated and approved in Germany, Switzerland, Austria, Belgium and the USA in the previous year.

The framework agreement concluded in Germany between the Lufthansa Group, the Economic Stabilisation Fund (ESF) and the KfW had an overall financing framework of up to EUR 9.0bn. Funding agreed in Switzerland, Austria and Belgium was offset against this. ESF funding totalling EUR 6.0bn was provided by subscribing for shares amounting to 20% of subscribed capital, and in the form of two silent participations in Deutsche Lufthansa AG. As well as the issuance of shares and the full payment made for Silent Participation II in the amount of EUR 1.0bn in the previous year, an amount of EUR 1.5bn was drawn down from Silent Participation I in the second quarter of the 2021 financial year.

The framework agreement with the Economic Stabilisation Fund provides for extensive information and auditing rights for the Economic Stabilisation Fund and obligations for the Lufthansa Group including regarding the suspension of dividend payments, limitations on management compensation, waiver of up to 24 slots at both the Frankfurt and Munich airports and pursuit of a sustainable corporate policy. Compliance with the obligations across the Lufthansa Group is crucial and it may in some cases be demanding in the current situation since some of the obligations call for interpretation, taking into account the understanding of the EU Commission.

➤ **Note 46, p. 240f.**

The ESF reduced its equity interest to 14.09% in the course of the third quarter of the financial year. A decision was taken and successfully carried out at the end of the third quarter to increase capital by EUR 2.2bn, making partial use of Authorised Capital C. The ESF participated in the capital increase by contributing EUR 282m from Silent Participation I. Having fully repaid the amounts drawn down from the silent participation and the subsequent cancellation of the stabilisation funds still available, Deutsche Lufthansa AG fulfilled the requirements for the obligation to sell the shareholding agreed in the framework agreement with ESF in the fourth quarter of the financial year.

As well as the issuance of bonds for EUR 4.1bn within the scope of the EMTN programme, the other refinancing measures implemented in 2021 included aircraft financing and the issuance of borrower's note loans. ➤ **Note 37, p. 211.**

CHF 420m of the state-guaranteed credit lines agreed in Switzerland as part of the stabilisation measures had been used as of the reporting date.

After initial repayments, the EUR 240m credit facility that forms part of the state aid agreed in Austria was used in full as of the reporting date.

The credit facility of EUR 287m from the stabilisation package agreed with the Belgian government was used in full as of year-end.

Additional funds were made available in the USA in 2021 through CARES Acts I-III. The LSG group and the Lufthansa Technik group have received commitments of a further USD 284m (of which USD 192m as a grant). The approved funds thus total USD 528m (of which USD 345m as a grant). All the approved funds had been disbursed as of the reporting date. In 2021, USD 237m was recognised in the income statement for these grants.

As of 31 December 2021, Deutsche Lufthansa AG had centrally available liquidity of EUR 6.4bn. Decentralised bank and cash balances came to a further EUR 1.3bn, and a total of EUR 1.0bn has not yet been used from the state funding agreed in Switzerland. Free credit lines of EUR 0.7bn are still available as of the reporting date. Altogether, the Lufthansa Group's available liquidity therefore comes to EUR 9.4bn.

Since there is still great uncertainty regarding travel opportunities and customer behaviour, the Lufthansa Group regularly updates its rolling liquidity planning to reflect the changing parameters for its forecast course of business. The uncertainty surrounding the armed conflict between Russia and Ukraine represents an additional risk for the continued recovery of business. Performance in 2022 will depend to a great extent on the further course of the pandemic and the economic impact of the Russia/Ukraine conflict, which in turn are significant factors for the recovery potential of the aviation industry. Under these circumstances, further easing of the travel restrictions still in place around the world and the impact of the Ukraine conflict on the economic parameters for aviation will be decisive for the speed at which the airlines' earnings recover. Progress was made with the internal activities in the ReNew programme. Capacity reductions advanced, with voluntary redundancy programmes for cockpit, cabin and ground staff at Deutsche Lufthansa AG, as well as closures, disposals and downsizing of businesses in the MRO segment. Management continues to assume that the entire volume of measures will be successfully implemented.

To the extent that it is legally possible, state aid in the form of short-time working benefits and the reimbursement of social security contributions will continue to be received in the first quarter of 2022 to mitigate the economic consequences of the pandemic.

Current corporate planning only anticipates that the effects of the coronavirus pandemic will end starting in 2025, whereby significantly positive earnings are expected in the recovery phase from 2023. The potential impact of the conflict between Russia and Ukraine does increase the uncertainty of future earnings development, but does not affect the going-concern forecast. The Lufthansa Group's current corporate planning assumes that the Group will regain its pre-crisis level in terms of available seat-kilometres from 2025, but it expects that

demand will still be down on 2019 in the business travel segment. The forecast for developments in the tourist travel segment is more positive. This means the planning is in line with sector forecasts, such as the most recent IATA study from November 2021, which in a base case scenario predicts that passenger numbers will return to pre-crisis levels in 2024. The restructuring measures, some of which have been initiated and others completed, should then lead to a profitable growth path again. The main business risks for the recovery phase from 2022 until 2025 relate in particular to the macro-economic consequences of current military conflicts as well as to forecasting customers' future travel patterns once travel restrictions are lifted, especially for corporate customers.

Taking into account the corporate planning – which assumes an average available capacity of over 70% and over 85% of the 2019 level in 2022 and 2023 respectively – and the resulting liquidity planning, the further potential funding measures and the uncertainties about the future course of business, the Company's Executive Board considers the Group's liquidity to be secure for the next 18 months. In the management's opinion, the uncertainties in connection with the public and political debate on climate protection are not a threat to this forecast. The consolidated financial statements have therefore been prepared on a going concern basis.

3 New international accounting standards in accordance with IFRS and interpretations and summary of the significant accounting policies and valuation methods

INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS) AND INTERPRETATIONS (IFRIC) TO BE APPLIED FOR THE FIRST TIME IN THE FINANCIAL YEAR AND AMENDMENTS TO STANDARDS AND INTERPRETATIONS

T062 IFRS-PRONOUNCEMENT (APPLICABLE FROM FINANCIAL YEAR 2021)

Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16, Interest Rate Benchmark Reform – Phase 2

Amendments to IFRS 16, COVID-19-related Rent Concessions

The first-time application from 1 January 2021 of the mandatory accounting standards had no or no material effect on the presentation of the net assets, financial and earnings position or on earnings per share.

Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16, Interest Rate Benchmark Reform – Phase 2. In August 2020 the IASB adopted amendments to the Interest Rate Benchmark Reform (IBOR reform) – Phase 2. The amendments provide for temporary exemptions if a reference interest rate (IBOR – interbank offered rate) is replaced by an alternative, virtually risk-free rate (RFR) and this has an impact on financial reporting.

In view of the endorsement in January 2021, the Lufthansa Group has applied the amendments in advance since financial year 2020. First-time adoption had no effect on the presentation of the net assets, the financial and earnings position or on earnings per share.

Amendments to IFRS 16, COVID-19-related Rent Concessions. The IASB published an amendment to IFRS 16 in May 2020 that includes a temporary optional exemption for lessees who receive rent concessions in connection with Covid-19. As a practical expedient, the lessee can decide to exempt themselves from assessing whether a Covid-19-related rent concession is a lease modification and not apply the accounting rules for lease modifications. In May 2021, the IASB extended the option to apply this exemption for one year until 30 June 2022. The European Commission endorsed this extension in Regulation (EU) 2021/1421 of 30 August 2021. The Lufthansa Group had in the previous year decided not to apply the optional exemption for lessees.

PUBLISHED INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS) AND INTERPRETATIONS (IFRIC) NOT YET APPLIED/APPLICABLE AND AMENDMENTS TO STANDARDS AND INTERPRETATIONS

The following standards and amendments have already been adopted by the European Union but are only mandatory for financial statements after 31 December 2021:

T063 IFRS-PRONOUNCEMENT (ADOPTED BY THE EU)

	Mandatory application for financial years beginning on or after
Amendments to IFRS 3, Reference to the conceptual framework	1 Jan 2022
Amendments to IAS 16, Generation of revenue before an asset's intended use	1 Jan 2022
Amendments to IAS 37, Onerous Contracts – Cost of Fulfilling a Contract	1 Jan 2022
Annual improvement process (2018 – 2020), Amendments to IFRS 1, IFRS 9 and IAS 41	1 Jan 2022
IFRS 17, Insurance Contracts	1 Jan 2023

Amendments to IAS 37, Onerous Contracts – Cost of Fulfilling a Contract. The IASB published amendments to IAS 37, Provisions, Contingent Liabilities and Contingent Assets, Onerous Contracts – Cost of Fulfilling a Contract, in May 2020 to clarify that the costs of fulfilling a contract include all directly attributable costs. They include the additional costs of fulfilling a contract such as direct costs of labour or materials and the inclusion of other costs that relate directly to fulfilling contracts. General and administrative expenses do not relate directly to the contract and so are not costs of fulfilling a contract, unless the contract specifically provides for them to be charged on to the customer. The Group will apply these amendments to contracts in which not all obligations have been fulfilled at the beginning of the financial year in which the amendments are applied for the first time.

The Lufthansa Group does not expect the endorsed but not yet effective amendments to have any material impact on its consolidated financial statements.

The IASB and the IFRS Interpretations Committee have adopted other standards and interpretations whose application is not mandatory for financial year 2021:

**T064 IFRS-PRONOUNCEMENT
(NOT YET ENDORSED BY THE EU)**

	Mandatory application for financial years beginning on or after
Amendments to IAS 1 and IFRS Practice Statement 2: Disclosure of Accounting Policies	1 Jan 2023
Amendments to IAS 8: Definition of Accounting-related Estimates	1 Jan 2023
Amendments to IAS 12: Deferred Tax related to Assets and Liabilities arising from a Single Transaction	1 Jan 2023
Amendments to IFRS 17: Comparative Information for "First-time Application of IFRS 17 and IFRS 9"	1 Jan 2023
Amendments to IAS 1, Classification of Liabilities as Current or Non-current	1 Jan 2023

Amendments to IAS 12, Deferred Tax related to Assets and Liabilities arising from a Single Transaction. The IASB published amendments to IAS 12 in May 2021, which define how an entity accounts for income taxes, including deferred taxes. Under certain circumstances, entities are exempt from recognising deferred taxes when they recognise assets or liabilities for the first time (initial recognition exemption). To date there has been a degree of uncertainty about whether the exemption applies to transactions in connection with leases (when a lessee recognises an asset and a liability at the beginning of a lease) and decommissioning obligations (when an entity recognises a liability and includes the costs

of decommissioning in the cost of the asset). The amendments clarify that this exemption does not apply and that entities must recognise deferred taxes on such transactions. This is stated in the new clause IAS 12.22A. The amendment applies to financial years beginning on or after 1 January 2023, whereby early application is allowed. The Lufthansa Group does not expect these amendments to have any material effects.

Amendments to IAS 1, Classification of Liabilities as Current or Non-current. In January 2020 the IASB published amendments to IAS 1, Presentation of Financial Statements, to clarify the guidance for classifying liabilities as current or non-current. The amendments clarify that the classification of liabilities depends on the rights in existence at the end of the reporting period. Classification is unaffected by the expectations of management or any events. What is meant by the "settlement" of a liability in IAS 1 is also clarified. The amendments are applicable retrospectively for financial years beginning on or after 1 January 2023.

Currently, the new or amended IFRS pronouncements listed in the tables, as well as those which are no longer discussed, are not considered to have a material effect on the presentation of the net assets, financial and earnings position.

The Lufthansa Group has not voluntarily applied any of the new or amended regulations mentioned above before their binding date of application. If the effective dates of the standards and interpretations mentioned above fall within the year, they are applied as of 1 January of the following financial year. This is subject to the endorsement of the standards by the EU.

**SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
AND VALUATION METHODS**

The companies included in the consolidated financial statements use uniform accounting policies to prepare their financial statements.

The application of the accounting policies prescribed by IFRS and IFRIC requires making a large number of estimates and assumptions with regard to the future that may, naturally, not coincide with actual future conditions. All of these estimates and assumptions are, however, reviewed continuously and are based either on past experience and/or expectations of future events that seem reasonable in the circumstances on the basis of sound business judgement. Estimates and assumptions that are of material importance in determining the carrying amounts for assets and liabilities are explained in the following description of the accounting policies applied to material items in the statement of financial position.

The ongoing coronavirus pandemic and the steps taken worldwide to contain the virus have continued to have a massive impact on the Group's business operations in the reporting year. Uncertainty and restrictions due to lockdowns and new virus variants had a direct impact on bookings with the Lufthansa Group, for example. The uncertainties resulting from the crisis are vital for the general assessment of the Company's status as a going concern, but also for specific accounting judgements and estimates. It is therefore of fundamental importance how long and at what intensity government measures to contain the pandemic will continue to affect air travel and the economy as whole, and over which period a recovery will take place. In addition, it is hard to foresee at what level the path to a new normal will be for air transport in general and the Lufthansa Group in particular. The main assumptions and estimates were therefore based on the Group's liquidity and profit forecasts (↗ **Note 2, p. 160ff.**). The armed conflict between Russia and Ukraine and its political and economic consequences also represent an additional material risk for the performance of the world economy, the continued recovery of the entire aviation industry and the Lufthansa Group. Critical accounting areas that may be affected most severely by the ongoing uncertainty about the further course of the pandemic are:

- Carrying amounts of goodwill (↗ **Note 17, p. 184f.**) and equity investments (↗ **Note 23, p. 193f.**), which depend to a large degree on the speed of the recovery and the level of post-crisis business.
- Carrying amount of the aircraft (↗ **Note 19, p. 189**), which are affected by uncertainties regarding future capacities and so the extent to which the fleet can be used.
- Repairable spare parts (↗ **Note 20, p. 190**) and inventories (↗ **Note 26, p. 195f.**) require measurement assumptions about the extent to which future overcapacities will result from reducing particular fleet models or from a general long-term decline in business in the MRO segment, despite the recovery in the current year.
- Since the assumption is that the earnings position will recover slowly and that sustainably positive taxable profits in the official planning period up to 2025 will only be seen from 2023, the measurement of carrying amount for deferred tax assets (↗ **Note 15, p. 181f.**), especially the tax loss carry-forwards created in the financial year, was based on their potential use over a longer time frame.
- Trade receivables (↗ **Note 28, p. 196f.**) remained subject to greater uncertainty about default risk due to the particular situation caused by the pandemic. Estimates had to be made for expected future losses. Established estimates of credit risk from financial years pre-dating the coronavirus pandemic are only of limited use here.
- Accounting for obligations under customer loyalty programmes and unused flight documents (↗ **Note 40, p. 216**) was subject to greater uncertainty about how customers would redeem miles or use tickets, which will also depend on when and to what extent air travel is possible again without restrictions. These estimates play a role in the measurement of miles accounts and forecasts of when miles and tickets are likely to expire.

The accounting areas mentioned above could also be affected by declines in demand for air travel or higher costs due to climate-related aspects. In addition to the uncertainty caused by the pandemic, there is uncertainty about the extent to which regulatory efforts in connection with discussions about climate protection could lead to higher costs for the Lufthansa Group. Public debate is currently focused on CO₂ emissions. The Lufthansa Group is planning to cut its net CO₂ emissions by half compared with 2019 by 2030 and to be net carbon-neutral by 2050. Corporate planning has factored in the necessary additional costs for kerosene tax, emissions trading and sustainable aviation fuel, amongst other things, so they were included when applying IAS 36 and in the impairment considerations for deferred tax assets. Accelerated fleet modernisation is another key element for the planned reduction of CO₂ emissions. We do not currently see any climate-related indications for material changes in the expected useful lives of aircraft and reserve engines. The debate about the influence of aviation on climate change could have a negative long-term impact on air travel and thus on planned revenue. No specific assumptions about this were made in the corporate planning for the ramp-up phase, apart from the general presumption that demand will recover slowly. However, the planning does assume a high level of general uncertainty about demand, which is to be addressed by making production highly flexible. For the medium- and long-term period, the impairment testing did not adopt the further market growth assumed by the industry association IATA (forecast through 2030; as of July 2021), however, but only included the effects of inflation.

The fundamental valuation method applied in the consolidated financial statements is the acquisition cost principle. Where IFRSs stipulate that other methods of measurement should be applied, these are used instead, and are referred to specifically in the following comments on measuring assets and liabilities.

Amendments to accounting policies as a result of revised and new standards are applied retrospectively unless provided otherwise for a specific standard. The income statement for the previous year and the opening statement of financial position for the comparable period are adjusted as if the new accounting policies had always been applied.

Recognition of income and expenses

Revenue and other operating income are recognised when the service has been provided.

Passenger transport and ancillary services

The Lufthansa Group sells flight tickets and related ancillary services primarily via agents, its own websites or other airlines in the case of interlining. The payments are received by the Lufthansa Group via credit card billing companies, agents or other airlines, generally before the corresponding service is provided. Receivables from the sale of flight tickets and related ancillary services are only amounts payable by credit card billing companies, agents or other airlines.

The Lufthansa Group initially recognises all ticket sales as liabilities from unused flight documents. These are presented as contract liabilities in accordance with IFRS 15. Depending on the terms of the selected fare, the contract liabilities reflect a range of possibilities for refunding services that have not yet been provided. Liabilities include both the deferred income for future flights and ancillary services that are recognised as revenue when the flight documents are used, and the liabilities for award miles credited to the passenger when the flight documents are used. The Lufthansa Group allocates the transaction price to all of the performance obligations identified on the flight ticket on the basis of their individual transaction prices. The individual transaction prices for flight segments are determined using the IATA procedure, which allocates the total price payable to individual flight segments using what is known as a prorated calculation. Amounts calculated in this way meet the IFRS 15 definition of a relative individual transaction price. The individual transaction prices for ancillary services that are not included in the fare are directly observable prices within the meaning of IFRS 15. On average, it takes 2.5 months for a flight coupon to be realised. This does not apply to financial years with severe flight restrictions such as 2020/2021, when the use of flight documents fluctuated from month to month and altogether

the large number of flight cancellations meant that customers could not use their tickets as planned. Additional cancellation and rebooking options were introduced in connection with the restrictions and flight cancellations caused by the coronavirus pandemic.

The Lufthansa Group reduces liabilities from unused flight documents and recognises revenue for each flight segment (including the related ancillary revenue) when the respective document is used. For tickets that cover more than one flight segment, the Lufthansa Group identifies each flight segment as a distinct performance obligation, since each flight segment is independent and can be distinguished in the context of the contract.

Interlining means that the passenger is carried by another airline for one (or more) flight segments. Only the commission paid by the other carrier is recognised as revenue for these flight segments, since the Lufthansa Group acts solely as an agent in terms of these performance obligations. If passengers with tickets sold by other airlines are carried partly or fully by the Lufthansa Group, the Lufthansa Group shows the pro rata ticket income received from the other airlines less the commission retained by the ticketing airline as revenue.

Generally speaking, the Lufthansa Group does not expect to receive any amount if a flight document is not used (or does not expect the amount to be material) and so for this reason does not anticipate the possibility that documents for a flight segment will not be used. The expected amount if flight documents are not used is only recognised as revenue if the probability that the passengers (in accordance with the portfolios they are assigned to) exercise their remaining rights is low, and no later than when the expiry of flight documents is certain and known.

IFRS 15 requires that income from the expiry of miles is recognised in parallel with revenue from the performance obligations that do not expire. A period of three years is therefore assumed for revenue recognition, and the revenue from miles expected to expire is recognised on a straight-line basis over this time, as a rule. The effects of the coronavirus pandemic on air travel have changed the recognition parameters, partly because there were fewer opportunities to fly and partly because customers' redemption patterns changed. The average percentage decline in redemption volumes was used as an indicator for adjusting the pro rata recognition volume.

Revenue for award miles is recognised at the point in time or over the time at which the goods and services purchased with the award miles are transferred.

Logistics

Lufthansa Cargo markets the freight capacities of passenger aircraft at Lufthansa German Airlines, Austrian Airlines, Eurowings and Brussels Airlines and operates a fleet of cargo aircraft. In addition to income from standard cargo services, Lufthansa Cargo generates part of its revenue from ancillary services that are closely connected to the freight service.

In its cargo business, the Lufthansa Group has identified the entire freight service as a distinct performance obligation. The end customer receives the benefit of the transport service and uses the service at the same time as this performance obligation is fulfilled with each transport segment. In this case, the customer takes control of the company's output while the carrier provides its service. The customer receives the benefit of the service as each transport segment is fulfilled. The corresponding cargo revenue is therefore recognised at the prorata value when the documents for each individual freight segment are used.

Lufthansa Cargo typically receives the consideration for performing its service once the transport has been carried out.

MRO

The main distinct performance obligations in the MRO segment are the provision of maintenance and aircraft and engine overhaul services, which are recognised over time since the condition of IFRS 15.35 (b) is generally met. These performance obligations involve estimating the proportion of the total contract already completed and the profit on the whole contract, so that an input-orientated measurement of the percentage of completion can be made. Contract assets and contract liabilities are therefore both recognised.

Access to Lufthansa Technik's pool of spare parts and components is another key performance obligation, which is satisfied either over time or at a point in time, depending on the contract model agreed.

In some cases, the contracts in the MRO segment make it necessary not to recognise distinct services as individual performance obligations but rather as a series, as described in IFRS 15.22 (b). Furthermore, some of the contracts include standby obligations that require the recognition of revenue over time. This is particularly the case when remuneration is paid in the form of a fixed rate per hour of flying time. For such contracts, the percentage of completion is primarily measured on the basis of the hours invoiced to the customer monthly. Revenue from component supply contracts is realised taking into consideration the margin shown in the business plans, which are updated annually.

A significant portion of the contracts in the MRO business segment run for several years and so have price adjustment clauses, which are only considered in the transaction price when the event that triggers a price adjustment (a wage increase, for example) has occurred.

Catering

The LSG group mainly offers products and services related to in-flight service. Its in-flight service comprises catering, in-flight sales and the related logistics.

Airline catering is the main business of the LSG group as far as revenue is concerned. Taking the business model and the value chain for airline catering into account, the preparation of meals and the logistics related to this catering have been identified as distinct performance obligations. The performance obligation to prepare meals is generally fulfilled when the meals are delivered to the contract partners. The catering logistics performance obligation is fulfilled over the time between the transport of the meals to the airport and the disposal of the waste, depending on the services ordered. For performance obligations over time, the percentage of completion is measured on an output basis in accordance with IFRS 15.B15 in conjunction with IFRS 15.B16.

Billing and payment in the Catering segment generally take place one to two months after the performance obligation has been fulfilled. This gives rise to trade receivables, but no significant contract liabilities or contract assets from catering contracts.

Variable consideration (e.g. volume discounts) must be taken into account when determining the transaction price in the catering business. The majority of the variable consideration is estimated using the expected value method on the basis of historic data and current developments. The LSG group updates the estimated transaction price at the end of each reporting period and accounts for the resulting changes in accordance with IFRS 15.87-90.

Further disclosures on the Lufthansa Group's revenue from contracts with customers can be found in [Notes 4 and 5, p. 176ff.](#)

Operating expenses are recognised when the product or service is used or the expense arises. Provisions for warranties are generally accounted for when the corresponding revenue is recognised, while provisions for onerous contracts are generally set up when they are identified.

Interest income and expenses are accrued in the appropriate period. Dividends from shareholdings not accounted for using the equity method are recognised when a legal claim to them arises.

Initial consolidation and goodwill

The initial consolidation of Group companies takes place using the acquisition method. This involves measuring the fair value of the assets, liabilities and contingent liabilities identified, in accordance with the provisions of IFRS 3, of the company acquired at the acquisition date, and allocating the acquisition costs to them. The proportion of fair value of assets and liabilities not acquired is shown under non-controlling interests. The ancillary acquisition costs are recognised as expenses in the periods in which they occur.

Any excess of cost over the value of equity acquired is capitalised as goodwill. If the value of the acquirer's interest in the shareholders' equity exceeds the purchase price paid by the acquiring company, the difference is recognised immediately in profit or loss.

Differences from non-controlling interests acquired after control has been gained are set off directly against equity.

Goodwill is not amortised, but is tested annually for impairment. The impairment tests applied to goodwill are carried out using established discounted cash flow methods. This is done on the basis of expected future cash flows from the latest business plan, which are extrapolated on the basis of long-term revenue growth rates and assumptions with regard to margin development and are discounted using the capital costs of the business unit. Tests are performed at the cash-generating unit (CGU) level. For the individual assumptions on which impairment tests were based in financial year 2021, see Note 17, p. 184f.

Additional impairment tests are also applied during the course of the year if events give reason to believe that goodwill could be permanently impaired.

Once an impairment loss has been recognised on goodwill, it is not reversed in subsequent periods.

Notwithstanding the principles described above, Group companies that have no material impact on the Lufthansa Group's net assets, financial and earnings position are not consolidated, but rather recognised in the consolidated financial statements at cost less any impairments.

Currency translation and consolidation methods

The financial statements of the foreign Group companies are prepared in the relevant functional currency and translated into euros before consolidation. The functional currency is mainly the currency of the country in which the company concerned is located. Occasionally, the functional currency differs from the national currency. Assets and liabilities are translated at the middle rates on the balance sheet date. Income statements are translated at the average exchange rates for the year. Any translation differences are recognised

directly in equity without effect on profit and loss and are only recognised in profit or loss when control is lost or the equity investment is disposed of.

Goodwill from capital consolidation of foreign subsidiaries prior to 2005 is carried at historical cost net of amortisation accumulated by the end of 2004. Goodwill acquired after 2005 is held in the functional currency of the purchased company and translated at the middle rates on the reporting date.

Transaction differences, however, are recognised in profit or loss. These differences arise in the financial statements of consolidated companies from the measurement of assets and liabilities denominated in a currency other than the company's functional currency. Exchange rate differences here are included in revenue (exchange rate gains and losses on trade receivables) and in other operating income (other exchange rate gains) or other operating expenses (other exchange rate losses).

Translation differences relating to items whose fair value changes are recognised in equity are also recognised in equity without effect on profit and loss.

The most important exchange rates used in the consolidated financial statements have developed in relation to the euro as follows:

T065 EXCHANGE RATES

	2021		2020	
	Balance sheet exchange rate	Income statement average rate	Balance sheet exchange rate	Income statement average rate
AUD	0.64092	0.63492	0.62497	0.60232
CAD	0.69143	0.67397	0.63740	0.65478
CHF	0.96657	0.92129	0.92165	0.93484
CNY	0.13867	0.13066	0.12475	0.12701
GBP	1.19191	1.16459	1.10660	1.12600
HKD	0.11331	0.10855	0.10497	0.11357
INR	0.01187	0.01145	0.01112	0.01188
JPY	0.00767	0.00769	0.00788	0.00825
KRW	0.00074	0.00074	0.00075	0.00074
NOK	0.10035	0.09823	0.09514	0.09271
PLN	0.21789	0.21818	0.21851	0.22425
SEK	0.09759	0.09854	0.09927	0.09515
USD	0.88378	0.84368	0.81377	0.88089

The provisions of IAS 29, Financial Accounting in Hyper-inflationary Economies, were applied to one consolidated company in Argentina. Gains and losses from adjusting for inflation on the carrying amounts of non-monetary assets and liabilities and the income statement were immaterial and were recognised in other operating income.

The effects of intra-Group transactions are completely eliminated in the course of consolidation. Receivables and liabilities between consolidated companies are offset against one another and intra-Group provisions are reversed through profit or loss. Intra-Group profits and losses in non-current assets and inventories are eliminated – mostly in connection with the internal resale of aircraft and maintenance events. Intra-Group income is set off against the corresponding expenses. Tax accruals and deferrals are made as required by IAS 12 for temporary differences arising from consolidation.

Other intangible assets (except goodwill)

Acquired intangible assets are shown at cost, while internally generated intangible assets from which the Lufthansa Group expects to derive future benefit and that can be measured reliably are capitalised at cost of production and amortised regularly using the straight-line method over an estimated useful life. The cost of production includes all costs directly attributable to the production process, including borrowing costs as required under IAS 23, as well as appropriate portions of production-related overhead.

Intangible assets with indefinite useful lives (mainly brands and purchased, resellable take-off and landing rights) are not amortised, but rather subjected to a regular annual impairment test, as is goodwill.

Property, plant and equipment

Tangible assets used in business operations for longer than one year are valued at cost less regular straight-line depreciation. The cost of production includes all costs directly attributable to the manufacturing process as well as appropriate portions of production-related overhead. Borrowing costs in close connection with the financing of the purchase or production of a qualifying asset are also capitalised.

Key components of property, plant and equipment that have different useful lives are recognised and depreciated separately. Seats and in-flight entertainment systems installed in commercial aircraft are recognised separately. If costs are incurred in connection with regular extensive maintenance work (e.g. overhauling aircraft and major engine overhauls), these costs are recognised as a separate component insofar as they meet the criteria for recognition. The useful lives and remaining carrying amounts of assets are reviewed regularly and adjusted as necessary in line with the forecast.

The following useful lives and residual carrying amounts are applied throughout the Group:

T066 USEFUL LIVES OF PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment	Useful life
Buildings	45 years
New commercial aircraft and reserve engines	20 years to a residual value of 5%
Separable aircraft components	4 to 6 years
Technical equipment and machinery	8 to 20 years
Other equipment, operating and office equipment	3 to 20 years

Buildings, fixtures and fittings on rented premises are depreciated according to the terms of the leases or over a shorter useful life.

Assets acquired second-hand are depreciated over their expected remaining useful life.

When assets are sold or scrapped, the difference between the net proceeds and the net carrying amount of the assets is recognised as a gain or loss in the other operating income or expenses, respectively.

In addition to the impairment tests for goodwill, slots and brands, individual items of property, plant and equipment and intangible assets are also tested for impairment if they are no longer intended for future use, either because they are damaged, retired or due to be sold. In this case, the assets are measured individually in line with the applicable standard (full write-down to scrap value, or disposal proceeds less costs to sell). The lowest level at which assets can form a CGU for catering services is a production facility, to the extent that separate product lines or customer (groups) can be assigned to it. When aircraft are held for service in the Lufthansa Group fleet and there is no immediate intention to sell them, they are combined with the assets of the respective operating unit for the purposes of impairment testing. The smallest separable CGU in the passenger business is the airlines' flight operations (Lufthansa German Airlines, SWISS, etc.). For the MRO segment it is the entire MRO operation because of the alliance effects between the MRO business units.

Impairment losses on intangible assets and property, plant and equipment

The Lufthansa Group tests intangible assets and property, plant and equipment for impairment if events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. In addition to depreciation and amortisation, impairment losses are also recognised on the

balance sheet date if the asset's recoverable amount has fallen below its carrying amount. The recoverable amount is determined as the higher of an asset's fair value less costs to sell and the present value of the estimated net future cash flows from continued use of the asset (value in use).

Fair value less costs to sell is derived from recently observed market transactions – insofar as they are available – or in the case of aircraft, from general external information on current market prices.

If it is impossible to forecast expected cash flows for an individual asset, the cash flows for the next larger asset unit are estimated, discounted at a rate reflecting the risk involved, and the recoverable amount allocated to the individual assets in proportion to their respective carrying amounts.

If the reason for an impairment loss recognised in previous years should cease to exist in whole or in part in subsequent periods, the impairment loss is reversed up to the amount of the asset's amortised cost.

Repairable spare parts for aircraft

Initial supply of spare parts for aircraft that can be reused after repair are classified as non-current assets.

The MRO segment accounts for most of the Group's repairable spare parts. They are replaced and repaired on an ongoing basis to carry out customer orders and for the Group's own purposes and are held in stock to support the Group's long-term business. A valuation-relevant subdivision essentially distinguishes between replacement components for aircraft ("pool material"), which is provided continuously for customer orders and which is measured at production/acquisition cost less depreciation, and spare parts that are exchanged and repaired on an ongoing basis for overhaul orders ("non-pool material"), which is measured at the lower of production/acquisition cost and net realisable value. The starting point for the depreciated carrying amounts is the rolling average price of the materials. Pool material is depreciated over 5 to 20 years, depending on the expected useful life of the corresponding aircraft model. Valuation allowances for non-pool materials reflect their expected future marketability. All depreciation and impairment is recognised within the cost of materials and services, since this best reflects the business model.

Leases

The Lufthansa Group is a lessee for certain assets, particularly property and aircraft. In terms of property, the Group mainly leases airport infrastructure, including hangars, parking and handling spaces, lounges, and offices. Other office buildings, production and warehouse space are also leased. In addition, the Group uses aircraft and other operating and office equipment on the basis of leases. To the extent that these contracts include payments for non-leased components, they are not included when accounting for the right-of-use asset. In accordance with IFRS 16, the Lufthansa Group assesses at contract inception whether a contract is or contains a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Right-of-use assets are measured at cost less accumulated depreciation and impairment losses and adjusted for any change in the measurement of the lease liability. The cost of right-of-use assets includes the amount of lease liabilities recognised, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received.

The Lufthansa Group has opted not to apply IFRS 16 to intangible assets. Payments under leases with a term of not more than twelve months and leases for assets of low value are recognised as expenses on a straight-line basis over the term of the lease. For contracts that include non-lease components alongside lease components, these components are separated.

Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease term or the estimated useful life of the leased item. The lease term consists of the basic fixed term and the term of any renewal options, to the extent that it is sufficiently probable that the lessee will exercise this option, or the term of a cancellation option if it is sufficiently probable that the lessee will not exercise the option.

If ownership of the leased asset passes to the Lufthansa Group at the end of the lease term or is included in the costs of exercising a purchase option, the right-of-use asset is depreciated on a straight-line basis over the expected useful life of the leased asset.

Impairment testing for right-of-use assets is carried out as described above for intangible assets and property, plant and equipment subject to depreciation.

At the commencement date of the lease, the Lufthansa Group recognises **lease liabilities** measured at the present value of the lease payments to be made over the term of the lease. The lease payments include fixed payments less any lease incentives owed, variable lease payments that depend on an index or a rate, and any amounts that are expected to be paid in the context of residual value guarantees. Lease payments also include the exercise price of a purchase option or penalties for early termination if the exercise of the purchase or termination option by the lessee is reasonably certain.

The Lufthansa Group has several leases that include renewal and termination options, particularly for properties. Judgment is used when determining the probability that the option to renew or terminate the lease will be exercised. When determining lease terms, all the facts and circumstances are reasonably certain that offer an economic incentive to exercise renewal options or not to exercise termination options. After the commencement date of the lease, the Lufthansa Group remeasures the lease liability if a significant event occurs or if circumstances change.

Variable lease payments that do not depend on an index or a reference rate are recognised as expenses in the period in which the event or condition triggering the payment occurs.

Lease payments are generally discounted at the incremental borrowing rate. Reference interest rates based on congruent, risk-free rates in major countries and currencies were used to calculate the incremental borrowing rate. A credit risk premium was added to the respective reference rates.

When the Lufthansa Group is a lessor it classifies leases as operating leases or finance leases. A lease is classified as a finance lease if it transfers all the risks and rewards associated with ownership of the leased asset. If this is not the case, the lease is classified as an operating lease.

As the lessor in an operating lease, the Lufthansa Group presents the leased item as an asset at amortised cost in property, plant and equipment. Lease payments received in the period are shown as other operating income. The Lufthansa Group leases some of its properties and engines to other entities. There are currently no finance leases at the Lufthansa Group.

Equity investments accounted for using the equity method

Equity investments accounted for using the equity method are capitalised at cost at the time of acquisition.

In subsequent periods, the carrying amounts are either increased or reduced annually by changes in the shareholders' equity of the associated company or joint venture that is held by the Lufthansa Group. The principles of purchase price allocation that apply to full consolidation are applied accordingly to the initial measurement of any difference between the acquisition cost of the investment and the pro rata share of shareholders' equity of the company in question. An impairment test is only carried out in subsequent periods if there are indications of a potential impairment in the entire investment valuation.

Financial instruments

Financial assets are classified within the Lufthansa Group in accordance with IFRS 9 as "at amortised cost", "at fair value through profit or loss", "at fair value through other comprehensive income (with and without recycling)" and "derivative financial instruments as an effective part of a hedging relationship".

The category "**at amortised cost**" consists of financial assets that are debt instruments and are intended to be held to maturity on the basis of the company's business model. Furthermore, these instruments have fixed payment terms and meet the criteria for cash flow characteristics, i.e. contractual payments of principal and interest. For the Lufthansa Group, this item particularly includes loans and receivables, cash-in-hand and bank balances. They are classified as non-current or current assets according to their remaining maturity.

The category "**at fair value through profit or loss**" comprises debt instruments for which the business model is neither to hold nor to sell them, or which do not pass the cash flow characteristics test. This is generally not the case for the Lufthansa Group. Equity instruments are also allocated to this category as a rule, so the Lufthansa Group generally recognises shares and equity investments that are financial instruments in this category. Derivatives are also classified in this category if they do not meet the criteria for hedge accounting.

Debt instruments are classified as "**at fair value through other comprehensive income (with recycling)**" when the business model is to both hold and sell these instruments and they pass the cash flow characteristics test. For the Lufthansa Group, this applies to securities representing debt instruments.

An option can be exercised to classify specific equity instruments as **“at fair value through other comprehensive income (without recycling)”**. The Lufthansa Group exercises this option for individual share positions.

The Lufthansa Group uses derivatives for hedging, which are classified as **“derivative financial instruments as an effective part of a hedging relationship”** if all the requirements for hedge accounting are satisfied.

Financial instruments are recognised on the settlement date, i.e. on the date that they are created or transferred. Financial assets are capitalised at fair value plus transaction costs. Unrealised gains and losses are recognised directly in equity, taking deferred taxes into account. Long-term low or non-interest-bearing loans are recognised at net present value using the effective interest method. Subsequent measurement of the financial instrument depends on the classification, either at amortised cost using the effective interest method, or at fair value, through profit or loss or in equity without effect on profit and loss.

Receivables denominated in foreign currencies are measured at the balance sheet date rate.

The fair value of securities is determined by the price quoted on an active market. For unlisted fixed-interest securities, the fair value is determined from the difference between effective and market interest rate at the valuation date.

If there are doubts as to the recoverability of receivables, then impairment losses are recognised and these receivables are recognised at the lower recoverable amount. Subsequent reversals (write-backs) are recognised in profit or loss. IFRS 9 requires that when a receivable is recognised for the first time, an expected loss is provided for that reflects the credit risk of the receivable before a default event occurs. An external credit risk exists for the Lufthansa Group, especially in its portfolio of trade receivables, for which an expected credit loss is recognised.

Derivative financial instruments are measured at fair value on the basis of published market prices. If there is no quoted price on an active market, other appropriate valuation methods are applied. Appropriate valuation methods take all factors into account that independent, knowledgeable market participants would consider in arriving at a price and that constitute recognised, established economic models for calculating the price of financial instruments.

In accordance with its internal guidelines, the Lufthansa Group uses derivative financial instruments to hedge interest rate and exchange rate risks and to hedge fuel price risks. This is based on the hedging policy defined by the Executive Board and monitored by a committee. ➤ **Note 45, p. 225ff.**

Interest rate swaps and interest rate/currency swaps are used to manage interest rate risks. Interest rate/currency swaps also hedge exchange rate risks arising from borrowing in foreign currencies.

Fuel price hedging takes the form of spread options and other hedging combinations, primarily for crude oil. To a limited extent, hedging may also be undertaken for other products, such as jet fuel or gas oil.

Hedging transactions are used to secure either fair values (fair value hedge) or future cash flows (cash flow hedge).

To the extent that the financial instruments used qualify as effective cash flow hedging instruments within the scope of a hedging relationship, in accordance with the provisions of IFRS 9, the fluctuations in market value will not affect the result for the period during the term of the derivative. They are recognised without effect on profit or loss in the corresponding reserves. If the hedged cash flow is an investment, the result of the hedging transaction that has previously been recognised in equity is set off against the cost of the capital expenditure at the time the underlying transaction matures. In all other cases, the cumulative gain or loss previously stated in equity is included in net profit or loss for the period on maturity of the hedged cash flow.

In the case of effective hedging of fair values that are designated as a fair value hedge, the changes in the market value of the hedged asset or the hedged debt and those of the financial instrument will balance out in the income statement.

Derivatives that do not meet the criteria for hedge accounting are presented in the category “at fair value through profit or loss”. Changes in fair value are then recognised directly in the income statement. For the Lufthansa Group, this generally occurs when the exposure or item being hedged cannot be measured reliably or the exposure ceases to exist prematurely over the course of the hedge.

Embedded derivatives – to the extent that they should, but cannot, be separated from the financial host contract – are also considered with these as trading transactions for measurement purposes. Changes in market value are also recognised directly as profit or loss in the income statement. Both types must be classified as financial assets stated at fair value through profit or loss.

It is the Lufthansa Group's hedging policy [↗ Note 45, p. 225ff.](#)) to only acquire effective derivatives for the purpose of hedging interest rate, exchange rate and fuel price risks.

Initial recognition of **financial guarantees** to third parties is at fair value. Thereafter, financial guarantees are either measured in the category "at fair value through profit or loss" or at the higher of the originally recognised amount, less any cumulative amortisation through profit or loss in line with IFRS 15, and the value of the contractual obligation measured in line with IAS 37.

Emissions certificates

CO₂ emissions certificates are recognised as intangible assets and presented under other receivables. Rights, both those purchased and those allocated free of charge, are measured at cost and not amortised.

The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which was concluded with the International Civil Aviation Organization (ICAO) in October 2016, seeks to offset growth-related CO₂ emissions in international air traffic using climate protection projects from 2021 onwards. In June 2020, the ICAO adopted a resolution confirming that carbon emissions in 2019 are the sole benchmark for determining relevant industry growth in the course of the CORSIA pilot phase. Whether and how many CORSIA offsets will be required in the years ahead depends primarily on how fast air traffic recovers between the states participating in the CORSIA pilot phase.

Contract assets and receivables

Contract assets represent contractual claims to receive payments from customers where the contractual performance obligations have already been fulfilled but no unconditional payment claim has yet been incurred. Receivables are recognised if the right to receive consideration is no longer subject to conditions. This is generally the case when the Group is contractually entitled to send the customer an invoice.

Contract assets mainly relate to construction or service contracts for MRO and IT services. Valuation allowances are made on the respective gross amounts of expected payment defaults.

Inventories

The item "Inventories" comprises non-repairable spare parts and assets used in production or the provision of services (raw materials, consumables and supplies), purchased merchandise, finished and unfinished goods and advance payments for them. They are measured at cost, determined on the basis of average prices, or at production cost. The cost of production includes all costs directly attributable to the production process, including borrowing costs as required under IAS 23, as well as appropriate portions of production-related overheads at normal productivity rates. Measurement on the balance sheet date is at the lower of cost and net realisable value. Net realisable value is defined as the estimated selling price less the estimated cost of completion and the estimated costs necessary to make the sale. If there are indicators for future inability to pay, corresponding valuation allowances are made.

Assets held for sale

Individual, formerly non-current assets or groups of assets that are expected to be sold within the next twelve months are measured at the lower of their carrying amount at the time they are reclassified and fair value less costs to sell. Fair value less costs to sell is derived from recent market transactions, if available.

Property, plant and equipment and intangible assets are no longer depreciated or amortised and affiliated companies accounted for using the equity method are no longer accounted for in this way once they are classified as held for sale or distribution. While the impairment charge from the last measurement before reclassification is recognised as an impairment loss, all subsequent changes in the measurement of current assets held for sale, for instance due to exchange rate movements, are shown in other operating expenses or income.

Cash and cash equivalents

Cash and cash equivalents comprise cash-in-hand, cheques received and credit balances at banks. Cash equivalents are financial investments that can be liquidated at short notice. At the time of purchase or investment, they have a maturity of three months or less.

Pension provisions

The pension provisions for defined benefit plans correspond to the present value of the defined benefit obligations (DBO) on the reporting date less the fair value of plan assets, if necessary taking the rules on the maximum surplus of plan assets over the obligation (asset ceiling) into account.

The DBO is calculated annually by independent actuaries using the projected unit credit method prescribed in IAS 19 for defined benefit pension plans. The measurement of pension provisions within the statement of financial position is based on a number of actuarial assumptions.

Capital account plans are measured using the market value of the assets assigned to the individual capital accounts as of the reporting date, whereby the present value of the minimum benefit payable when the beneficiary becomes entitled to the benefit is compared with the amount of contributions already paid in, measured using the assumptions for the benefit plans. Additional risk premiums that the employer contributes to insure against early entitlements are included in current service expense.

They include, in particular, assumptions about long-term salary and pension trends as well as average life expectancy. The assumptions about salary and pension trends are based on developments observed in the past and take into account national interest and inflation rates and labour market trends. The estimate of average life expectancy is based on recognised biometric calculation formulas.

The interest rate used to discount the individual future payment obligations is based on the return from investment grade corporate bonds in the same currency and with a similar maturity. The discount rate is determined by reference to high-quality corporate bonds with an issue volume of at least EUR 100m and an AA rating from at least one of the rating agencies Moody's Investor Service, Fitch Ratings or Standard & Poor's Rating Services.

Actuarial gains and losses arising from the regular adjustment of actuarial assumptions are recognised directly in equity in the period in which they arise, taking deferred taxes into account. Also presented without effect on profit and loss are differences between the interest income at the beginning of the period calculated on plan assets based on the interest rate used to discount the pension obligations and the earnings from plan assets actually recorded at the end of the period. The actuarial gains and losses and any difference between the forecast result and the actual result from plan assets form part of the remeasurement.

Past service cost and effects of plan settlements are recognised in profit and loss.

Payments to pension providers for defined contribution retirement commitments for which the pension provider or the beneficiary assumes the financial risks are recognised in staff costs as they fall due.

Other provisions

Other provisions are recognised for present legal and constructive obligations to third parties arising from past events that will probably give rise to a future outflow of resources provided that a reliable estimate can be made of the amount of the obligations as of the reporting date.

The amount of the provision is determined using the best estimate. Past experience, current cost and price information as well as estimates from internal and external experts are used to determine the amount of provisions.

The management regularly analyses the current information on legal risks and makes provisions for probable obligations. These provisions cover estimated payments to the claimant, court and procedural costs, the costs of lawyers and of any out-of-court settlement. Internal and external lawyers assist with the estimate. When deciding on the necessity of a provision for litigation, the management takes into account the probability of an unfavourable outcome and the chance of making a sufficiently accurate estimate of the amount of the obligation. The commencement of legal proceedings, the formal assertion of a claim against the Group or the disclosure of certain litigation in the Notes does not automatically mean that a provision was made for the risk concerned. A ruling in court proceedings, a decision by a public authority or an out-of-court settlement may cause the Group to incur expenses for which no provision was made because the amount could not be reliably determined or for which the provision made and the insurance coverage is not sufficient.

Provisions for restructuring and severance payments are only recognised when the Group has a constructive obligation. In the case of restructuring, a constructive obligation exists if there is a formal restructuring plan that includes the affected business unit or the affected part of a business unit, the location and number of employees affected, the detailed estimate of the associated costs and the time schedule. In addition, the key points of the plan must have been communicated to the employees concerned. The restructuring provisions only include expenses directly attributable to the restructuring measures that are necessary for the restructuring and are not related to the future operating business. This includes, for example, expenses for severance payments to employees.

Provisions for onerous contracts are recognised on the basis of the directly attributable costs and income expected, as well as any opportunities to terminate the relevant contracts early.

Provisions for obligations that are not expected to lead to an outflow of resources in the following year are recognised to the amount of the present value of the expected outflow, taking foreseeable price rises into account.

The assigned value of provisions is reviewed on each balance sheet date. Provisions in foreign currencies are translated at reporting date rates.

If no provision could be recognised because one of the stated criteria was not fulfilled, the corresponding obligations are shown as contingent liabilities and discussed in the relevant section.

Liabilities

Trade and other payables are initially recognised at fair value. Fair value is approximately equivalent to the carrying amount.

Measurement in subsequent periods is at amortised cost using the effective interest rate method.

Liabilities denominated in foreign currencies are measured at the balance sheet date rate.

Obligations from share programmes are measured at fair value as cash-settled share-based payment transactions in accordance with IFRS 2. Fair value is derived using a Monte Carlo simulation.

The liability is recognised on the basis of the resulting fair value, taking the remaining term of the programme into account. Changes are recognised as staff costs in profit or loss.

Details of the assumptions used for the model and the structure of the share programmes can be found in [Note 39, p. 212ff.](#)

Contract liabilities

A contract liability is an obligation on the part of the Group towards a customer to provide goods or services for which the customer has already performed an obligation, e.g. by making an advance payment. Contractual liabilities are recognised as revenue as soon as the Group fulfils its contractual obligations. The Group's contract liabilities consist of liabilities from unused flight documents, unredeemed miles from customer loyalty programmes, construction contracts and other contract liabilities.

Until they are used, sold flight documents are recognised as an **obligation from unused flight documents**. Coupons that are unlikely to be used any more are recognised pro rata temporis as traffic revenue in the income statement at their estimated value. The estimate is based on historical statistical data. Due to the coronavirus pandemic and the associated increased number of tickets for cancelled and rebookable flights, the parameters for the use of expired flight coupons were adjusted according to current estimates.

The Lufthansa Group uses various bonus miles programmes with the aim of ensuring long-term **customer loyalty**. Participants in the Miles & More programme, which is the biggest bonus miles programme in the Lufthansa Group, can collect and redeem bonus miles for flights with the airlines in the Lufthansa Group as well as with numerous partners (including other airlines, hotels, global car hire companies, financial and insurance providers, telecommunications companies, retailers, automobile clubs, etc.). Miles expire three years after they are collected, in accordance with the terms of membership, unless they are protected by frequent flyer status or credit card use.

Observable past redemption patterns are used to measure the premium claims that are collected on flights with the airlines in the Lufthansa Group. Miles that are expected to be used for flights with airlines of the Lufthansa Group are measured based on the average price of the premium flight

or upgrade for the average number of miles used. The price is calculated on the basis of past redemption patterns, weighted for the various geographic regions and booking classes. This is then corrected to allow for the reduced flexibility of premium flights and the award miles granted for normal flights. Miles that are expected to be redeemed for other bonuses are measured at the average price for these bonuses and the average number of miles redeemed. The prices for additional miles are recalculated every year and applied to all additions in that year. Consumption of miles is measured using the average rate for total miles at the beginning of the year (same as previous year).

Premium points collected from other partners are measured at the amounts paid by these partners in relation to the average number of miles collected and redeemed.

The calculation method for the legal and economic expiry rate entails calculating the expiry rate from the values observed in prior years, increased or decreased as necessary by reference to past trends or future enhancements to the programme. Because far fewer miles were redeemed during the coronavirus pandemic, it was decided not to adjust the parameters for measurement purposes to reflect current redemption patterns, but rather to use the figure from before the crisis.

Government grants

Government grants are recognised at fair value when there is reasonable assurance that the grant will be received and that the Group will fulfil all conditions attached to such grants. Government grants include, for example, income subsidies or social security contributions for short-time working pay. If the supplement for short-time working pay is a personal benefit for the employee, the respective payments are transitory items. Another example is government loans at below-market rates, where the interest rate advantage is allocated pro rata temporis over the term of the loan.

Government grants for the acquisition of property, plant and equipment are included in other liabilities as deferred income and recognised in other operating income on a straight-line basis over the estimated useful life of the corresponding asset. Non-monetary assets are only recognised in the income statement when the necessary eligibility criteria have been fulfilled. Until then, the corresponding amounts must also be shown under deferred income.

Tax assets/liabilities

Claims and obligations towards tax authorities that are uncertain with regard to their occurrence, probability and amount are recorded as tax assets or liabilities on the basis of best estimates or expectations. Any contingent liabilities or assets existing in this context are addressed separately as needed.

Deferred tax items

In accordance with IAS 12, deferred taxes are recognised for all temporary differences between the statements of financial position with regard to tax of individual companies and the consolidated financial statements. Tax loss carry-forwards are recognised to the extent that the deferred tax assets are likely to be used in the future. Company earnings forecasts and specific, realisable tax strategies are used to determine whether deferred tax assets are usable or not, i.e. whether they have a value that can be realised. The planning period used to assess this probability is determined by the individual Group company according to the specific circumstances and lies generally between three and five years unless there is convincing evidence of possible prolonged use beyond the general horizon of the official Group planning. Other factors in the assessment include the reason for losses, the existence of a history of losses and prudence in considering future risks in the respective plans. In terms of the high losses in Germany resulting from the shock of the coronavirus pandemic, longer planning periods and a balance of qualitative indicators were used for the analysis. For entities with a history of losses not due to the pandemic, no deferred taxes were generally recognised for tax loss carry-forwards
➤ **Note 15, p. 181ff.**

Effective income taxes

The Lufthansa Group is liable for income taxes in various countries. Material assumptions are necessary to calculate the income tax liabilities. For certain transactions and calculations, the final taxation cannot be assessed definitively in the course of normal business. The amount of the liability that may arise from future determinations of expected tax inspection is based on estimates of whether additional income taxes will be owed, and if so, at which amount. The assumptions underlying the estimates are reviewed on an ongoing basis and adjusted as necessary. Nevertheless, different tax payments may occur in the period in which taxation is definitively assessed.

NOTES TO THE CONSOLIDATED INCOME STATEMENT

4 Traffic revenue

In the consolidated income statement, the Lufthansa Group attributes revenue to the segments Network Airlines, Eurowings, Logistics, MRO, Catering, and Additional Businesses and Group Functions.

Global travel restrictions in response to the coronavirus pandemic put a significant strain on traffic. The number of passengers in the financial year was 68% lower than in the pre-crisis year 2019, but 29% higher than the previous year.

The following table provides a breakdown of traffic revenue according to the different business models for the financial year that ended on 31 December 2021. The table following that shows the previous year's figures.

T067 TRAFFIC REVENUE BY SECTOR 2021

	Total	Europe ¹⁾	North America ¹⁾	Central and South America ¹⁾	Asia/Pacific ¹⁾	Middle East ¹⁾	Africa ¹⁾
in €m							
Network Airlines ²⁾	7,407	5,049	1,274	156	537	190	201
Lufthansa German Airlines	4,241						
SWISS ²⁾	1,994						
Austrian Airlines	669						
Brussels Airlines	503						
Eurowings ²⁾	825	820	3	-	1	1	-
Logistics	3,644	1,823	359	121	1,236	40	65
Total	11,876						

¹⁾ Traffic revenue is allocated according to the original location of sale.

²⁾ Disclosure of traffic revenue, including belly revenue; this is reported in the segment reporting in the reconciliation column.

T067 TRAFFIC REVENUE BY SECTOR 2020

	Total	Europe ¹⁾	North America ¹⁾	Central and South America ¹⁾	Asia/Pacific ¹⁾	Middle East ¹⁾	Africa ¹⁾
in €m							
Network Airlines ²⁾	5,899	4,066	859	131	556	144	143
Lufthansa German Airlines	3,465						
SWISS ²⁾	1,635						
Austrian Airlines	415						
Brussels Airlines	384						
Eurowings ²⁾	583	576	4	1	2	-	-
Logistics	2,596	1,210	250	90	983	22	41
Total	9,078						

¹⁾ Traffic revenue is allocated according to the original location of sale.

²⁾ Disclosure of traffic revenue, including belly revenue; this is reported in the segment reporting in the reconciliation column.

Traffic revenue of EUR 11,876m (previous year: EUR 9,078m) includes freight and mail revenue of EUR 4,254m (previous year: EUR 3,011m). Of the total, EUR 3,644m (previous year: EUR 2,596m) relates to the Logistics segment. Other freight and mail revenue of EUR 610m (previous year: EUR 415m) mainly comes from marketing belly capacities on passenger flights by SWISS and Eurowings.

5 Other revenue

The following table provides a breakdown of other revenue by category (type of service) and geography for 2021.

T068 OTHER OPERATING REVENUE BY AREA OF OPERATIONS 2021

	Total	Europe ¹⁾	North America ¹⁾	Central and South America ¹⁾	Asia/Pazific ¹⁾	Middle East ¹⁾	Africa ¹⁾
in €m							
MRO	3,117	1,307	971	87	536	156	60
MRO services	2,676						
Other operating revenue	441						
Catering	1,085	101	791	65	75	21	32
Catering services	911						
Revenue from in-flight sales	98						
Other services	76						
Network Airlines	295	259	13	1	13	4	5
Eurowings	1	1	-	-	-	-	-
Logistics	124	76	46	-	-3	4	1
Additional Businesses and Group Functions	313	198	32	9	52	16	6
IT services	158						
Travel management	92						
Other	63						
Total	4,935						

¹⁾ Traffic revenue is allocated according to the original location of sale.

T068 OTHER OPERATING REVENUE BY AREA OF OPERATIONS 2020

	Total	Europe ¹⁾	North America ¹⁾	Central and South America ¹⁾	Asia/Pazific ¹⁾	Middle East ¹⁾	Africa ¹⁾
in €m							
MRO	2,724	1,175	734	90	513	133	79
MRO services	2,272						
Other operating revenue	452						
Catering	1,064	165	662	53	132	22	30
Catering services	900						
Revenue from in-flight sales	50						
Other services	114						
Network Airlines	268	233	10	2	14	5	4
Eurowings	6	6	-	-	-	-	-
Logistics	137	90	37	2	3	5	-
Additional Businesses and Group Functions	312	206	31	13	42	14	6
IT services	167						
Travel management	91						
Other	54						
Total	4,511						

¹⁾ Traffic revenue is allocated according to the original location of sale.

MRO services make up the majority of external revenue in the MRO segment. Other revenue in the MRO segment from the sale of material and hiring out material and engines, as well as logistics services, are classified as other services.

The revenue listed under catering services originates exclusively in the Catering segment. The Catering segment also

generates revenue from other services, particularly in the areas of flight security concepts and transport/warehouse logistics.

Other revenue also includes revenue from customer contracts that are fulfilled over a given period. These are mainly MRO and IT services.

6 Changes in inventories and work performed by entity and capitalised

T069 CHANGES IN INVENTORIES AND WORK PERFORMED BY ENTITY AND CAPITALISED

in €m	2021	2020
Increase/decrease in finished goods and work in progress	-10	-6
Other internally produced and capitalised assets	119	181
	109	175

Other own work capitalised relates almost exclusively to aircraft and engine overhauls. Fleet retirements due to the coronavirus crisis again caused a decline in capitalised maintenance inspections and thus an overall decline in other own work capitalised.

7 Other operating income

T070 OTHER OPERATING INCOME

in €m	2021	2020
Foreign exchange gains	396	677
Subsidies	241	261
Income from the reversal of provisions and accruals	210	338
Reversal of write-downs on receivables	108	36
Income from the reversal of impairment losses on fixed assets	70	30
Compensation received for damages	39	45
Rental income	32	36
Services provided by the Group	32	24
Income from the disposal of non-current assets	27	17
Income from staff secondment	18	15
Commission income	9	10
Income from the disposal of non-current available-for-sale financial assets	3	21
Income from operating lease aircraft	-	10
Miscellaneous other operating income	417	377
	1,602	1,897

Foreign exchange gains (excluding financial liabilities) mainly include gains from differences between the average rate for the month on the transaction date and on the payment date, along with foreign exchange gains from measurement at the closing date rate. Income from exchange rate hedging is also recognised here. Foreign exchange losses from these transactions are reported under other operating expenses.

➤ **Note 10, p. 179f.** The foreign currency effects of borrowing are recognised in other financial items, in the context of the net results of exchange rate hedging relationships for borrowing.

Income from government grants mainly includes unrestricted grants paid directly to the companies affected. Of this income, EUR 201m (previous year: EUR 92m) related to grants received by US entities in the LSG group and in the Lufthansa Technik group under the CARES Act in the USA. The grants mentioned above were recognised after appropriate documentation was provided. In addition to the income under the CARES Act, in the previous year this item included an income subsidy to Austrian Airlines of EUR 150m.

Income from the reversal of provisions and accruals relates to a number of provisions and accruals recognised in previous years that have not been fully used. In contrast, expenses from insufficient provisions recognised in previous years are recognised together with the primary expense item to which they relate.

Income from the reversal of write-downs on receivables mainly related to the MRO segment. In contrast to earlier expectations, receivables from airline customers for which defaults were considered to be highly probable as of the last reporting date did turn out to be recoverable. At the same time, the general allowances for expected losses were lower due to an improved structure of overdue receivables in the portfolio of Lufthansa Technik customers.

Income of EUR 70m was recognised from write-backs on assets in 2021 (previous year: EUR 30m). Write-backs on a total of 19 aircraft accounted for EUR 57m of the total. Higher disposal proceeds than was assumed at the time of the transfer are now expected for 17 Airbus A340s transferred to long-term parking mode the previous year. Contrary to the original plans, two other leased aircraft were not transferred to long-term parking mode, so the write-down on the right-of-use assets was reversed pro rata.

The Lufthansa Group recognised rental and lease income of EUR 32m in 2021 (2020: EUR 46m). The main reason for the decline was the discontinuation of operations by two lessees in the previous year.

The following table shows the contractual lease payments.

T071 CONTRACTUAL LEASE PAYMENTS (LESSOR)

in €m	31 Dec 2021	31 Dec 2020
to 1 year	18	20
more than 1 year to 2 years	14	16
more than 2 years to 3 years	11	14
more than 3 years to 4 years	9	11
more than 4 years to 5 years	6	9
more than 5 years	56	40

Income from the disposal of non-current assets also includes EUR 18m from eleven aircraft sold (previous year: EUR 5m).

Other operating income includes items not attributable to any of the aforementioned categories.

8 Cost of materials and services

T072 COST OF MATERIALS AND SERVICES

in €m	2021	2020
Aircraft fuel and lubricants	2,409	1,875
Other raw materials, consumables and supplies	1,615	2,104
Purchased goods	139	226
Total cost of raw materials, consumables and supplies and of purchased goods	4,163	4,205
Fees and charges	2,155	1,796
External MRO services	1,181	1,139
Charter expenses	409	469
In-flight services	390	137
External IT services	305	318
Flight irregularities	51	66
Other services	292	323
Total cost of purchased services	4,783	4,248
	8,946	8,453

Changes in depreciation and valuation allowances on repairable spare parts are also reported within expenses for other raw materials, consumables and supplies. In the 2021 financial year, impairments and valuation allowances totalling EUR 48m were incurred as a result of the crisis (previous year: EUR 158m).

Expenses for flight irregularities includes accommodation and meals in the case of delays, for instance, or payments for damaged luggage.

9 Staff costs

T073 STAFF COSTS

in €m	2021	2020
Wages and salaries	5,175	5,091
Social security contributions	698	687
Expenses for pension plans and other employee benefits	455	658
	6,328	6,436

Staff costs were stable year-on-year. Increased severance payment expenses of EUR 581m (previous year: EUR 233m) offset the savings from the decline in the number of employees. In 2021, income of EUR 865m was received in reimbursement of wage-replacement benefits and social security

contributions paid in the context of short-time working in Germany, Austria and Switzerland (previous year: EUR 1,020m). This includes EUR 340m (previous year: EUR 293m) in subsidies for social security contributions and wage-replacement benefits that are qualified as support payments.

Expenses for pension plans principally consist of additions to the pension provisions. ➔ Note 35, p. 200ff.

T074 EMPLOYEES

	Average for the year 2021	Average for the year 2020	As of 31 Dec 2021	As of 31 Dec 2020
Ground staff	65,157	79,878	63,612	66,070
Flight staff	41,355	44,050	40,632	42,675
Staff	106,512	123,928	104,244	108,745
Trainees	1,131	1,279	1,046	1,320
	107,643	125,207	105,290	110,065

The annual average is calculated pro rata temporis from the time companies are consolidated or deconsolidated.

10 Depreciation, amortisation and impairment

Total depreciation, amortisation and impairment came to EUR 2,351m (previous year: EUR 4,389m).

T075 DEPRECIATION, AMORTISATION AND IMPAIRMENT

in €m	2021	2020
Amortisation of other intangible assets	101	134
Depreciation of aircraft	1,691	1,923
Depreciation of other tangible assets	467	504
Total amortisation/depreciation	2,259	2,561
Impairment of goodwill	-	222
Impairment of other intangible assets	17	15
Impairment of aircraft and reserve engines	7	1,461
Impairment of other tangible assets	36	51
Impairment of right-of-use assets	23	60
Impairment of financial assets	9	19
Total impairment	92	1,828
Total depreciation, amortisation and impairment	2,351	4,389

The decline in the amount of depreciation of aircraft was due to the reduction of the active fleet, the impairment losses recognised in the previous year and fewer additions in 2021.

The fall in other depreciation and amortisation is mainly due to significantly lower investment in intangible assets and other items of property, plant and equipment since the outbreak of the pandemic.

Impairment losses of EUR 92m were recognised in the financial year 2021. EUR 28m of the total related to assets of the disposal groups Lufthansa Technik Shannon Co. Ltd. and Lufthansa Technik Maintenance International GmbH. Right-of-use assets for aircraft returned early were written down by EUR 18m. Impairment losses of EUR 17m were recognised for abandoned IT projects and internally developed software. EUR 9m related to write-downs on other long-term financial assets and another EUR 9m to assets of the LSG Chile business, whose business prospects have worsened.

Other operating expenses include additional write-downs of EUR 8m (previous year: EUR 5m) on the businesses in the Lufthansa Technik group reclassified as held for sale.

Impairment losses of EUR 1,475m were incurred in the previous year on 115 aircraft and aircraft right-of-use assets that were no longer intended for long-term service or were intended to be sold. Another EUR 222m related to write-downs on goodwill at LSG USA, LSG Korea and Eurowings. Impairment losses of EUR 66m were recognised on joint ventures presented within the financial result as part of the result of investments accounted for using the equity method.

11 Other operating expenses

T076 OTHER OPERATING EXPENSES

in €m	2021	2020
Rental and maintenance expenses	531	603
Staff-related expenses	479	543
Foreign exchange losses	463	596
Auditing, consulting and legal expenses	306	203
Expenses for computerised distribution systems	156	126
Other services	146	146
Advertising and sales promotions	136	128
Sales commission paid to agencies	96	97
Commissions for credit cards	92	58
Write-downs on receivables	73	251
Other taxes	57	51
Losses on disposal of non-current assets	56	39
Communications costs	53	68
Insurance premiums for flight operations	51	42
Miscellaneous other operating expenses	520	521
	3,215	3,472

Staff-related expenses also include travel and training costs for Group employees and the costs of agency staff.

Foreign exchange losses (excluding financial liabilities) mainly consist of losses from differences between the monthly average rates on the transaction date and on the payment date, expenses from exchange rate hedges and translation losses from measurement at the exchange rate on the balance sheet date. ➤ **Note 7, p. 178f.** The foreign currency effects of borrowing are recognised in other financial items, in the context of the net results of exchange rate hedging relationships for borrowing.

The increase in auditing, consulting and legal expenses is based on extraordinary provisions of EUR 103m for litigation not connected to normal business activities. This litigation primarily relates to differing opinions about the interpretation of the state aid regulations relating to the EU Temporary Framework for state aid to support the economy in light of Covid-19 and the conditions of the approval of the stabilisation measures relating to state aid, as well as to fines that will probably be imposed in other European countries.

The decline in write-downs on receivables stems from the higher write-downs in the previous year, whereby EUR 68m (previous year: EUR 197m), mainly related to customer receivables at direct risk of default. Write-downs of EUR 5m (previous year: EUR 54m) were also recognised for general default risks under the expected credit loss model defined in IFRS 9.

EUR 37m were recognised in losses on the disposal of non-current assets, as risks materialised in connection with the assumption of liability for the sale of the European catering businesses in the previous year.

12 Result from equity investments

T077 RESULT FROM EQUITY INVESTMENTS

in €m	2021	2020
Result of joint ventures accounted for using the equity method	-2	-236
Result of associated companies accounted for using the equity method	-20	-40
Result of equity investments accounted for using the equity method	-22	-276
Dividends from other joint ventures	-	4
Dividends from other associated companies	-	2
Income from profit transfer agreements	29	26
Expenses from loss transfer agreements	-22	-35
Dividends from other equity investments	17	15
Result of other equity investments	24	12
	2	-264

Entities accounted for using the equity method significantly reduced their losses in the financial year. The main reason for this was the improvement in earnings at Günes Ekspres Havacilik Anonim Sirketi (SunExpress) and Terminal 2 Gesellschaft mbH & Co oHG (➔ Note 23, p. 193ff.) and the fact that no write-downs on shares were recognised within the earnings of equity-accounted joint ventures in the reporting year (previous year: EUR 66m).

Income and expenses from profit and loss transfer agreements include apportionments of taxes.

13 Net interest

T078 NET INTEREST

in €m	2021	2020
Income from other securities and non-current financial loans	2	3
Other interest and similar income	-8	80
Interest income	-6	83
Interest expenses on pensions obligations	-78	-97
Interest expenses on other provisions	-1	-13
Interest and other similar expenses	-356	-307
Interest expenses	-435	-417
	-441	-334

Net interest comprises interest income and expenses – calculated using the effective interest method in accordance with IFRS 9 – from financial assets and liabilities not classified as at fair value through profit or loss.

Net interest declined year-on-year by EUR 107m. This is mainly due to lower income from cash investments and higher interest expense for new borrowing. Interest expenses for state loans came to EUR 103m in the financial year (previous year: EUR 50m). These were offset by lower expenses for the compounding of pension provisions, since the base rate was 0.5% lower on average between 31 December 2019 and 31 December 2020.

14 Other financial items

T079 OTHER FINANCIAL ITEMS

in €m	2021	2020
Result of fair value hedges – change in time value of hedged transactions	-30	60
Result of fair value hedges – change in time value of hedging instruments	31	-41
Ineffective portion of derivatives used as cash flow hedges	39	-144
Result of derivatives held for trading classified as at fair value through profit or loss	27	-790
Result of measuring securities classified as at fair value through profit or loss	95	-57
Exchange rates effects from financial liabilities	-11	28
	151	-944

Income in the financial year essentially consisted of the mark-to-market accounting for the convertible bond in the item “securities measured at fair value through profit or loss”, which came to EUR 93m (previous year: EUR -96m), and the ineffective portions of cash flow hedges (EUR 39m; previous year: EUR -144m), particularly currency hedges. Net income in the previous year was mainly driven by the reversal of hedging relationships as a result of the overhedging of fuel prices, which were then recognised at fair value through profit or loss.

15 Income taxes

In the 2021 financial year, tax income of EUR 413m (previous year: EUR 1,865m) was recognised due to the loss incurred, which breaks down as follows:

T080 INCOME TAXES

in €m	2021	2020
Current income taxes	112	80
Deferred income taxes	-525	-1,945
	-413	-1,865

Current income taxes include corporation tax, solidarity surcharge, trade tax and other income taxes paid outside Germany totalling EUR 123m for 2021 (previous year: EUR 4m). Other tax income of EUR 11m related to prior years (previous year: tax expense of EUR 76m). The tax rates used to calculate deferred taxes abroad in the 2021 financial year were unchanged from the previous year at 3.5% to 35.0%. For measuring deferred taxes, the relevant taxation rules in force or adopted at the balance sheet date are used. Deferred taxes include expenses of EUR 424m (previous year: income of EUR 649m) from temporary differences.

The following table reconciles expected and effective tax expenses. Expected tax expense is calculated by multiplying profit before income taxes by a tax rate of 25% (previous year: 25%). This is calculated as the average estimated value for the tax group of the Group parent company and is made up of a tax rate of 15.825% (previous year: 15.825%) for corporation tax/solidarity surcharge and 9.175% for trade tax (previous year: 9.175%). The portion of trade tax related to the foreign air transport operations is deducted when calculating the tax rate for trade tax, particularly in the case of the Group parent company with its head office in Germany.

T081 TAX RECONCILIATION

in €m	2021		2020	
	Basis of assessment	Tax expenses	Basis of assessment	Tax expenses
Expected income tax expenses	-2,606	-652	-8,631	-2,158
Tax free gains/losses	-10	3	-122	31
Non-deductible costs	245	61	488	122
Non-taxable income	95	-24	278	-70
Non-taxable income from equity investments	-10	3	-226	57
Difference between local taxes and the deferred tax rates of the parent company as well as effects of changes in tax rates	-	51	-	-132
Taxes from other periods ¹⁾	-	-7	-	44
Effects from use or deferred tax assets not recognised	-	152	-	241
Recognised income tax expenses	-	-413	-	-1,865

¹⁾ Deferred tax expenses of EUR 4m for other periods (previous year: EUR 32m tax revenue) and effective tax expenses of EUR 11m for other periods (previous year: EUR 76m).

Deferred tax liabilities of EUR 108m (previous year: EUR 47m) were not recognised on temporary differences in connection with shares in subsidiaries, as the temporary differences are not expected to reverse in future.

Deferred tax assets and liabilities in 2021 and 2020 were allocable to the following items in the statement of financial position:

T082 DEFERRED TAX ASSETS AND LIABILITIES

in €m	31 Dec 2021		31 Dec 2020	
	Assets	Liabilities	Assets	Liabilities
Tax loss carry-forwards and tax credits	2,290	-	1,341	-
Pension provisions	2,908	-	3,424	-
Intangible assets, property, plant and equipment	-	1,276	-	1,034
Non-current financial assets	-	5	-	24
Fair value measurement of financial instruments	-	163	113	-
Provisions for contingent losses	58	-	15	-
Receivables/liabilities/other provisions	-	27	215	-
Inventories	359	-	313	-
Assets held for sale	-	-	-	15
Other	-	12	-	-
Offset amounts	-954	-954	-588	-588
	4,661	529	4,833	485

In addition to a deferred tax asset on temporary differences of EUR 2,335m (previous year: EUR 3,243m), a deferred tax receivable on losses of EUR 2,327m (previous year: EUR 1,335m) was recognised for companies which incurred a net tax loss in the reporting year or in the previous year. In cases of a history of losses, an assessment of whether there would be sufficient taxable income in future was made on the basis of the forecasts for taxable income. Deferred tax assets were only recognised to the extent that these analyses indicated that there is a sufficient probability.

EUR 1,642m of capitalised tax loss carry-forwards (previous year: EUR 1,200m) related to the tax group of Deutsche Lufthansa AG. The full amount of the loss carry-forward arising in the financial year was recognised. The basis for this approach was long-term tax planning based on current corporate planning. Both external forecasts, e.g. by the industry association IATA, and internal planning currently assume that the current loss situation is an exogenous shock which will be overcome in the next few years and which does not fundamentally call into question the sustainable profitability of the industry or the company. Deutsche Lufthansa AG has shown in the past that positive tax results could be achieved over long-term periods, and the Company's planning indicates a return to sustained positive tax results from 2023 and for subsequent years. Based on these external and internal indicators, as well as the fact that under current German law the tax loss carry-forward is not restricted in time, the Company assumes that there is a high probability of sufficiently positive tax results in the future to be able to fully utilise the deferred tax assets. This means that the period of use is subject to uncertainty, but the Company does not consider the full use as such to be subject to uncertainty. An additional EUR 192m (previous year: EUR 87m) related to Swiss International Air Lines, which, on the basis of current earnings planning, considers the use of the loss carry-forwards to be sufficiently secure for the period of their legally limited useful life.

In addition to recognised deferred tax assets from tax loss carry-forwards and tax credits, further tax loss carry-forwards and temporary differences totalling EUR 3,845m (previous year: EUR 3,324m) exist for which no deferred tax assets could be recognised at entities which already had a history of losses before the pandemic.

The usage restrictions for non-capitalised tax loss carry-forwards and the resulting deferred taxes are distributed as follows:

T083 LIMITS ON THE USE OF NON-CAPITALISED LOSS CARRY-FORWARDS

in €m	Non-capitalised loss carry-forwards	Deferred taxes
Usable		
until 2025	259	60
until 2026	95	23
until 2027	55	14
until 2028	55	14
until 2029	55	14
until 2030	54	14
2031 and beyond	3,127	764
Total	3,700	903

16 Earnings per share

Basic/diluted earnings per share are calculated by dividing consolidated net profit by the weighted average number of shares in circulation during the financial year. To calculate the average number of shares, the shares bought back and reissued for the employee share programmes are included pro rata temporis.

The convertible bond issued in 2020 has not yet had an impact on earnings per share. The shares that could potentially be issued were not taken into account when determining diluted earnings, because they would have improved them. The coupon payments on ESF Silent Participation I (EUR 19m) were recognised as a dividend because the participation was classified as equity, and were deducted from earnings for the calculation of earnings per share.

T084 EARNINGS PER SHARE

		2021	2020
Basic/diluted earnings per share	€	-2.99	-12.51
Consolidated net profit/loss	€m	-2,191	-6,725
Weighted average number of shares		738,580,857	537,591,908

As the parent company of the Group, Deutsche Lufthansa AG reported a loss of EUR 3,090m for the 2021 financial year in its HGB financial statements. This is made up of a net loss for the financial year of EUR 2,310m and a loss carried forward of EUR 780m.

NOTES TO THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

Assets

17 Goodwill and intangible assets with an indefinite useful life

T085 GOODWILL AND INTANGIBLE ASSETS WITH AN INDEFINITE USEFUL LIFE

in €m	Goodwill from consolidation	Intangible assets with an indefinite useful life	Total
Cost as of 1 Jan 2020	1,044	663	1,707
Accumulated impairment losses	-308	-4	-312
Carrying amount 1 Jan 2020	736	659	1,395
Currency translation differences	-3	-	-3
Additions due to changes in consolidation	-	-	-
Additions	-	-	-
Reclassifications	-	-	-
Disposals due to changes in consolidation	-1	-	-1
Disposals	-	-	-
Reclassifications to assets held for sale	-	-	-
Impairment losses	-222	-	-222
Reversal of impairment losses	-	-	-
Carrying amount 31 Dec 2020	510	659	1,169
Cost as of 1 Jan 2021	1,038	662	1,700
Accumulated impairment losses	-528	-3	-531
Carrying amount 1 Jan 2021	510	659	1,169
Currency translation differences	1	19	20
Additions due to changes in consolidation	-	-	-
Additions	-	-	-
Reclassifications	-	-	-
Disposals due to changes in consolidation	-	-	-
Disposals	-	-	-
Reclassifications to assets held for sale	-	-	-
Impairment losses	-	-	-
Reversal of impairment losses	-	-	-
Carrying amount 31 Dec 2021	511	678	1,189
Cost as of 31 Dec 2021	1,037	682	1,719
Accumulated impairment losses	-526	-4	-530

All goodwill and intangible assets with an indefinite useful life were subjected to a regular impairment test in 2021 as required by IAS 36. Furthermore, there is the obligation to perform an impairment test if there is a triggering event.

Acquired brands and slots have an indefinite useful life due to their lasting legal and economic significance. The tests were performed at the level of the smallest cash-generating unit (CGU) on the basis of fair value less costs to sell. Apart from this, a “stand-alone” brand test on the basis of a relief-from-royalty approach was performed for the brands Edelweiss and time:matters.

The following table provides an overview of the goodwill tested and the assumptions made in the respective impairment tests regarding the smallest possible cash-generating unit (CGU) in each case.

T086 IMPAIRMENT TESTS OF GOODWILL 2021

Name of the CGU	Lufthansa German Airlines	Brussels Airlines	LSG Sky Chefs USA group	Other ¹⁾
Segment	Network Airlines	Network Airlines	Catering	Catering/Service and financial companies
Carrying amount of goodwill (31 Dec)	€ 252m	€ 44m	€ 177m	€ 36m
Impairment losses	-	-	-	-
Duration of planning period	4 years	4 years	4 years	4 years
Revenue growth p.a. after end of planning period	1.0%	1.0%	2.1%	1.9% to 3.4%
Discount rate	6.0% ²⁾	6.0% ²⁾	6.7% ²⁾	6.1% to 9.3% ²⁾

¹⁾ Goodwill of less than EUR 25m carrying amount in any individual instance.

²⁾ After-tax rate.

The assumptions on revenue growth used for the impairment tests are based on approved internal budgets and external industry-specific sources (for example IATA) in the planning period. On the basis of the financial planning by the individual business units, discounts were made at Group level to reflect the uncertainties in the planning due to the crisis. In the course of Group planning the discounts were set at approximately 18% of the Adjusted EBIT figure on a long-term basis and were allocated to the units on a pro rata basis during the impairment tests. Generally speaking, the markets and the earnings position are expected to recover steadily until the end of 2025. In the long term, the expectation is that available seat-kilometres will return to roughly the same level as before the crisis, but some customer segments, particularly the business travel market, will remain below their historic capacities, whereas others, such as leisure travel, will perform better. The duration of the ramp-up phase is an important risk factor. The margins used are based on past experience or were developed on the basis of cost-cutting measures initiated on the basis of the plans for the Group-wide ReNew programme. Long-term investment rates are based on past experience and take account of the replacement of any means of production envisaged during the planning period as well as current changes in fleet planning. Costs of the central functions were charged to the individual units based on their use of these functions.

The weighted average cost of capital is calculated using market data to derive leverage ratios, beta factors and borrowing costs from a peer group that is reviewed annually. A market risk premium of 7.5% was used as a basis (previous year: 7.5%). Regional risks are taken into account by applying appropriate risk premiums.

Having written off goodwill at LSG Korea, Eurowings, the flight school units and other smaller catering businesses in the previous year, there is no annual impairment testing for these business entities from 2021. At the end of the year, impairment tests were carried out at the level of the cash-generating units based on the assumptions described in the table.

An impairment test was performed as of 31 December 2021 for LSG Sky Chefs Chile following the loss of a key customer, which resulted in an impairment loss of EUR 9m on property, plant and equipment.

Assuming sustained revenue growth by the CGUs as described in the table, the recoverable amounts for the units without impairment indicators at the end of the year would exceed the carrying amount, even if the growth assumptions were reduced by one percentage point in each case. In terms of planned EBIDA margins or the discount rates used for the impairment tests, worsening the scenarios by one percentage point in each case would also not reduce the recoverable amounts below the respective carrying amounts for these CGUs, with the exception of LSG North America and RiM

– Retail in Motion. Reducing the EBIDA margin by more than 0.5 percentage points at LSG North America and by 0.2 percentage points at RiM – Retail inMotion results in a lower recoverable amount. The sensitivity analysis takes into account changes in one assumption at a time, whereby the other assumptions remain unchanged from the original calculation.

The following table shows the assumptions used for the previous year's impairment tests.

T086 IMPAIRMENT TESTS OF GOODWILL 2020

Name of the CGU	Lufthansa German Airlines	Brussels Airlines	Eurowings	LSG Sky Chefs USA group	LSG Sky Chefs Korea	Other ¹⁾
Segment	Network Airlines	Network Airlines	Eurowings	Catering	Catering	Catering/Service and financial companies
Carrying amount of goodwill (31 Dec)	€ 252m	€ 44m	-	€ 177m	-	€ 36m
Impairment losses	-	-	€ 57m	€ 100m	€ 57m	€ 8m
Duration of planning period	4 years	4 years	4 years	4 years	4 years	4 years
Revenue growth p.a. after end of planning period	1.0%	1.0%	1.0%	2.2%	2.0%	1.0% to 3.1%
Discount rate	5.5% ²⁾	5.5% ²⁾	5.5% ²⁾	5.7%	5.5%	5.0% ²⁾ to 9.6%

¹⁾ Goodwill of less than EUR 25m carrying amount in any individual instance.

²⁾ After-tax rate.

The intangible assets with indefinite useful lives consist of slots purchased as part of company acquisitions (insofar as they are tradeable) and brand names acquired. The slots were included in the impairment test for the smallest cash-generating unit (CGU) to which the respective slots are allocated. As described above for goodwill, the impairment tests were

then performed on the basis of the corporate planning for all of the assets, including slots, of the respective units.

The following table shows the assumptions made for the impairment testing.

T087 IMPAIRMENT TESTS OF SLOTS 2021

Group company	SWISS	Eurowings	Austrian Airlines
Carrying amount for slots (31 Dec)	€ 135m	€ 36m	€ 23m
Impairment losses	-	-	-
Duration of planning period	4 years	4 years	4 years
Revenue growth p.a. after end of planning period	1.0%	1.0%	1.0%
Discount rate	6.1% ¹⁾	6.0% ¹⁾	6.0% ¹⁾

¹⁾ After-tax rate.

Based on sustainable revenue growth according to assumptions described in the table, the recoverable amounts significantly exceed the carrying amounts. Even if the assumptions for revenue growth and margins were to be reduced or the discount rate were to be increased by one percentage point in each case, the recoverable amounts would exceed the carrying amounts.

The sensitivity analysis takes into account changes in one assumption at a time, whereby the other assumptions remain unchanged from the original calculation.

The following table shows the assumptions used for the previous year's impairment tests.

T087 IMPAIRMENT TESTS OF SLOTS 2020

Group company	SWISS	Austrian Airlines
Carrying amount for slots (31 Dec)	€ 135m	€ 23m
Impairment losses	-	-
Duration of planning period	4 years	4 years
Revenue growth p.a. after end of planning period	1.0%	1.0%
Discount rate	5.5% ¹⁾	5.5% ¹⁾

¹⁾ After-tax rate.

Depending on where they are used, the purchased slots of Deutsche Lufthansa AG are allocated at their historic cost partly to Eurowings and partly (EUR 76m, carrying amount unchanged) to the unit Lufthansa German Airlines. The slots of the CGU Lufthansa German Airlines were tested as part of the impairment testing of goodwill described above.

The regular impairment test for the brands acquired was carried out on the basis of the revenue generated from each brand.

The following additional assumptions were used in the impairment test for the acquired brands:

T088 IMPAIRMENT TESTS OF BRANDS 2021

Group company	SWISS	Austrian Airlines	Brussels Airlines	Other
Carrying amount for brand (31 Dec)	€ 239m	€ 107m	€ 37m	€ 7m
Impairment losses	-	-	-	-
Duration of planning period	4 years	4 years	4 years	4 years
Revenue growth p.a. after end of planning period	1.0%	1.0%	1.0%	1.0% to 2.1%
Savings in hypothetical leasing payments before taxes (royalty rate)	0.63%	0.35%	0.20%	0.23% to 0.50%
Discount rate	6.1% ¹⁾	6.0% ¹⁾	6.0% ¹⁾	6.0% to 6.4% ¹⁾

¹⁾ After-tax rate.

Assuming sustained brand-related revenue growth at the end of the planning period, as described in the table, the recoverable amounts for the brands exceed their carrying amounts, significantly in some cases. If the assumptions for sustained brand-related revenue growth were to be reduced by 0.5 percentage points or the discount rate were to be increased by 0.4 percentage points, the carrying amounts of the Austrian Airlines and Brussels Airlines brands would each fall short of the recoverable amounts. With corresponding

sensitivity analyses, there was no impairment charge within the other brands in 2021.

The sensitivity analysis takes into account changes in one assumption at a time, whereby the other assumptions remain unchanged from the original calculation.

The assumptions used for the previous year's impairment tests can be derived from the following table.

T088 IMPAIRMENT TESTS OF BRANDS 2020

Group company	SWISS	Austrian Airlines	Brussels Airlines	Other
Carrying amount for brand (31 Dec)	€ 238m	€ 107m	€ 37m	€ 7m
Impairment losses	-	-	-	-
Duration of planning period	4 years	4 years	4 years	4 years
Revenue growth p.a. after end of planning period	1.0%	1.0%	1.0%	1.0% to 2.2%
Savings in hypothetical leasing payments before taxes (royalty rate)	0.63%	0.35%	0.20%	0.23% to 0.50%
Discount rate	5.5% ¹⁾	5.5% ¹⁾	5.5% ¹⁾	5.5% to 5.7% ¹⁾

¹⁾ After-tax rate.

18 Other intangible assets

T089 OTHER INTANGIBLE ASSETS

in €m	Concessions, industrial property rights and similar rights and licences to such rights and assets	Internally developed software	Advance payments	Total
Cost as of 1 Jan 2020	1,324	163	205	1,692
Accumulated amortisation	-992	-124	-29	-1,145
Carrying amount as of 1 Jan 2020	332	39	176	547
Currency translation differences	-1	-	-	-1
Additions due to changes in consolidation	-	-	-	-
Additions	18	3	59	80
Reclassifications	80	12	-88	4
Disposals due to changes in consolidation	-	-	-	-
Disposals	-8	-	-4	-12
Reclassifications to assets held for sale	-	-	-	-
Amortisation	-126	-21	-2	-149
Reversal of impairment losses	-	-	-	-
Carrying amount as of 31 Dec 2020	295	33	141	469
Cost as of 1 Jan 2021	1,393	178	157	1,728
Accumulated amortisation	-1,098	-145	-16	-1,259
Carrying amount as of 1 Jan 2021	295	33	141	469
Currency translation differences	5	-	-	5
Additions due to changes in consolidation	-	-	-	-
Additions	33	1	40	74
Reclassifications	56	9	-64	1
Disposals due to changes in consolidation	-	-	-	-
Disposals	-1	-1	-6	-8
Reclassifications to assets held for sale	-	-	-	-
Amortisation	-92	-15	-15	-122
Reversal of impairment losses	-	-	-	-
Carrying amount as of 31 Dec 2021	296	27	96	419
Cost as of 31 Dec 2021	1,488	188	116	1,792
Accumulated amortisation	-1,192	-161	-20	-1,373

Non-capitalised research and development expenses for intangible assets of EUR 23m (previous year: EUR 25m) were incurred. Fixed orders have been placed for intangible assets worth EUR 1m (previous year: EUR 12m), but they are not yet at the Lufthansa Group's economic disposal.

19 Aircraft and reserve engines including right-of-use assets

T090 AIRCRAFT AND RESERVE ENGINES INCLUDING RIGHT-OF-USE ASSETS

in €m	Aircraft and reserve engines	Advance payments for aircraft and reserve engines	Total
Cost as of 1 Jan 2020	32,945	2,102	35,047
Accumulated amortisation	-16,698	-	-16,698
Carrying amount as of 1 Jan 2020	16,247	2,102	18,349
Currency translation differences	-33	-	-33
Additions due to changes in consolidation	-	-	-
Additions	1,004	258	1,262
Reclassifications	602	-602	-
Disposals due to changes in consolidation	-	-	-
Disposals	-119	-27	-146
Reclassifications to assets held for sale	-149	-	-149
Depreciation	-3,441	-	-3,441
Reversal of impairment losses	-	-	-
Carrying amount as of 31 Dec 2020	14,111	1,731	15,842
Cost as of 1 Jan 2021	32,025	1,731	33,756
Accumulated amortisation	-17,914	-	-17,914
Carrying amount as of 1 Jan 2021	14,111	1,731	15,842
Currency translation differences	149	7	156
Additions due to changes in consolidation	-	-	-
Additions	668	556	1,224
Reclassifications	155	-155	-
Disposals due to changes in consolidation	-	-	-
Disposals	-52	-17	-69
Reclassifications to assets held for sale	-174	-	-174
Depreciation	-1,714	-4	-1,718
Reversal of impairment losses	57	-	57
Carrying amount as of 31 Dec 2021	13,200	2,118	15,318
Cost as of 31 Dec 2021	32,036	2,122	34,158
Accumulated amortisation	-18,836	-4	-18,840

This item includes 94 aircraft with a carrying amount of EUR 2,728m (previous year: 79 aircraft with a carrying amount of EUR 1,988m), which have been sold to and leased back from foreign leasing companies mainly with the aim of obtaining favourable financing conditions. The leasing companies were fully consolidated as structured entities. The Lufthansa Group is entitled to buy the aircraft back at a fixed price and at a given point in time. Another four aircraft (previous year: four) with a carrying amount of EUR 386m (previous year: EUR 416m) were pledged as collateral under loan agreements.

Austrian Airlines AG in Austria has granted liens on 38 aircraft with a carrying amount of EUR 191m to a banking consortium as part of the stabilisation measures (previous year: 38 aircraft with a carrying amount of EUR 212m).

The sale of three Airbus A380 aircraft with a carrying amount of EUR 165m has been contractually agreed, with a handover date in 2023.

In the reporting year, borrowing costs of EUR 28m were capitalised (previous year: EUR 19m). The financing rate used was 1.5% (previous year: 0.9%).

The additions relate to the procurement of new aircraft and engines as well as the capitalisation of engine maintenance and aircraft overhaul events. This item also includes right-of-use assets for aircraft and reserve engines amounting to EUR 81m (previous year: EUR 261m).

Write-backs mainly related to the Airbus A340-600 fleet, which was put in long-term parking mode in the previous year; it has been partly reactivated and disposal proceeds are now expected to be higher than at the previous reporting date.

Order commitments for aircraft and reserve engines amount to EUR 14.3bn (previous year: EUR 12.9bn). We also refer to the comments on fleet orders in the management report (➤ **Principles of the Group, Fleet and route network, p. 24ff.**).

20 Repairable spare parts for aircraft

T091 NOTES ON REPAIRABLE SPARE PARTS FOR AIRCRAFT

in €m	2021			2020		
	Gross acquisition cost	Accumulated depreciation	Net carrying amount	Gross acquisition cost	Accumulated depreciation	Net carrying amount
Pool material	2,198	907	1,291	2,283	972	1,311
Non-pool material	1,141	585	556	1,055	543	512
Total	3,339	1,492	1,847	3,338	1,515	1,823

The additions for the year (netted against disposals) accordingly amounted to EUR -85m (previous year: EUR -107m) for pool material and EUR 86m (previous year: EUR -19m) for non-pool material in the financial year; the net change in depreciation recognised in profit and loss was EUR -65m

(previous year: EUR 34m) and EUR 42m (previous year: EUR 115m) respectively. Of the depreciation and amortisation expense for the financial year, EUR 48m (previous year: EUR 158m) related to impairments in connection with materials that are expected to become obsolete.

21 Property, plant and equipment including right-of-use assets

T092 PROPERTY, PLANT AND OTHER EQUIPMENT INCLUDING RIGHT-OF-USE ASSETS

in €m	Land and buildings	Technical equipment and machinery	Other equipment, operating and office equipment	Advance payments and plant under construction	Total
Cost as of 1 Jan 2020	4,714	1,245	1,470	124	7,553
Accumulated depreciation	-1,623	-896	-993	-	-3,512
Carrying amount as of 1 Jan 2020	3,091	349	477	124	4,041
Currency translation differences	-38	-6	-11	-4	-59
Additions due to changes in consolidation	-	-	-	-	-
Additions	228	34	72	61	395
Reclassifications	25	17	18	-65	-5
Disposals due to changes in consolidation	-1	-	-	-	-1
Disposals	-98	-1	-20	-19	-138
Reclassifications to assets held for sale	-11	-3	7	8	1
Depreciation	-363	-79	-120	-2	-564
Reversal of impairment losses	1	-	-	-	1
Carrying amount as of 31 Dec 2020	2,834	311	423	103	3,671
Cost as of 1 Jan 2021	4,703	1,256	1,453	105	7,517
Accumulated depreciation	-1,869	-945	-1,030	-2	-3,846
Carrying amount as of 1 Jan 2021	2,834	311	423	103	3,671
Currency translation differences	44	9	7	3	63
Additions due to changes in consolidation	-	-	-	-	-
Additions	95	21	47	60	223
Reclassifications	11	19	7	-38	-1
Disposals due to changes in consolidation	-	-	-	-1	-1
Disposals	-77	-2	-4	-4	-87
Reclassifications to assets held for sale	-9	-	-	-	-9
Depreciation	-345	-57	-106	-	-508
Reversal of impairment losses	1	2	-	-	3
Carrying amount as of 31 Dec 2021	2,554	303	374	123	3,354
Cost as of 31 Dec 2021	4,667	1,274	1,404	126	7,471
Accumulated depreciation	-2,113	-971	-1,030	-3	-4,117

Land at Frankfurt Airport with a carrying amount at amortised cost of EUR 30m that was not included in the sale of LSG group's European business is no longer used primarily for the Group's operations and is therefore classified as an investment property.

As in the previous year, there are no charges over land and property. Pre-emption rights are registered for land held at EUR 171m (previous year: EUR 178m).

Other property, plant and equipment owned by the Group that did not consist of right-of-use assets was not used as collateral for financing arrangements (previous year: EUR 4m).

The following items of property, plant and equipment have been ordered, but are not yet at the Lufthansa Group's economic disposal:

**T093 ORDERS OF PROPERTY, PLANT AND EQUIPMENT
AS OF THE REPORTING DATE**

in €m	31 Dec 2021	31 Dec 2020
Land and buildings	60	11
Technical equipment and vehicles	29	19
Operating and office equipment	33	26
	122	56

22 Leases

The following table shows the carrying amounts of the recognised right-of-use assets and the changes during the reporting period.

T094 RIGHT-OF-USE ASSETS

in €m	Aircraft and reserve engines	Land and buildings	Other intangible assets and technical equipment	Total
Cost as of 1 Jan 2020	1,588	2,225	38	3,851
Accumulated depreciation	-651	-273	-17	-941
Carrying amount as of 1 Jan 2020	937	1,952	21	2,910
Currency translation differences	-	-21	-	-21
Additions due to changes in consolidation	-	-	-	-
Additions	261	205	6	472
Reclassifications	-3	-1	-	-4
Disposals due to changes in consolidation	-	-	-	-
Disposals	-24	-97	-1	-122
Reclassifications to assets held for sale	-	-2	-1	-3
Depreciation	-311	-264	-10	-585
Reversal of impairment losses	-	1	-	1
Carrying amount as of 31 Dec 2020	860	1,773	15	2,648
Cost as of 1 Jan 2021	1,652	2,273	37	3,962
Accumulated depreciation	-792	-500	-22	-1,314
Carrying amount as of 1 Jan 2021	860	1,773	15	2,648
Currency translation differences	5	28	-	33
Additions due to changes in consolidation	-	-	-	-
Additions	81	89	5	175
Reclassifications	-	-	-	-
Disposals due to changes in consolidation	-	-	-	-
Disposals	-25	-75	-	-100
Reclassifications to assets held for sale	-	-	-	-
Depreciation	-215	-244	-8	-467
Reversal of impairment losses	14	1	-	15
Carrying amount as of 31 Dec 2021	720	1,572	12	2,304
Cost as of 31 Dec 2021	1,562	2,273	28	3,863
Accumulated depreciation	-842	-701	-16	-1,559

The Lufthansa Group mainly leases property, particularly at airports, as well as aircraft and other operating and office equipment. Leases may include renewal and termination options. The terms of the leases are negotiated individually and cover a wide range of different areas. Longer-term leases exist particularly for property. There is a remaining lease term of up to 34 years for land and buildings (previous year: up to 35 years) as of the reporting date. The average remaining term of the land and building leases as of 31 December 2021 was four years (previous year: four years).

The average remaining term of the aircraft leases as of 31 December 2021 was two years (previous year: three years). The additions to rights-of-use assets for aircraft in 2021 relate to five aircraft.

The leases existing under IFRS 16 affected the consolidated income statement as follows:

T095 LEASE EXPENSES RECOGNISED IN PROFIT OR LOSS

in €m	2021	2020
Amortisation of right-of-use assets	467	585
Interest expenses for lease liabilities	70	69
Expenses for short-term leases	20	50
Expenses for low-value leases	119	120
Variable lease payments	83	80

Some of the Lufthansa Group's leases for properties and aircraft include renewal options and variable lease payments. They are used to obtain the greatest possible flexibility in terms of capacities. They have not been taken into account in various cases when measuring the lease liabilities, because it is not sufficiently probable that they will be exercised. Potential future lease payments for periods after the exercise date of the renewal options are summarised in the following table:

T096 DISCLOSURES ON RENEWAL OPTIONS AND VARIABLE LEASE PAYMENTS 2021

in €m	Recognised lease liability (discounted) 31 Dec 2021	Potential future lease payments not included in lease liabilities (undiscounted payments)		Total
		Payable 2022 - 2026	Payable after 2026	
Aircraft	755	255	71	326
Property/operating and office equipment	1,615	73	477	550
Total	2,370	328	548	876

T096 DISCLOSURES ON RENEWAL OPTIONS AND VARIABLE LEASE PAYMENTS 2020

in €m	Recognised lease liability (discounted) 31 Dec 2020 ¹⁾	Potential future lease payments not included in lease liabilities (undiscounted payments)		Total
		Payable 2021 - 2025	Payable after 2025	
Aircraft	774	306	42	348
Property/operating and office equipment	1,863	71	435	506
Total	2,637	377	477	854

¹⁾ Figures adjusted.

Where termination options existed for individual leases, their exercise was considered unlikely, so that additional lease payments were already taken into account in the corresponding lease liability.

Amounts included in the cash flow statement are shown in the following table:

T097 CASH OUTFLOWS FOR LEASES

in €m	2021	2020
Lease expenses from short-term and low-value leases and variable lease payments not included in the measurement of lease liabilities	222	250
Repayment of the redemption portion of the lease liability	424	480
Interest payments	70	67
Total	716	797

Lease payments are shown as cash flows from financing activities unless they are lease payments not included in the measurement of lease liabilities, which are shown as cash flow from operating activities.

The maturity analysis of lease liabilities is shown under borrowings, ↗ **Note 37, p. 211.**

Information about operating leases in which the Lufthansa Group is lessor can be found in ↗ **Note 7, p. 178f.**

23 Equity investments accounted for using the equity method

T098 EQUITY INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

in €m	Investments in joint ventures	Investments in associated companies	Total
Cost as of 1 Jan 2020	479	241	720
Accumulated impairment losses	-43	-5	-48
Carrying amount as of 1 Jan 2020	436	236	672
Currency translation differences	-11	-19	-30
Additions due to changes in consolidation	-	-	-
Additions	31	-	31
Changes with and without an effect on profit and loss	-167	-33	-200
Reclassifications	39	-	39
Disposals due to changes in consolidation	-	-	-
Disposals	2	-	2
Dividends paid	-32	-13	-45
Reclassifications to assets held for sale	-	-	-
Impairment losses	-66	-	-66
Reversal of impairment losses	-	-	-
Carrying amount as of 31 Dec 2020	232	171	403
Cost as of 1 Jan 2021	340	176	516
Accumulated impairment losses	-108	-5	-113
Carrying amount as of 1 Jan 2021	232	171	403
Currency translation differences	14	14	28
Additions due to changes in consolidation	-	-	-
Additions	24	-	24
Changes with and without an effect on profit and loss	3	-20	-17
Reclassifications	-	-	-
Disposals due to changes in consolidation	-	-	-
Disposals	-1	-1	-2
Dividends paid	-	-2	-2
Reclassifications to assets held for sale	-	-	-
Impairment losses	-	-	-
Reversal of impairment losses	-	-	-
Carrying amount as of 31 Dec 2021	272	162	434
Cost as of 31 Dec 2021	377	166	543
Accumulated impairment losses	-105	-4	-109

Reclassifications of interests in joint ventures in the previous year related to the entitlement to profits of Terminal 2 Gesellschaft mbH & Co oHG for 2019, which was reported under current receivables as of 31 December 2019 and whose collection was partially waived in 2020.

No impairment losses were recognised on the carrying amounts of equity investments accounted for using the equity method in the reporting year. Due to the deterioration in the business outlook in connection with the coronavirus crisis, impairment tests were carried out in the previous year for the joint ventures XEOS and Spairliners in the MRO segment as well as at Diners Club Spain (Service & Finance companies), resulting in write-downs totalling EUR 66m.

Individual interests in companies accounted for using the equity method

The following tables contain summarised aggregated data from the income statements and the carrying amounts for the individually material joint ventures accounted for using the equity method.

T099 BALANCE SHEET DATA GÜNES EKSPRES HAVACILIK ANONIM SİRKETİ (SUNEXPRESS), ANTALYA, TURKEY

in €m	31 Dec 2021	31 Dec 2020
Current assets	688	558
of which cash and cash equivalents	504	310
Non-current assets	937	845
Current liabilities	699	738
Non-current liabilities	772	559
Current financial liabilities (except trade and other payables and provisions)	462	490
Non-current financial liabilities (except trade and other payables and provisions)	655	442
Shareholders' equity	154	106
Share of equity	77	53
Other	26	24
Carrying amount	103	77

T100 INCOME STATEMENT DATA GÜNES EKSPRES HAVACILIK ANONIM SİRKETİ (SUNEXPRESS), ANTALYA, TURKEY

in €m	2021	2020
Revenue	747	493
Depreciation and amortisation	92	103
Interest income	4	4
Interest expenses	22	27
Income tax expense or income	-12	19
Profit or loss from continuing operations	48	-158
Profit or loss after tax from discontinued operations	-	-
Other comprehensive income	-	-14
Total comprehensive income	48	-172
Share of profit or loss from continuing operations ¹⁾	24	-79
Share of comprehensive income ¹⁾	24	-86
Dividends received	-	-

¹⁾ Previous year's figures have been adjusted.

The item "Other" in the reconciliation with the carrying amount for SunExpress primarily includes the difference from the first-time consolidation of the company.

T101 BALANCE SHEET DATA TERMINAL 2 GESELLSCHAFT MBH & CO OHG, MUNICH AIRPORT, GERMANY

in €m	31 Dec 2021	31 Dec 2020
Current assets	48	15
of which cash and cash equivalents	-	-
Non-current assets	1,201	1,265
Current liabilities	199	209
Non-current liabilities	1,088	1,030
Current financial liabilities (except trade and other payables and provisions)	153	137
Non-current financial liabilities (except trade and other payables and provisions)	1,060	1,002
Shareholders' equity	-38	41
Share of equity	-15	17
Other	-	-
Carrying amount	-	17

T102 INCOME STATEMENT DATA TERMINAL 2 GESELLSCHAFT MBH & CO OHG, MUNICH AIRPORT, GERMANY

in €m	2021	2020
Revenue	123	123
Depreciation and amortisation	82	83
Interest income	-	-
Interest expenses	24	31
Income tax expense or income	-	-
Profit or loss from continuing operations	-92	-97
Profit or loss after tax from discontinued operations	-	-
Other comprehensive income	10	11
Total comprehensive income	-82	-86
Share of profit or loss from continuing operations	-37	-39
Share of comprehensive income	-33	-34
Dividends received	-	12

EUR 15m of the result of Terminal 2 Gesellschaft mbH & CO. OHG was not recognised in profit or loss in the reporting year because the carrying amount was not sufficient. To date, the company has not incurred any losses not recognised in total comprehensive income.

The following table contains summarised aggregated data from the income statements and the carrying amounts for the individually immaterial joint ventures accounted for using the equity method.

T103 INCOME STATEMENTS DATA AND CARRYING AMOUNTS OF JOINT VENTURES ACCOUNTED FOR USING THE EQUITY METHOD

in €m	2021	2020
Profit or loss from continuing operations	-6	-30
Profit or loss after tax from discontinued operations	-	-
Other comprehensive income	-	-
Total comprehensive income	-6	-30
Depreciation and amortisation	-	-66
Carrying amount	169	138

Losses of EUR 10m at the immaterial joint ventures were not recognised in total comprehensive income because the carrying amounts of the equity interests were too low. There were no unrecognised losses from prior years.

The following table contains summarised aggregated data from the income statements and the carrying amounts for the individually immaterial associated companies accounted for using the equity method.

T104 INCOME STATEMENTS DATA AND CARRYING AMOUNTS OF ASSOCIATED COMPANIES ACCOUNTED FOR USING THE EQUITY METHOD

in €m	2021	2020
Profit or loss from continuing operations	-20	-40
Profit or loss after tax from discontinued operations	-	-
Other comprehensive income	-	3
Total comprehensive income	-20	-37
Carrying amount	162	171

24 Other equity investments and non-current securities

T105 OTHER EQUITY INVESTMENTS AND NON-CURRENT SECURITIES

in €m	31 Dec 2021	31 Dec 2020
Investments in affiliated companies	221	218
Investments	24	34
Other investments	245	252
Non-current securities	38	54

Shares in related parties include shares in affiliated companies, joint ventures and associates that are not consolidated for reasons of materiality. These shares are carried at amortised cost. The decline in equity investments stems from the

reclassification to assets held for sale of the interests in Beijing Lufthansa Center Co. Ltd. and Lufthansa Technik Brussels N.V. Disclosures on the equity investments and non-current securities can be found in [Note 45, p. 225ff.](#)

25 Non-current loans and receivables

T106 NON-CURRENT LOANS AND RECEIVABLES

in €m	31 Dec 2021	31 Dec 2020
Loans to and receivables from affiliated companies	72	104
Loans to and receivables from other equity investments	-	-
Other loans and receivables	247	169
Emissions certificates	206	167
	525	440

Non-current loans and receivables are carried at amortised cost.

CO₂ emissions certificates valued at EUR 172m (previous year: EUR 275m) were sold and simultaneously repurchased on the market on a forward basis in what are known as repo agreements so that economic ownership of the certificates is maintained. Appropriate other liabilities were recognised in the amount of the consideration received. For the impairment test for emissions certificates, we refer to the disclosures on the cash-generating units (CGU) in [Note 17, p. 184ff.](#)

Other receivables include expected reimbursements for obligations for which provisions have been made amounting to EUR 2m (previous year: EUR 1m). No non-current receivables were used as collateral for liabilities (previous year: EUR 1m).

26 Inventories

T107 INVENTORIES

in €m	31 Dec 2021	31 Dec 2020
Raw materials, consumables and supplies	618	650
Finished goods and work in progress	54	75
Advance payments	3	1
	675	726

No inventories have been pledged as collateral for loans. Inventories of EUR 525m (previous year: EUR 571m) relate to non-repairable spare parts for aircraft.

The gross value of written-down inventories as of 31 December 2021 was EUR 862m (previous year: EUR 938m). Inventories with a carrying amount of EUR 498m (previous year: EUR 542m) are held at net realisable value. Write-downs to net realisable value of EUR 402m were made at the beginning of the financial year (previous year: EUR 276m). New impairment losses of EUR 21m were recognised in the reporting year (previous year: EUR 129m), most of which relate to the MRO segment. Write-downs of EUR 58m made in the previous year were reversed (previous year: EUR 8m).

27 Contract assets

The Lufthansa Group recognised the following contract assets in 2021:

T108 CONTRACT ASSETS

in €m	31 Dec 2021	31 Dec 2020
Contract assets from MRO and IT services	183	146
Impairment of contract assets	-4	-4
Total contract assets	179	142

28 Trade receivables and other receivables

T109 TRADE RECEIVABLES AND OTHER RECEIVABLES

in €m	31 Dec 2021	31 Dec 2020
Trade receivables		
Trade receivables from affiliated companies	52	60
Trade receivables from other equity investments	1	1
Trade receivables from third parties	2,347	1,516
	2,400	1,577
Other receivables		
Receivables from affiliated companies	97	54
Receivables from other equity investments	-	1
Other receivables	1,175	1,161
Emissions certificates	14	50
	1,286	1,266
Total	3,686	2,843

The increase in trade receivables resulted from the significant increase in business volume across all operating segments.

For the impairment test for emissions certificates, we refer to the disclosures on the cash-generating units (CGU) in [Note 17, p. 184ff.](#)

As in the previous year, there is no collateral for trade receivables. Other receivables include expected reimbursements for obligations for which provisions have been made amounting to EUR 0m (previous year: EUR 1m).

For disclosures on impairment losses, credit risks and term structures, we refer to [Note 45, p. 225ff.](#)

Other receivables include claims of EUR 137m (previous year: EUR 140m) against insurers in connection with the accident involving the Germanwings aircraft on 24 March 2015. As of the reporting date, these receivables are offset by provisions of EUR 130m for outstanding obligations relating to this accident (previous year: EUR 132m).

Other receivables of EUR 0m (previous year: EUR 2m) serve to secure negative market values of derivatives.

29 Deferred charges and prepaid expenses

Deferred charges and prepaid expenses consist of various services paid for in advance for subsequent periods.

30 Current securities

Current securities are fixed income securities, participation certificates, shares and investments in money market funds. The year-on-year increase stems primarily from the investment of cash inflows from financing transactions.

31 Cash and cash equivalents

This item includes fixed-term deposits in the amount of EUR 2m (previous year: EUR 2m) with terms of four to twelve months. As of 31 December 2021, bank balances of EUR 5m are pledged to lending banks. Other bank balances of EUR 64m are pledged subject to a condition precedent.

Bank balances in foreign currencies are translated at the exchange rate on the balance sheet date.

32 Assets held for sale and additional liabilities

T110 ASSETS HELD FOR SALE AND ADDITIONAL LIABILITIES

in €m	31 Dec 2021	31 Dec 2020
Assets		
Aircraft and reserve engines	216	130
Land and buildings	9	3
Financial assets	11	-
Other assets	34	1
Total	270	134
Shareholders' equity and liabilities		
Pension provisions	6	-
Other provisions	21	-
Borrowings	1	-
Other liabilities	35	-
Total	63	-

Aircraft and reserve engines held for sale include three Airbus A380s, seven A320/321s and three Bombardier CRJ9s. Two of the three Bombardier CRJ9s were also presented as held for sale as of the previous year's reporting date. This presentation was maintained because it was only the contractually agreed handover dates that were moved to 2022. All the aircraft held for sale were allocated to the Network Airlines segment.

Land and buildings consist of a Lufthansa Aviation Training Germany GmbH location; long-term financial assets relate to the equity investments in Beijing Lufthansa Center Co. Ltd. and Lufthansa Technik Brussels N.V. Other assets and liabilities held for sale relate to the consolidated entities Lufthansa Technik Shannon Ltd. and Lufthansa Technik Maintenance International GmbH.

In the previous year, this item included 40 aircraft (three Boeing 767s, two Boeing 747s, 16 Airbus A320/321s, eight Dash 8-400s, six Bombardier CRJ9s and five Boeing MD-11 freighters).

Contracts signed for the sale of aircraft are expected to generate cash inflows of EUR 182m (previous year: EUR 37m).

Shareholders' equity and liabilities

33 Issued capital

SHARE CAPITAL

By resolution of the Executive Board of Deutsche Lufthansa AG dated 19 September 2021, with the approval of the Supervisory Board on the same date, the share capital of Deutsche Lufthansa AG was increased by EUR 1,530,221,624.32 to EUR 3,060,443,248.64 through the issue of 597,742,822 registered shares using Authorised Capital C. The capital increase took effect on 6 October 2021 when it was entered in the commercial register. Issued capital is divided into 1,195,485,644 registered shares, with each registered share representing EUR 2.56 of issued capital.

AUTHORISED CAPITAL

A resolution passed at the Annual General Meeting on 7 May 2019 authorised the Executive Board until 6 May 2024, subject to approval by the Supervisory Board, to increase the Company's issued capital by up to EUR 450,000,000 by issuing new registered shares on one or more occasions for payment in cash or in kind (Authorised Capital A). In certain cases, the shareholders' subscription rights can be excluded with the approval of the Supervisory Board.

A resolution passed at the Annual General Meeting on 7 May 2019 authorised the Executive Board until 6 May 2024, subject to approval by the Supervisory Board, to increase the issued capital by EUR 30,000,000 by issuing new registered shares to employees (Authorised Capital B) for payment in cash. Existing shareholders' subscription rights are excluded. As of 31 December 2021, the issued capital was increased under this authorisation by a total of EUR 7,637,831.68, so that Authorised Capital B still amounted to EUR 22,362,168.32 as of the reporting date.

A resolution passed at the Annual General Meeting on 4 May 2021 authorised the Executive Board until 3 May 2026, subject to approval by the Supervisory Board, to increase the Company's issued capital by up to EUR 5,500,000,000.00 by issuing new registered shares on one or more occasions for payment in cash or in kind, in order to use the net issue proceeds largely to repay the capital provided to Deutsche Lufthansa AG by the Economic Stabilisation Fund or for other purposes mentioned in Section 7f of the German Economic Stabilisation Act (WStBG) (Authorised Capital C). Existing shareholders are to be granted subscription rights. The Economic Stabilisation Fund is entitled to subscribe for the new registered shares to which it is entitled as of its exercise of its subscription rights in accordance with the subscription ratio, in return for payment in kind through the contribution of Silent Participation I and/or II either in whole or in part (including the rights to the coupons and any additional payment). The Executive Board is authorised to prescribe the further contents of the share rights and the terms and conditions of the issuance of shares with the consent of the Supervisory Board. As of 31 December 2021, the issued capital was increased under this authorisation by a total of EUR 1,530,221,624.32, so that Authorised Capital C still amounted to EUR 3,969,778,375.68 as of the reporting date.

The Executive Board is authorised, in the event of the fulfilment of the requirements stipulated in Section 4 Paragraph 3 of the German Aviation Compliance Documentation Act (LuftNaSiG) and with the consent of the Supervisory Board, to increase the issued capital by up to 10% by issuing new shares in return for payment in cash and without subscription rights for existing shareholders. The issue price for the new shares must be determined subject to the agreement of the Supervisory Board and may not be significantly lower than the market price. The authorisation may only be made use of insofar as this is necessary in order to achieve the non-applicability of the conditions stipulated in Section 4 Paragraph 3 LuftNaSiG.

The Executive Board is authorised, according to Section 5 Paragraph 2 LuftNaSiG and subject to the approval of the Supervisory Board, to require shareholders to sell some or all of their shares and to provide the Company with proof of this sale without delay insofar as this is necessary for compliance with the requirements for the maintenance of air traffic rights and in the sequence prescribed in Section 5 Paragraph 3 LuftNaSiG, subject to an appropriate time limit and while indicating the legal consequence which would otherwise be possible of the loss of their shares in accordance with Section 5 Paragraph 7 LuftNaSiG.

CONTINGENT CAPITAL

A resolution of the Annual General Meeting on 5 May 2020 increased the Company's contingent capital by up to EUR 122,417,728. The contingent capital increase serves to provide shares to the holders or creditors of conversion and/or option rights from convertible bonds that may be issued by the Company or its Group companies until 4 May 2025. In certain cases, the shareholders' subscription rights can be excluded with the approval of the Supervisory Board.

A resolution of the extraordinary general meeting on 25 June 2020 increased the contingent capital of Deutsche Lufthansa AG by up to EUR 102,014,776.32. The contingent capital increase serves to provide shares for the exercise of conversion rights granted to the Economic Stabilisation Fund created by the Stabilisation Fund Act as a silent shareholder of the Company for Silent Participation II-A at a strike rate of EUR 2.56 per share by resolution of the extraordinary general meeting on 25 June 2020. The rights can be exercised if a decision is published to make a takeover offer pursuant to Section 10 of the German Securities Acquisition and Takeover Act (WpÜG) or if control is acquired pursuant to Sections 35 and 29 WpÜG. The buyer can exercise the conversion rights at any time if Silent Participation II-A is sold to a private purchaser.

A resolution of the extraordinary general meeting on 25 June 2020 increased the contingent capital of Deutsche Lufthansa AG by up to EUR 897,985,223.68. The contingent capital increase serves to provide up to 350,775,478 shares for the exercise of conversion rights granted to the Economic Stabilisation Fund created by the Stabilisation Fund Act as a silent shareholder for antidilution and/or coupon protection for Silent Participation II-B by resolution of the extraordinary general meeting on 25 June 2020. If the conversion right is exercised to protect against dilution, the new shares will be issued at the current market price on the conversion date, less 10%. If the conversion right is exercised to protect the coupon, the shares are issued at the current market price on the conversion date, less 5.25%. The conversion rights expire if Silent Participation II-B is assigned to a third party.

The repayment of the silent participations made by the ESF rendered the conditional capital increases described in the previous two paragraphs irrelevant. Their repeal is planned for the next Annual General Meeting.

A resolution of the Annual General Meeting on 4 May 2021 increased the Company's contingent capital by up to EUR 153,022,161.92. The contingent capital increase serves to provide shares to the holders or creditors of conversion and/or option rights from convertible bonds that may be issued by the Company or its Group companies until 3 May 2026. In certain cases, the shareholders' subscription rights can be excluded with the approval of the Supervisory Board.

AUTHORISATION TO PURCHASE TREASURY SHARES

A resolution passed at the Annual General Meeting held on 7 May 2019 authorised the Executive Board pursuant to Section 71 Paragraph 1 No. 8 of the German Stock Corporation Act (AktG) to purchase treasury shares until 6 May 2024. The authorisation is limited to 10% of current issued capital, which can be purchased on the stock exchange or by a public purchase offer to all shareholders. The authorisation states that the Executive Board can use the shares, in particular, for the purposes defined in the resolution passed at the Annual General Meeting. According to the resolution of the Annual General Meeting held on 7 May 2019, the Executive Board is also authorised to purchase treasury shares by means of derivatives and to conclude corresponding derivative transactions.

Deutsche Lufthansa AG did not buy back any of its own shares in 2021. No treasury shares were held as of the balance sheet date.

SILENT PARTICIPATION I

In June 2021, EUR 1.5bn was drawn down from Silent Participation I agreed with the ESF. In the course of the capital increase in October 2021, the ESF exercised its subscription rights and made a contribution in kind of EUR 282m from Silent Participation I in exchange for the granting of new shares. Directly after the completion of the capital increase, the outstanding balance of Silent Participation I of EUR 1,218m plus the coupons of EUR 19m to be paid on it was repaid to the ESF.

CAPITAL MANAGEMENT

After overcoming the coronavirus pandemic, the Lufthansa Group continues to aim for a sustainable equity ratio of 25% in order to ensure long-term financial flexibility and stability as a basis for the Group's growth targets. As of 31 December 2021 and 2020, equity and total assets were as follows:

T111 EQUITY AND LIABILITIES

in €m	31 Dec 2021	31 Dec 2020
Shareholders' equity	4,490	1,387
In % of total assets	10.6	3.5
Liabilities	38,048	38,097
In % of total assets	89.4	96.5
Total capital	42,538	39,484

In 2021, the equity ratio increased by 7.1 percentage points to 10.6% compared with the previous year's figure due to the capital measures and a profit for the year recognised directly in other comprehensive income that more than compensated for the loss after tax recognised in profit or loss.

Deutsche Lufthansa AG's Articles of Association do not stipulate any capital requirements.

34 Reserves

Capital reserves only include the share premium paid on capital increases and a convertible bond that was redeemed in full in previous years. In the course of the capital increase in 2021, the capital reserve increased by a gross amount of EUR 632m and by EUR 578m after deducting transaction costs of EUR 71m and taking into account deferred taxes of EUR 17m.

The legal reserve contained in retained earnings of Deutsche Lufthansa AG is unchanged at EUR 26m; other reserves consist of other retained earnings.

The following table shows changes in other neutral reserves in 2021:

T112 NOTES ON OTHER COMPREHENSIVE INCOME

in €m	2021	2020
Other comprehensive income after income taxes		
Currency translation differences		
Profit/loss for the period	193	-107
Reclassification adjustments recognised in profit or loss	-	-
Subsequent measurement of financial assets at fair value (with recycling)	-27	-29
Subsequent measurement of financial assets at fair value (without recycling)	2	1
Profit/loss for the period	-	-
Reclassification adjustments recognised in profit or loss	-	-
Subsequent measurement of hedges - cash flow hedge reserve	1,009	-655
Subsequent measurement of hedges - costs of hedging	96	143
Profit/loss for the period	1,095	-1,119
Reclassification adjustments recognised in profit or loss	10	607
Other comprehensive income from investments accounted for using the equity method		
Profit/loss for the period - reclassifiable	7	4
Profit/loss for the period - non-reclassifiable	-	-
Revaluation of defined-benefit pension plans	2,933	-2,584
Other expenses and income recognised directly in equity (with recycling)	-1	-4
Other expenses and income recognised directly in equity (without recycling)	-	-
Income taxes on items in other comprehensive income	-810	747
Other comprehensive income after income taxes	3,402	-2,484

T113 NOTE ON INCOME TAXES RECOGNISED FOR OTHER COMPREHENSIVE INCOME

in €m	2021			2020		
	Amount before income taxes	Tax expenses/ income	Amount after income taxes	Amount before income taxes	Tax expenses/ income	Amount after income taxes
Currency translation differences	193	-	193	-107	-	-107
Subsequent measurement of financial assets and liabilities at fair value (with recycling)	-27	7	-20	-29	-7	-36
Subsequent measurement of financial assets at fair value (without recycling)	2	-	2	1	-	1
Subsequent measurement of hedges - cash flow hedge reserve	1,009	-234	775	-655	166	-489
Subsequent measurement of hedges - costs of hedging	96	-17	79	143	-34	109
Other comprehensive income from investments accounted for using the equity method - reclassifiable	7	-	7	4	-	4
Revaluation of defined-benefit pension plans	2,933	-566	2,367	-2,584	622	-1,962
Other expenses and income recognised directly in equity (with recycling)	-1	-	-1	-4	-	-4
Other expenses and income recognised directly in equity (without recycling)	-	-	-	-	-	-
Other comprehensive income	4,212	-810	3,402	-3,231	747	-2,484

The overall change in equity is shown in the [T060 Consolidated statement of changes in shareholders' equity, p. 158](#).

35 Pension provisions

The Lufthansa Group's pension obligations comprise both defined benefit and defined contribution plans and include both obligations to make current payments and entitlements to future pension payments.

In addition to various actuarial risks such as interest rate risk, life expectancy risk and the risk of salary increases, the pension plans expose the Group primarily to financial risks in connection with plan assets.

Obligations under defined benefit pension plans for employees of the Lufthansa Group related mostly to pension obligations in Germany, Switzerland, Austria and the USA. Various commitments have been made to different groups of employees.

GERMANY

Between 2015 and 2017, the conversion of the defined benefit plans to defined contribution plans with guaranteed contributions during the vesting period for future pension commitments was completed for all groups of employees.

The Lufthansa collective agreement on benefits for ground staff established a new Company retirement benefit plan in the form of a defined contribution benefit commitment for the ground staff in Germany, in particular those at Deutsche Lufthansa AG, Lufthansa Cargo AG, the Lufthansa Technik group and the LSG group. For employees recruited before 1 January 2016, the entitlements vested up until 31 December 2015 are maintained. For service periods starting from 1 January 2016, employees can reach the same level of benefits by making contributions from their own pocket as under the previous wage agreement. For employees recruited from 1 January 2016, the contributions to the new model will be invested on the capital market. When the employee reaches retirement age, the entire account balance is converted into an annuity on the basis of the applicable BilMoG interest rate in accordance with Section 253 Paragraph 2 of the German Commercial Code (HGB), subject to a pension adjustment of 1% per annum and while guaranteeing the contributions that were originally made.

For cabin crew recruited up to 5 July 2016, the pension entitlements vested up until 30 June 2016 are maintained. For service periods from 1 July 2016, these employees receive employer contributions to the Company pension scheme

depending on their eligible gross salary. An initial contribution to the transitional benefit scheme was calculated for the staff concerned as of 30 June 2016 on the basis of parameters and valuation methods defined by the collective bargaining partners. This initial transitional benefit contribution will replace all existing claims by the employees concerned under the collective agreement on “Transitional Benefit for Cabin Crew” and will be switched to a contribution commitment with a minimum guaranteed payment. All employees are free to make their own contributions on a voluntary basis. Contributions from both employer and employee, as well as the initial transitional benefit contribution, are invested on the capital markets with a capital guarantee. When the employee reaches retirement age, the available account balance is converted into an annuity on the basis of the applicable BilMoG interest rate in accordance with Section 253 Paragraph 2 HGB, subject to a pension adjustment of 1% per annum.

For cockpit staff recruited before 1 January 2017, the pension entitlements vested up until 31 December 2016 are maintained. For service periods from 1 January 2017, the employees receive employer contributions to the Company pension scheme depending on their eligible gross salary. All employees are free to make their own contributions on a voluntary basis. The capital is invested on capital markets with a capital guarantee and the guaranteed interest rate offered by the life insurance companies (currently 0.9% per annum) as an additional commitment. When the employee reaches retirement age, the available account balance is converted into an annuity on the basis of the applicable BilMoG interest rate in accordance with Section 253 Paragraph 2 HGB, subject to a pension adjustment of 1% per annum.

Cockpit staff are still additionally entitled to a transitional pension arrangement covering the period from the end of their active in-flight service until the beginning of their statutory/ Company pension plans. Benefits depend on the number of years of service and the final salary before retirement (final salary plans). Pension entitlements continue to accrue while transitional benefits are being received. The transitional rules provide for a gradual increase of the collective retirement age for pilots from 58 to 60 years by 2021. In connection with the forecast long-term staff surplus among cockpit crew, there will be a temporary suspension of the clause relating to the collective retirement age. The related plan adjustment was recognised in the previous year in past service cost.

In the Company retirement benefit scheme for ground, cabin and cockpit staff, the obligations from the capital market-oriented components are recognised at the time value of the corresponding assets, insofar as the assets exceed the minimum guaranteed amount. Plan assets and benefit obligations are presented on a net basis. The employer contributions constitute service expense.

A temporary reduction in employer contributions was agreed for the collective defined benefit plans for cockpit and cabin crew in 2020. This reduction applied until 30 June 2021 for cabin staff and is limited until 31 March 2022 for cockpit staff.

Defined-benefit Company pension schemes and transitional pension arrangements for Germany are funded by plan assets, while amounts that have not yet been transferred are covered by pension provisions.

In the financial year 2004, work began on building up plan assets to fund and safeguard future pension payments. The aim was to fund the pension obligations under existing plans in Germany in full. Contractual trust arrangements (CTAs) in the form of a mutual two-stage trusteeship were set up for this purpose.

The main trustee is Lufthansa Pension Trust e.V., a separate legal entity subject to German regulations. Deutsche Lufthansa AG and the trustees/other trustors agree on contributions and, if such a contribution is determined, make a payment to Lufthansa Pension Trust e.V. Deutsche Lufthansa AG and its subsidiaries Lufthansa Technik AG and Lufthansa Cargo AG are parties to the contractual trust arrangement. The trust assets have largely been held by a Maltese corporate vehicle since 2007. The Investment Board of Lufthansa Malta Pension Holding decides on the fund's asset allocation. The asset management itself is delegated to fund management companies, who invest the assets in accordance with the general investment principles defined by the Investment Board.

Assets to fund pension obligations for other German subsidiaries have been invested with Deutsche Treuinvest Stiftung with the same investment strategy.

The assets to fund pension obligations in the new Lufthansa Pension Ground, Lufthansa Pension Cabin and Lufthansa Pension Cockpit capital market-based benefits system were transferred to an external trustee, Deutsche Treuinvest Stiftung, as part of a contractual trust arrangement. Capital is invested in what are known as age group funds, whose investment strategy is based on a life cycle model. As employees get older, less and less is invested in asset classes with a higher risk-return profile and a greater percentage in more conservative asset classes. The Company has set up an Investment Committee that is responsible for defining and monitoring the investment strategy, e.g. how the age group funds are composed and how the asset allocation changes over time.

There are no minimum funding requirements in Germany. The current allocation for German defined benefit plans, which was suspended in the second quarter of the previous year, was partially made up for in the reporting period with a one-time funding of EUR 276m. EUR 85m was paid into the plan assets in the first quarter of the previous year. Ongoing contributions will remain suspended. In addition, reimbursements totalling EUR 328m (previous year: EUR 288m) for pension payments made were withdrawn from the plan assets of Lufthansa Pension Trust e.V. for the plans of Deutsche Lufthansa AG, Lufthansa Cargo AG and Lufthansa Technik AG. While the reimbursement amount in the previous year had already been withdrawn from the plan assets as of the reporting date, in 2021 it was only registered for reimbursement as of the reporting date. The related assets were consequently reported under other assets and not under plan assets.

SWITZERLAND

Pension obligations in Switzerland are largely based on statutory obligations. The retirement benefits are funded via pension funds known as collective foundations. In addition to retirement benefits, the plans cover invalidity and dependant persons' benefits. Beneficiaries can choose between an annuity and a lump sum payment. The retirement age for the plans lies between 58 and 63 years. Contributions to the pension funds are made by employers and employees, whereby the Company contributions must be at least equal to the employee contributions defined in the terms of the plan. Contributions are deducted from the qualifying salary according to a sliding scale. If there is a deficit of plan assets, employer and employee contributions can be increased, a lower return can be determined or other steps permissible by law can be taken. The decision is taken by the trustees of the pension fund concerned. The trustees' strategies for making good a deficit are based on the report by a pension fund expert and must be presented to the regulatory authority. The approval of the authority is not required, however. In 2021, the annuity factors for the cockpit pension fund were reset for all employees retiring from 2023 to 2025, resulting in income from past service cost of EUR 62m.

AUSTRIA

The pension obligations for employees of Austrian Airlines AG are mostly on a defined contribution basis and have been outsourced to a pension fund. They consist of retirement, invalidity and dependant persons' benefits. Obligations under defined benefit plans at Austrian Airlines AG relate to former directors and Executive Board members and others already receiving their pensions. During the reporting year, a temporary waiver of the obligation to make additional contributions to the pension fund was agreed in a supplementary collective agreement for flight staff. The reductions in the pensions of beneficiaries that are expected to arise in future years as a result will lead to income from past service cost of EUR 22m.

Obligations under defined benefit plans for ground staff are now contribution-free and are determined by converting plan assets into an annuity. There are no obligations under defined benefit plans but only defined contribution pension obligations for active pilots, flight attendants and members of the top management level.

USA AND OTHER COUNTRIES

The defined benefit pension plans at LSG Sky Chefs in the USA are closed to new entrants and no further benefits are being granted to beneficiaries still in service. Benefit payments are based on average salary and the years of service acquired before the plan was closed or frozen. The retirement age is 65. Pension payments are funded externally. The retirement benefit plans for current employment are based on defined contribution plans.

Other staff abroad are also entitled to minor retirement benefits and in some cases to medical care based mainly on length of service and salary earned. As a rule, benefits are financed by means of external funds.

Amounts shown in the statement of financial position for defined benefit commitments are made up as follows:

T114 DEFINED-BENEFIT RETIREMENT COMMITMENTS

in €m	31 Dec 2021				31 Dec 2020			
	Defined-benefit obligations (DBO)	Fair value of plan assets	Effect of asset ceiling	Net carrying amount for defined-benefit obligations	Defined-benefit obligations (DBO)	Fair value of plan assets	Effect of asset ceiling	Net carrying amount for defined-benefit obligations
Retirement benefits Germany	18,191	-13,166	-	5,025	19,506	-12,165	-	7,341
Transitional benefits Germany	1,568	-266	-	1,302	1,528	-337	-	1,191
Switzerland	3,968	-4,119	121	-30	4,188	-3,606	-	582
Austria	385	-176	-	209	444	-180	-	264
USA	339	-345	-	-6	342	-306	-	36
Other countries	484	-438	-	46	520	-443	-	77
Carrying amounts	24,935	-18,510	121	6,546	26,528	-17,037	-	9,491
of which pension provisions	-	-	-	6,682	-	-	-	9,531
of which other assets	-	-	-	136	-	-	-	40
of which shown under liabilities for disposal	12	6	-	6	-	-	-	-

The asset ceiling arises for plans in Switzerland where the fair value of plan assets exceeds the defined benefit obligation. However, this surplus cannot be withdrawn from the plan through payouts or future contributions to the plan assets that are less than the service cost.

The total amount of defined benefit obligations is distributed among the beneficiaries as follows:

T115 ALLOCATION OF DEFINED-BENEFIT COMMITMENTS

in €m	2021	2020
Active employees	15,806	17,589
Vested employees who have left the company	2,189	2,127
Retired employees	6,940	6,812
Total	24,935	26,528

As in the previous year, the weighted duration of pension obligations was 20 years as of 31 December 2021.

The changes between the opening balance and the closing balance of the pension obligation, the plan assets and the pension provision are as follows:

T116 PERFORMANCE OBLIGATIONS TO EMPLOYERS

	2021					2020				
	Defined-benefit obligations (DBO)	Fair value of plan assets	Pension provision	Effect of asset ceiling	Net carrying amount for defined-benefit obligations	Defined-benefit obligations (DBO)	Fair value of plan assets	Pension provision	Effect of asset ceiling	Net carrying amount for defined-benefit obligations
in €m										
Opening balance as of 1 Jan	26,528	17,037	9,491	-	9,491	24,865	17,960	6,905	2	6,907
Current service costs	508	-	508	-	508	502	-	502	-	502
Past service cost/ effects of curtailments	-89	-	-89	-	-89	31	-	31	-	31
Interest expenses/ interest income	201	119	82	-	82	319	222	97	-	97
Total amount recognised in profit and loss	620	119	501	-	501	852	222	630	-	630
Actuarial gains/ losses from changes in financial assumptions	-1,978	-	-1,978	-	-1,978	2,433	-	2,433	-	2,433
Actuarial gains/ losses from changes in demographic assumptions	-150	-	-150	-	-150	24	-	24	-	24
Gains/losses from experience adjustments	209	-	209	-	209	-308	-	-308	-	-308
Performance of plan assets, without amounts included in interest	-	1,132	-1,132	-	-1,132	-	-443	443	-	443
Effect from asset ceiling	-	-	-	121	121	-	-	-	-2	-2
Total amount recognised in other comprehensive income	-1,919	1,132	-3,051	121	-2,930	2,149	-443	2,592	-2	2,590
Plan contributions – employees	83	81	2	-	2	96	61	35	-	35
Plan contributions – employers	-	486	-486	-	-486	-	235	-235	-	-235
Pension payments	-630	-598	-32	-	-32	-602	-510	-92	-	-92
Settlement payments	-6	-7	1	-	1	-10	-10	-	-	-
Total amount recognised in the Group cash flow statement	-553	-38	-515	-	-515	-516	-224	-292	-	-292
Currency translation differences	231	239	-8	-	-8	-51	-46	-5	-	-5
Changes in the group of consolidated companies	-	-	-	-	-	-772	-431	-341	-	-341
Other/reclassifications	28	21	7	-	7	1	-1	2	-	2
Closing balance as of 31 Dec	24,935	18,510	6,425	121	6,546	26,528	17,037	9,491	-	9,491
of which pension obligations	-	-	-	-	6,682	-	-	-	-	9,531
of which present value of non-funded pension obligations	-	-	-	-	539	-	-	-	-	544
of which surpluses of plan assets over pension obligations	-	-	-	-	136	-	-	-	-	40
of which shown under liabilities for disposal	12	6	6	-	6	-	-	-	-	-

Interest expenses on pension provisions and interest income on plan assets are shown in the financial result. Current service expense and past service expense are recognised in staff costs.

The curtailment effect in the reporting year mainly results from a reduction in the annuity factor applied to funds saved in the pension plan and affects all beneficiaries of the cockpit pension plan in Switzerland retiring between 2023 and 2025 as well as a temporary reduction in current pension payments for retired cockpit staff in Austria.

Actuarial gains/losses from changes in financial assumptions include gains due to the increase in the discount rate compared with the previous year. Adjustments to obligations regarding capital market-based pension plans, which are due to changes in exchange rates, are shown in adjustments based on past experience.

The plan assets generated a gain of EUR 1,251m in the 2021 financial year (previous year: loss of value of EUR 221m). This amount is made up of the interest income recognised in the income statement and the revaluation component for plan assets.

The item “Other/Reclassifications” mainly relates to additions from the merger of non-consolidated companies into consolidated entities.

The outflows of plan assets due to pension payments of EUR 598m include the financing of pensions in Germany from the CTA assets in the amount of EUR 328m.

Information on tax assets related to pension obligations can be found in [T082 Deferred tax assets and liabilities, p. 182](#).

The main actuarial assumptions used to calculate pension obligations and the corresponding plan assets are shown below:

T117 MAIN ACTUARIAL ASSUMPTIONS FOR GERMAN COMPANIES

in %	31 Dec 2021	31 Dec 2020
Interest rate		
Retirement benefits	1.3	0.8
Transitional benefits	1.3	0.8
Salary increase		
Retirement benefits	2.5	2.5
Transitional benefits	2.5	2.5
Pension increase		
Retirement benefits	1.0	1.0
Transitional benefits	1.0	1.0

The Heubeck Actuarial Tables 2018 G were used in the biometric calculations for the German companies in the Group.

T118 MAIN ACTUARIAL ASSUMPTIONS FOR FOREIGN COMPANIES

in %	31 Dec 2021	31 Dec 2020
Interest rate		
Austria	1.3	0.8
Switzerland	0.3	0.1
USA	2.7	2.3
Salary increase		
Austria	1.6	1.6
Switzerland	1.5	1.5
USA	-	-
Pension increase		
Austria	1.8	1.6
Switzerland	0.0	0.0
USA	-	-

The BVG 2020 generation tables were used for the first time for the biometric calculations for Switzerland. This resulted in an actuarial gain of EUR 148m. Country-specific mortality tables were used in the other countries.

The following table shows how the present value of defined benefit obligations would have been affected by changes in the relevant actuarial assumptions for the main pension plans described above.

T119 CHANGE IN ACTUARIAL ASSUMPTIONS, AS OF 2021

	Effect on the defined-benefit contribution as of 31 Dec 2021 in €m	Change in %
Present value of the obligation ¹⁾	24,937	-
Interest rate		
Increase by 0.5 percentage points	22,797	-8.6
Decrease by 0.5 percentage points	26,950	+8.1
Salary trend		
Increase by 0.5 percentage points	24,975	+0.2
Decrease by 0.5 percentage points	24,901	-0.1
Pension trend		
Increase by 0.5 percentage points	25,201	+1.1
Decrease by 0.5 percentage points	24,907	-0.1

¹⁾ Present value of the obligation using the assumptions shown in the “Actuarial assumptions” tables.

T119 CHANGE IN ACTUARIAL ASSUMPTIONS, AS OF 2020

	Effect on the defined-benefit contribution as of 31 Dec 2020 in €m	Change in %
Present value of the obligation ¹⁾	26,528	-
Interest rate		
Increase by 0.5 percentage points	24,257	-8.6
Decrease by 0.5 percentage points	29,241	+10.2
Salary trend		
Increase by 0.5 percentage points	26,668	+0.5
Decrease by 0.5 percentage points	26,396	-0.5
Pension trend		
Increase by 0.5 percentage points	26,825	+1.1
Decrease by 0.5 percentage points	26,483	-0.2

¹⁾ Present value of the obligation using the assumptions shown in the "Actuarial assumptions" tables.

A reduction of 10% in the mortality rates used to calculate the pension obligations increases the life expectancy of the beneficiaries by a given amount depending on their individual ages. It roughly corresponds to an increase of one year in the life expectancy of a male employee who is 55 years old today. A 10% reduction in the mortality rate would therefore increase the present value of the main benefit obligations in Germany and Switzerland by EUR 323m as of 31 December 2021 (previous year: EUR 351m).

The sensitivity analysis examines changes in one assumption and leaves the other assumptions unchanged compared with the original calculation. The effects of any interaction between the individual assumptions are therefore not taken into account.

Plan assets are made up as follows:

T120 COMPOSITION OF PLAN ASSETS

	31 Dec 2021				31 Dec 2020			
	Listed price in an active market in €m	No listed price in an active market in €m	Total in €m	in %	Listed price in an active market in €m	No listed price in an active market in €m	Total in €m	in %
Equities			6,579	35.5			5,626	33.0
Europe	2,745	-			2,152	-		
Other	3,834	-			3,470	4		
Fixed-income securities			6,933	37.4			6,060	35.6
Government bonds	3,482	-			3,159	8		
Corporate bonds	3,451	-			2,890	3		
Share funds	173	-	173	0.9	153	-	153	0.9
Fixed-income funds	643	-	643	3.5	723	-	723	4.2
Mixed funds ¹⁾	114	-	114	0.6	77	-	77	0.5
Money market investments	810	-	810	4.4	1,298	-	1,298	7.6
Property			1,348	7.3			1,225	7.2
Direct investments	-	9			-	7		
Indirect investments	957	382			863	355		
Insurance contracts	-	140	140	0.8	-	151	151	0.9
Bank balances	238	-	238	1.3	345	184	529	3.1
Other investments ²⁾	232	1,300	1,532	8.3	207	988	1,195	7.0
Total	16,679	1,831	18,510	100.0	15,337	1,700	17,037	100.0

¹⁾ Includes equities and interest-bearing securities.

²⁾ Other investments include, in particular, alternative investments such as hedge funds, commodities and private equity funds.

Plan assets for defined benefit pension obligations consist mainly of fixed-income securities, equities and cash and cash equivalents. They do not include financial instruments issued by companies in the Group nor properties used by Group companies.

Plan assets serve solely to meet the defined benefit obligations. Funding these benefit obligations with assets provides security for future payments. In some countries, this takes place on the basis of statutory regulations, while in others (Germany, for example), this takes place on a voluntary basis.

The allocation of the funds to asset classes (e.g. equities) for the defined benefit plans is carried out on the basis of asset-liability matching (ALM) studies performed by the Lufthansa Group. The ALM study is conducted every three years with an external adviser in order to review the funding strategy on a regular basis and to make adjustments as necessary. The results of the study should indicate what combination of investments (annuities, equities, etc.) can be used to cover the long-term pension obligations. Step one of this process is for the actuary to draft a long-term forecast charting how the pension obligations will develop.

The Lufthansa Group manages and monitors the financial risks that arise from funding the defined benefit pension obligations. There was no change in the risk management and monitoring processes compared with the previous year. Derivative financial instruments are used, especially to manage foreign exchange risks.

In addition to this, target figures are needed for the relative return and relative risk as regards coverage of the obligations. Last but not least, a risk budget must also be defined.

A simulation is used to test all permissible investment allocations for their future compliance with these objectives. Those which do not fulfil the criteria are eliminated. Preference is given to allocations that are return-oriented yet conservative and that have a high probability of achieving the investment target.

The results of the ALM study show whether there will be strategic shifts in the existing allocation.

The Lufthansa Group aims to cover its German pension obligations by means of plan assets and positive capital market returns in the medium to long term. Investment performance plays a crucial role in meeting this target.

The investment strategy for the capital market-based pension plans was also initially defined by the Company and is regularly reviewed in the course of an ALM study. Where necessary, it is adjusted by the Investment Committee to reflect changes in capital market requirements. This may result in changes to the investment strategy for amounts that have already been invested.

Based on current knowledge, EUR 365m is expected to be transferred to pension plans in 2022 (previous year: EUR 178m). In Germany, they only relate to the capital market orientated schemes. The transfers are made up of planned contributions and benefit payments that are not covered by equivalent reimbursements from plan assets.

Over the next ten years, the following pension payments are forecast for the defined benefit commitments in existence as of the reporting date:

T121 FORECAST MATURITIES OF UNDISCOUNTED PENSION PAYMENTS, AS OF 2021		Forecast pension payments 31 Dec 2021
in €m		
2022		636
2023		641
2024		655
2025		666
2026		700
2027 - 2031		3,873

T121 FORECAST MATURITIES OF UNDISCOUNTED PENSION PAYMENTS, AS OF 2020		Forecast pension payments 31 Dec 2020
in €m		
2021		524
2022		689
2023		626
2024		605
2025		627
2026 - 2030		3,699

The projected maturities for pension payments do not include possible contributions to or funding from plan assets. As a result, the cash flow effects from payments in respect of pension plans may be higher or lower than the projected pension payments, primarily depending on the Company's ability to continue its past funding policy in the future.

Contributions for defined contribution retirement benefit commitments came to EUR 298m in 2021 (previous year: EUR 409m). These mainly relate to contributions to statutory pension schemes, but also include collective bargaining contributions or voluntary contributions to other pension schemes. The decrease resulted primarily from reduced contributions to statutory pension schemes due to the lower headcount and short-time work, as well as the suspension of payments to pension funds for the period from 2021 to 2023.

36 Other provisions

Other provisions disclosed in the statement of financial position as non-current and current other provisions are made up as follows:

T122 NON-CURRENT AND CURRENT OTHER PROVISIONS

in €m	31 Dec 2021			31 Dec 2020		
	Total	Non-current	Current	Total	Non-current	Current
Obligations under partial retirement contracts	50	48	2	32	32	-
Other staff costs	197	160	37	209	169	40
Obligation to return emissions certificates	20	-	20	50	-	50
Onerous contracts	169	109	60	88	38	50
Environmental restoration	31	28	3	31	28	3
Legal proceedings	247	56	191	65	12	53
Restructuring/severance payments	487	54	433	221	47	174
Maintenance of lease aircraft	342	165	177	323	162	161
Warranties	65	-	65	47	-	47
Other provisions	350	83	267	323	70	253
Total	1,958	703	1,255	1,389	558	831

The obligations from partial retirement agreements result from collective bargaining agreements in Germany. Obligations were measured in 2021 using an interest rate of 0.00% (previous year: 0.00%). The interest effects shown in the following table on the development of other provisions resulted from the changes in the market value of the plan assets.

Funds have been transferred to an external trust fund and employer's pension liability insurance policies have been agreed as insolvency insurance for employer's performance arrears as part of partial retirement agreements under which the employee at first works full-time for less pay and then retires early on the same reduced pay. These assets, which fulfil the requirements for plan assets and therefore reduce the gross amount of obligations accordingly, are measured at market value on the balance sheet date.

The funding status for provisions for obligations to employees under partial retirement agreements is as follows:

T123 FUNDING STATUS

in €m	2021	2020
Present value of funded obligations under partial retirement agreements	183	149
External plan assets	-137	-130
	46	19
of which other provisions	50	32
of which other assets	2	13
of which assets held for sale	2	-

Provisions for other staff costs mainly relate to staff anniversary bonuses and other current obligations.

A provision for the obligation to submit CO₂ emissions certificates to the relevant authorities is recognised for an amount equivalent to the carrying amount of the capitalised CO₂ certificates. If the obligation is not fully covered by available certificates, the outstanding amount of the provision is measured using the market price of the emissions certificates as of the reporting date.

The increase in expected losses from onerous contracts is related to long-term maintenance contracts at Lufthansa Technik AG, for which it was determined in the past fiscal year that the agreed proceeds will not cover the attributable expenses.

Provisions for environmental restoration are based on surveyors' findings and the assumption that all contamination is removed within ten years without any further legal requirements.

Provisions for ongoing legal proceedings were based on an assessment of the likely outcome of the proceedings. The increase in the provision resulted mainly in connection with ongoing proceedings by state and European authorities that the Lufthansa Group assumes will lead to the imposition of fines. ➔ Note 11, p. 180.

The provisions for restructuring and severance payments are based on concluded termination agreements or proposed contract terminations which the Lufthansa Group can no longer avoid. The increase is mainly due to the severance programmes initiated at Deutsche Lufthansa AG and the Lufthansa Technik group.

The provisions for the overhaul of leased aircraft mainly relate to obligations for the maintenance, overhaul and repair of these aircraft.

Other provisions include EUR 130m (previous year: EUR 132m) in outstanding obligations in connection with the accident involving the Germanwings aircraft on 24 March 2015. This provision is offset by compensatory claims against insurers, which are presented under other receivables.

Changes in individual provisions in 2021 were as follows:

T124 CHANGES IN OTHER PROVISIONS 2021

in €m	Obligations under partial retirement contracts	Other staff costs	Obligation to return emissions certificates	Expected losses from onerous contracts	Environmental restoration	Legal proceedings
As of 1 Jan 2021	32	209	50	88	31	65
Changes in the group of consolidated companies	-	-	-	-	-	-
Currency translation differences	-	1	-4	-2	-	-1
Utilisation	-49	-32	-39	-12	-1	-6
Increase/addition	80	24	18	111	1	199
Interest added back	1	-	-	-	-	-
Reversal	-	-5	-	-16	-	-10
Transfers	-14	-	-5	-	-	-
As of 31 Dec 2021	50	197	20	169	31	247

T124 CHANGES IN OTHER PROVISIONS 2021 (continued)

in €m	Restructuring/severance payments	Maintenance of lease aircraft	Warranties	Other provisions	Total
As of 1 Jan 2021	221	323	47	323	1,389
Changes in the group of consolidated companies	-	-	-	-	-
Currency translation differences	2	3	1	2	2
Utilisation	-137	-39	-10	-56	-381
Increase/addition	427	61	30	85	1,036
Interest added back	-	-	-	-	1
Reversal	-10	-4	-3	-14	-62
Transfers	-16	-2	-	10	-27
As of 31 Dec 2021	487	342	65	350	1,958

Changes in individual provisions in the previous year were as follows:

T124 CHANGES IN OTHER PROVISIONS 2020

in €m	Obligations under partial retirement contracts	Other staff costs	Obligation to return emissions certificates	Expected losses from onerous contracts	Environmental restoration	Legal proceedings
As of 1 Jan 2020	20	202	95	49	30	77
Changes in the group of consolidated companies	-	-	-	-	-	-
Currency translation differences	-	-2	-	-	-	-1
Utilisation	-52	-42	-64	-11	-2	-4
Increase/addition	58	49	67	61	3	19
Interest added back	11	2	-	-	-	-
Reversal	-1	-3	-48	-11	-	-22
Transfers	-4	3	-	-	-	-4
As of 31 Dec 2020	32	209	50	88	31	65

T124 CHANGES IN OTHER PROVISIONS 2020 (continued)

in €m	Restructuring/severance payments	Maintenance of lease aircraft	Warranties	Other provisions	Total
As of 1 Jan 2020	171	293	46	301	1,284
Changes in the group of consolidated companies	-	-	-	-	-
Currency translation differences	-1	-10	-	-2	-16
Utilisation	-68	-89	-13	-62	-407
Increase/addition	124	132	21	97	631
Interest added back	-	-	-	-	13
Reversal	-2	-2	-7	-9	-105
Transfers	-3	-1	-	-2	-11
As of 31 Dec 2020	221	323	47	323	1,389

The following cash outflows are estimated for the non-current portion of the other groups of provisions:

T125 CASH OUTFLOWS FOR NON-CURRENT PROVISIONS, AS OF 2021

in €m	2023	2024	2025	2026 and thereafter
Expected losses from onerous contracts	20	14	13	61
Environmental restoration	3	3	3	19
Restructuring/severance payments	23	28	3	-
Maintenance of aircraft on leases	74	29	18	45
Other provisions	61	27	13	42

At the end of 2020, the corresponding cash outflows were estimated as follows:

T125 CASH OUTFLOWS FOR NON-CURRENT PROVISIONS, AS OF 2020

in €m	2022	2023	2024	2025 and thereafter
Expected losses from onerous contracts	13	6	6	12
Environmental restoration	3	3	3	19
Restructuring/severance payments	29	6	1	11
Maintenance of aircraft on leases	25	6	8	35
Other provisions	17	9	14	48

37 Financial liabilities

Financial liabilities consist of a non-current portion with a residual term of more than one year and a current portion of less than one year, which is shown under current liabilities. The following table shows the total amount of borrowings:

T126 FINANCIAL LIABILITIES 31 DEC 2021

in €m	Total	Non-current	Current
Bonds	6,697	6,697	–
Liabilities to banks	2,461	1,680	781
Leasing liabilities	2,370	1,962	408
Other loans	5,142	4,702	440
	16,670	15,041	1,629

T126 FINANCIAL LIABILITIES 31 DEC 2020

in €m	Total	Non-current	Current
Bonds	2,907	2,707	200
Liabilities to banks	4,938	2,867	2,071
Leasing liabilities	2,637	2,183	454
Other loans	4,886	4,495	391
	15,368	12,252	3,116

The Lufthansa Group pursues the strategy of converting financial liabilities in all currencies into financial liabilities in euros by means of interest rate derivatives.

The outstanding bonds comprise eight fixed redemption amount bonds issued under the Euro Medium Term Notes programme. The programme was increased to a total of EUR 10bn in 2021. As of the reporting date, bonds with a nominal volume of EUR 5.6bn, interest rates between 0.25% and 3.75% and maturities between November 2023 and July 2029 had been issued under the programme. One convertible bond and one hybrid bond are also reported under this item. The convertible bond was issued with a nominal volume of EUR 600m. Unless previously converted, the bond will be redeemed at its nominal value on 17 November 2025. Investors also have the option of converting the bond into new and/or existing registered shares of Deutsche Lufthansa AG. The conversion price was reduced from EUR 12.96 to EUR 9.23 as a result of the capital increase in 2021. The hybrid bond has a term until August 2075 and an interest rate of 4.382%. It can be cancelled in a five-year cycle, the next time in February 2026. The conditions attached to the stabilisation package of the ESF led to the suspension of interest payments on this bond in 2021 for the duration of the stabilisation measures while maintaining the creditors' payment claim.

The Lufthansa Group intends to pay the deferred interest as soon as possible after the applicable restrictions from the ESF stabilisation measures have been lifted.

Of the liabilities to banks, EUR 646m related to state-guaranteed loans in Switzerland and Austria, secured by shares and aircraft of various consolidated companies (➤ Note 2, p. 160ff., and Note 19, p. 189). In addition, EUR 1,626m was attributable to promissory note loans from credit institutions. A promissory note loan with a book value of EUR 70m was secured by an aircraft.

The lease liabilities correspond to the present value of the remaining payment obligations from contracted leases. Further details on the contracts concluded can be found in ➤ Note 22, p. 191ff.

The Lufthansa Group's lease liabilities have the following term structure: The disclosures are based on contractual, undiscounted payments.

T127 MATURITY ANALYSIS OF LEASE LIABILITIES

in €m	31 Dec 2021	31 Dec 2020
1st quarter	126	133
Up to 1 year ¹⁾	334	376
1 – 5 years	1,161	1,309
Later	1,168	1,409

¹⁾ Without payments in 1st quarter.

Under other loans, EUR 4,464m (previous year: EUR 3,378m) was attributable to structured leasing companies and other aircraft financing models (➤ Note 19, p. 189). This amount was collateralised with the respective financed aircraft. A total of 20 additional aircraft financing arrangements were concluded in 2021. EUR 287m related to a loan and profit-sharing rights as part of the Belgian state aid. A cumulative amount of EUR 6m was calculated for the below-market interest rate on the loan. The loan was collateralised with shares and profit-sharing rights of the Belgian SN Airholding SA/NV. A further EUR 142m related to loans to LSG Sky Chefs USA, Inc. under the CARES Act.

In both the 2021 financial year and the 2020 financial year, all payment obligations and requirements from the loan agreements described have been fulfilled. With its 2021 earnings, Austrian Airlines AG will not be able to meet a key figure agreed in the contract for the stabilisation loan. Consequently, the loan is presented under current financial liabilities. The Executive Board of Austrian Airlines has begun negotiations with the lending banks on a waiver of notice for the loan.

38 Non-current contract liabilities

T128 NON-CURRENT CONTRACT LIABILITIES

in €m	31 Dec 2021	31 Dec 2020
Non-current contract liabilities	30	36
	30	36

Non-current contract liabilities consist of long-term deferrals for construction contracts where the payments received exceed the performance to date.

39 Non-current advance payments received, deferred income and other non-financial liabilities

T129 NON-CURRENT ADVANCE PAYMENTS RECEIVED, DEFERRED INCOME AND OTHER NON-FINANCIAL LIABILITIES

in €m	31 Dec 2021	31 Dec 2020
Advance payments received	7	8
Deferred income	14	14
Other non-financial liabilities	9	11
	30	33

Deferred income includes EUR 6m for government grants and subsidies for capital expenditure (previous year: EUR 6m) received, which are realised over the useful life of the assets in the following years.

Other non-financial liabilities include obligations under share-based remuneration agreements for Executive Board members, managers and non-payscale employees. As part of the share-based remuneration agreements, Deutsche Lufthansa AG and other consolidated and non-consolidated Group companies participating in the programme offer a 50% discount on employee investment in Lufthansa shares to Executive Board members, managers and non-payscale employees. The option packages granted in 2018, 2019 and 2020 include an outperformance option and a performance option. At the end of the programme, the participants receive a cash payment if the conditions are met. No new program was established for any of the participating groups in 2021.

The outperformance option is linked to the performance of the Lufthansa share compared with a notional index of shares in European competitors. When the beneficiary exercises the outperformance option, they receive a cash payment for every percentage point of outperformance, with a hurdle rate of 1%. The cash payment is capped at an outperformance of more than 20%.

The performance option is linked to the absolute performance of the Lufthansa share. The amount of the payment depends on meeting defined performance targets, whereby both a hurdle rate and a cap apply.

The programmes are scheduled to run for four years. The performance and the outperformance in all programmes are calculated on the principle of total shareholder return. The shares invested in personally may not be sold until the option is exercised.

T130 OUTPERFORMANCE OPTION – OVERVIEW

	€ per outperformance level	Maximum per tranche in €
Board member	1,000 per percentage point from 1%	20,000
Managers	400 per percentage point from 1%	8,000
Non-payscale staff	200 per 5 percentage points from 1%	1,000

T131 PERFORMANCE OPTION – PERFORMANCE TARGETS

Performance option per year	Hurdle rate	Cap
2018	22%	33%
2019	22%	33%
2020	20%	35%

T132 PERFORMANCE OPTION – PAYMENT AMOUNTS

	€ per performance level	Maximum per tranche in €
Board member	10,000 + 1,000 per performance unit	20,000
Managers	4,000 + 500 per performance unit	8,000
Non-payscale staff	500 + 100 per performance unit	1,000

A different system of variable remuneration has applied to the Executive Board since 2019. Under this system, one of the financial targets for the share-based remuneration compares the performance of the Lufthansa share, expressed as the total shareholder return (TSR), to other DAX companies. The performance period is still four years. To calculate the TSR in the performance period, the arithmetic mean closing prices in XETRA trading at Deutsche Börse for shares in Deutsche Lufthansa AG and its peer group over the 30 days immediately preceding the beginning of the performance period are compared with the prices over the 30 days immediately preceding the end of the performance period.

The performance of all the companies in the DAX index at the beginning and end of the period is ranked and the relative position of Deutsche Lufthansa AG is determined by its achieved percentile. Performance against the target and the amount of the payment in the 2019 programme depend on the percentile position of Deutsche Lufthansa AG. Target achievement is adjusted on a linear basis for positions between the 25th and 50th percentile and between the 50th and 75th percentile.

T133 RELATIVE TSR – PERFORMANCE AND PAYMENT PROGRAMME 2019

Position of Lufthansa share compared with Peergroup	Target achievement	Payment in € for Executive Board members	Payment in € for Executive Board Chairman
≤ 25th percentile	0%	-	-
≥ 50th percentile	100%	467,500	888,250
≥ 75th percentile	200%	935,000	1,776,500

As a result of the regulations in the stabilisation agreement with the ESF, the 2020 management programme was only offered with a contribution of shares. The 50% discount applies only to a portion of the potential tranches to be agreed and will only be granted at the end of the programme. The payments from the 2020 Executive Board and management programme are subject to the completion of the stabilisation measures.

Starting in 2020, the TSR approach for the Executive Board programme has been adjusted so that 85% of performance is now measured by financial parameters and 15% by sustainability parameters. The financial targets are the relative total shareholder return (TSR) of the Lufthansa share compared with the DAX and the average adjusted return on capital employed (adjusted ROCE) during the performance period, both in equal parts (42.5% each). For the TSR component, the 60 trading days immediately preceding the beginning of the performance period and the 60 trading days immediately preceding the end of the performance period are used in the performance period. The positioning of the share in relation to the peer group remains identical for performance against the target. Performance against the target for average adjusted ROCE is based on a comparison of the average adjusted ROCE for the four-year performance period against a strategic target set in the grant year, which has a minimum target to cover the weighted average cost of capital (WACC). The sustainability parameters are set by the Supervisory Board for each performance period. For the two performance targets that are not market-dependent, an expected target of 0% for the adjusted ROCE and 100% for the sustainability parameter was assumed within the framework of the measurement. At the beginning of each performance period, a further innovation is the allocation of a number of virtual shares, which is calculated by dividing the individual target amount of the long-term variable remuneration by the average price of Deutsche Lufthansa AG shares during the 60 trading days immediately following the beginning of each performance period. The payment is calculated by multiplying the degree of target achievement for this performance target by the number of virtual shares at the beginning of the performance period and the average price of Deutsche Lufthansa AG shares during the 60 trading days immediately preceding the end of the last year of each performance period.

Over the financial years 2021 and 2020, the number of options changed as follows:

T134 CHANGE IN NUMBER OF OPTIONS AND VIRTUAL SHARES

	2021			2020		
	Number of options	Number of virtual shares	Cash settlement in € thousands	Number of options	Number of virtual shares	Cash settlement in € thousands
Outstanding on 1 Jan	19,582	571,106	-	22,313	-	-
Issued	-	-	-	2,243	571,106	-
Expired or unused	4,846	-	-	1,017	-	-
Exercised	-	-	-	3,957	-	17,062
Outstanding on 31 Dec	14,736	571,106	-	19,582	571,106	-

The performance and outperformance option of the 2017 share programme, which has now expired, resulted in no payments (2016 share programme: EUR 17m). No new share programme was established for the 2021 financial year. As a result, no staff costs arose from the issue of new shares in the financial year (previous year: also EUR 0m, as no new shares were issued). Participants in the programme therefore hold 2,610,934 shares as of the reporting date (previous year: 3,126,854 shares).

The fair values of the option rights in the share programmes still running were calculated using Monte Carlo simulations. This involves simulating the future returns of the shares in the comparative index and of Deutsche Lufthansa AG and calculating the value of the option rights as the forecast amount of a dividend.

The following fair values were measured in total:

T135 FAIR VALUE OF OPTION RIGHTS AS OF 31 DEC 2021

	Number of options/ virtual shares	Fair value per option/ virtual share in €	Proportional vested benefit	Total fair value in €
Board member				
Options 2018	181	138	0.66	16,480
Options 2019	6	700	0.62	2,600
Virtual shares 2020	571,106	1.18	0.44	296,258
Managers				
Options 2018	2,416	55	0.79	105,197
Options 2019	2,919	2,093	0.54	3,309,295
Options 2020	2,355	3,452	0.25	2,032,365
Non-payscale staff				
Options 2018	3,027	9	0.79	21,567
Options 2019	3,832	269	0.54	558,354
Options 2020	-	-	-	-
Total options and virtual shares	585,842			6,342,116
of which options	14,736			
of which virtual shares	571,106			

T135 FAIR VALUE OF OPTION RIGHTS AS OF 31 DEC 2020

	Number of options/ virtual shares	Fair value per option/ virtual share in €	Proportional vested benefit	Total fair value in €
Board member				
Options 2017	181	2,940	0.74	395,259
Options 2018	181	3,224	0.51	295,390
Options 2019	6	25,067	0.44	66,117
Options 2020	571,106	3.19	0.23	419,020
Managers				
Options 2017	2,172	1,176	0.79	2,022,132
Options 2018	2,386	1,301	0.54	1,681,434
Options 2019	2,922	3,212	0.29	2,737,427
Options 2020	2,243	5,326	0.02	248,880
Non-payscale staff				
Options 2017	2,291	158	0.79	286,566
Options 2018	3,154	168	0.54	287,014
Options 2019	4,046	400	0.29	472,033
Options 2020	-	-	-	-
Total options and virtual shares	590,688			8,911,272
of which options	19,582			
of which virtual shares	571,106			

Staff fluctuation of 6.08% is again assumed when accounting for the liability resulting from the valuation of option rights, so that the recognised liability is less than their calculated time value. An additional provision of EUR 3.8m was recognised for the 2020 management programme due to the granting of a purchase price discount that can only be paid out at the end of the programme term. This one-time provision and the measurement of option rights therefore resulted in a total provision of EUR 9.9m as of the reporting date (previous year: EUR 11.0m), of which EUR 9.8m (previous year: EUR 9.0m) is shown under non-current liabilities. No payments were made for expired option rights in the financial year. As a result, the change in option rights in the financial year reduced staff costs by EUR 1.1m.

The weighted average share prices at the calculation date (excluding the TSR programme for the Executive Board) were used in the Monte Carlo simulation. As stated in the terms of the programme, these are 50-day averages for the shares of Deutsche Lufthansa AG and the competitors included in the comparative index. The volatilities and correlations used are forecasts for a specific date and maturity on the basis of current market estimates.

Swap rates were used as the interest rate for the remaining term of the outperformance option in each case. The maximum term of the programmes was used for measurement purposes.

Time values for the Executive Board TSR programme were also measured using a Monte Carlo simulation based on historical and current market data for the relevant peer group of DAX companies. Forecast volatilities are based on the historic TSR data. The share prices for the past four years were used to calculate historical volatility. The measurement for the 2019 programme took into account a remaining term of 13 months and a risk-free interest rate of -0.81%, for the 2020 programme a remaining term of 25 months and a risk-free interest rate of -0.82%.

The parameters used by the external service provider for the notional airline peer group index are shown in the following table:

T136 REFERENCE PRICE

		Options 2018	Options 2019	Options 2020
Lufthansa	EUR	21.18	14.84	8.39
Air France-KLM	EUR	8.56	9.90	3.54
IAG	GBP	646.28	480.37	182.21
Ryanair	EUR	12.82	11.00	13.31
easyJet	GBP	1,340.31	1,131.63	622.96
Norwegian	NOK	236.70	37.49	-
WIZZair	GBP	2,858.46	3,667.66	3,701.91
Turkish	TRY	-	-	10.71

T137 PROJECTED VOLATILITIES

in % for:	Options 2018 as of 31 Dec 2021	Options 2018 as of 31 Dec 2020	Options 2019 as of 31 Dec 2021	Options 2019 as of 31 Dec 2020	Options 2020 as of 31 Dec 2021	Options 2020 as of 31 Dec 2020
Lufthansa	40.49	50.16	53.54	44.85	47.04	41.23
Air France-KLM	37.57	56.19	55.44	50.83	50.68	47.74
IAG	51.31	73.90	71.87	61.77	61.35	54.96
Ryanair	38.57	47.08	48.32	42.83	44.38	39.04
easyJet	48.74	67.31	70.00	57.57	61.44	52.02
Norwegian	142.36	119.94	142.19	105.57	-	-
WIZZair	39.81	51.89	55.38	47.38	48.16	43.74
Turkish	-	-	-	-	38.80	40.88
Risk-free interest rate	Options 2018: -0.81% for euro zone (previous year: -0.77%) 0.23% for UK (previous year: -0.02%) 0.78% for Norway (previous year: 0.31%)				Options 2020: -0.79% for euro zone (previous year: -0.80%) 0.50% for UK (previous year: 0.00%) 15.00% for Turkey (previous year: 15.00%)	
	Options 2019: -0.82% for euro zone (previous year: -0.79%) 0.43% for UK (previous year: -0.02%) 1.06% for Norway (previous year: 0.31%)					
Fluctuation	6.08% (previous year: 5.35%)				6.08% (previous year: 5.35%)	

40 Current contract liabilities

The Lufthansa Group recognised the following contract liabilities:

T138 CONTRACT LIABILITIES		
in €m	31 Dec 2021	31 Dec 2020
Contract liabilities from unused flight documents	3,340	2,064
Liabilities from customer loyalty programmes	2,131	2,220
Liabilities from MRO and IT services	319	297
Miscellaneous contract liabilities	159	460
Other contract liabilities	2,609	2,977
Liabilities from contracts with customers	5,949	5,041
Revenue recognised in the reporting period		
Revenue recognised that was included in the contract liability balance at the beginning of the period		
Revenue from unused flight documents	1,253	2,873
Revenue from customer loyalty programmes	292	210
Revenue from MRO and IT services	235	148
Other	418	226
Total	2,198	3,457

The increase in contract liabilities for non-flown flight documents results from the rebound in ticket sales on future air travel in the reporting year. EUR 569m of the contract liabilities as of 31 December 2020 (previous year: EUR 1,045m) could not be realised and were refunded to customers. Tickets refunds amounting to EUR 1,614m (previous year: EUR 3,851m) were provided in connection with flight cancellations. Only a small amount of expiry is currently assumed with regard to potentially unused tickets relating to flights during the crisis period. Consequently, no material revenue realisation was recognised for breakage for this period as part of the estimation assumptions in the measurement of the obligation.

Liabilities under customer loyalty programmes as of 31 December 2021 included 225 billion miles (previous year: 228 billion miles) from bonus miles programmes. As a rule, the miles that are expected to expire are recognised pro rata

over the general validity period of three years. The pro rata revenue realisations were reduced in accordance with the declining total redemptions in the financial year due to the severely restricted redemption options for air travel in connection with the coronavirus pandemic when measuring the scope of the obligation. This is in line with the assumption that the proportion of expiring miles will not fundamentally increase due to the effects of the pandemic, but will merely shift to later periods.

The unsatisfied performance obligation under existing long-term service contracts came to EUR 6.5bn in total, assuming that the services are performed as agreed, of which EUR 1.4bn relate to the next twelve months. These essentially consist of maintenance contracts in the MRO segment for the long-term maintenance and overhaul of air-line sub-fleets. To calculate the outstanding performance obligations, the number of maintenance events derived from the respective flight plans and agreed in the contracts are taken into account, along with the expected revenue and fixed prices for certain services (VIP and cabin modifications). Around 76% of performance obligations beyond twelve months are expected to have been fulfilled by 2027.

As in the previous year, no revenue was recognised in 2021 for performance obligations fulfilled in prior financial years.

In line with the practical expedient of IFRS 15, disclosures are not made on performance obligations as of 31 December 2021 or 31 December 2020 that have a forecast original term of one year or less. The option of rebooking flights means that there may be a period of time between the conclusion of the contract and the provision of the service that exceeds one year, although this cannot be foreseen when the contract is concluded. Due to the advance booking period of a maximum of one year and short-term rebooking possibilities, the Group assumes that the application of the practical expedient is justified. Award miles can be redeemed for at least three years, but may also be redeemed at short notice and for this reason are also reported as current.

The Lufthansa Group applies the practical expedient defined in IFRS 15.94, which allows contract initiation costs to be expensed if the amortisation period otherwise to be taken into account would be twelve months or less.

41 Trade payables and other current financial liabilities

T139 TRADE PAYABLES AND OTHER CURRENT FINANCIAL LIABILITIES

in €m	31 Dec 2021	31 Dec 2020
Trade payables		
Trade payables to affiliated companies	49	55
Trade payables to other equity investments	1	-
Trade payables to third parties	2,831	2,032
	2,881	2,087
Other liabilities		
Liabilities to banks	19	14
Other liabilities to affiliated companies	292	316
Other liabilities to equity investments	-	-
Liabilities from equity investments	82	61
Other financial liabilities	912	843
	1,305	1,234
Total	4,186	3,321

The carrying amount of these liabilities corresponds to their fair value. Other liabilities of EUR 135m (previous year: EUR 38m) serve to secure positive market values of derivatives.

The Lufthansa Group takes part in a Supply Chain Finance (SCF) programme to optimise working capital and cash flow and to strengthen supplier relationships. The provider of the programme is CRX Markets AG, Munich, and it is free of charge for participating suppliers. Supplier participation in the program is voluntary; suppliers can receive earlier payment of their receivables from the participating banks at a discount. The Lufthansa Group then pays the original invoice to the bank on the due date. This does not result in any additional costs for the Lufthansa Group in relation to the participating banks. As of 31 December 2021, the SCF programme was used by the Group companies Deutsche Lufthansa AG, Lufthansa Cargo AG and Lufthansa

Technik AG. Seven suppliers participate as of the reporting date with an outstanding trade payables volume of EUR 50m (2020: EUR 2m). Payment terms of liabilities in the programme do not exceed payment terms with suppliers not participating in the programme. All relevant contractual payment terms are also negotiated with suppliers outside the programme on a bilateral basis, which is why the SCF programme does not change the nature of the supplier liability. Consequently, the definition and disclosure of the trade payables remain unchanged. The cash flows from trade payables continue to be presented as operating cash flow in the cash flow statement.

42 Current advance payments received, deferred income and other non-financial liabilities

T140 CURRENT ADVANCE PAYMENTS RECEIVED, DEFERRED INCOME AND OTHER NON-FINANCIAL LIABILITIES

in €m	31 Dec 2021	31 Dec 2020
Advance payments received	27	21
Deferred income	57	88
Other non-financial liabilities	564	1,186
	648	1,295

The decrease in other non-financial liabilities is mainly due to tax liabilities. To support affected companies during the crisis in Germany and Austria, tax and levy deferrals were granted by state institutions in the previous year. Most of these were due for repayment during the financial year. This resulted in a reduction in liabilities of EUR 810m. These are mainly import VAT and air traffic tax. Other non-financial liabilities also include the current portion of obligations under share-based remuneration agreements measured at fair value (➔ Note 39, p. 212ff.). In addition, EUR 194m (previous year: EUR 193m) relates to deferred amounts for outstanding holiday allowance and overtime.

NOTES TO THE SEGMENT REPORTING

43 Notes to the reportable segments and segment data

NOTES TO THE REPORTABLE SEGMENTS

As of 31 December 2021, the Lufthansa Group operates in five reportable segments, which make up its Group activities. The segments are defined in line with the internal reporting and management structure.

The airline activities were combined in their respective reporting segments based on the similarity between the economic characteristics of the individual airlines, such as network and sales structures, as well as customers and services. The Network Airlines segment comprises Lufthansa German Airlines, SWISS, Austrian Airlines, Brussels Airlines and Germanwings. Further information about the individual airlines can be found in the Group management report ↗ starting on p. 53.

The Eurowings segment comprises the airlines under the Eurowings brand and the equity investment in SunExpress.

The Logistics segment comprises the scheduled airfreight activities of the Lufthansa Cargo group. Lufthansa Cargo is Europe's leading cargo airline.

The MRO segment is a leading global provider of maintenance, repair and overhaul services for civil and commercial aircraft and is represented by the Lufthansa Technik group.

The Catering segment, represented by the LSG Lufthansa Service/Sky Chefs group, is a leading airline caterer and also offers catering services in the retail segment as well as related services and logistics.

Business activities not allocated to a reportable segment are presented along with the income and expenses of central Group functions in ↗ T141, p. 219, in the column "Additional Businesses and Group Functions". They include the income and expenses of Lufthansa Commercial Holding GmbH, the Lufthansa AirPlus group, the Lufthansa Systems group, the Lufthansa Aviation Training group and other Group companies.

NOTES TO SEGMENT DATA AND INTERNAL MANAGEMENT

The accounting policies of the reportable segments are the same as those described in ↗ Note 3, p. 162ff.

Segmentation was unchanged compared with the financial statements as of 31 December 2020.

The Lufthansa Group measures the performance of its segments using both segment result indicators: EBIT and adjusted EBIT. EBIT is made up of the IFRS operating result and the result from equity investments. Adjusted EBIT is obtained by correcting EBIT for gains and losses on the disposal of assets, write-downs and write-backs and earnings attributable to other periods in connection with pension obligations (plan adjustments and plan settlements).

Sales and revenue between reportable segments are based on arm's length prices. Administrative services are charged as cost allocations.

For information on external traffic revenue ↗ Note 4, p. 176.

Capital employed largely comprises segment assets, adjusted for derivative financial instruments, and deferred tax items less non-interest-bearing debt.

The result of the equity valuation for the segment's equity investments is part of its segment result. However, from a Group perspective, it is attributed to the financial result rather than the operating result.

T141 SEGMENT INFORMATION FOR THE 2021 REPORTING SEGMENTS

in €m	Network Airlines	Eurowings	Logistics	MRO	Catering	Total reportable operating segments	Additional Businesses and Group Functions	Reconciliation		Group
								Not allocated	Consolidation	
External revenue	7,702	826	3,768	3,117	1,085	16,498	313	-	-	16,811
of which traffic revenue	6,802	820	3,644	-	-	11,266	-	610	-	11,876
Inter-segment revenue	674	-4	32	886	28	1,616	153	-	-1,769	-
Total revenue	8,376	822	3,800	4,003	1,113	18,114	466	-	-1,769	16,811
Other operating income	570	104	65	405	239	1,383	1,266	-	-1,038	1,611
Total operating income	8,946	926	3,865	4,408	1,352	19,497	1,732	-	-2,807	18,422
Operating expenses	12,413	1,180	2,396	4,173	1,303	21,465	2,188	-	-2,880	20,773
of which cost of materials and services	5,687	607	1,665	2,075	416	10,450	180	-	-1,684	8,946
of which staff costs	3,311	189	369	1,233	619	5,721	697	-	-1	6,417
of which depreciation and amortisation	1,566	205	149	174	81	2,175	120	-	-36	2,259
of which other operating expenses	1,849	179	213	691	187	3,119	1,191	-	-1,159	3,151
Results of equity investments¹⁾	-19	24	24	-25	-22	-18	19	-	1	2
of which result of investments accounted for using the equity method	-19	24	13	-18	-22	-22	-	-	-	-22
Adjusted EBIT²⁾	-3,486	-230	1,493	210	27	-1,986	-437	-	74	-2,349
Reconciliation items	122	3	4	-47	-51	31	3	-	-1	33
Impairment losses/gains	14	-2	-	-35	-9	-32	2	-	-	-30
Effects from pension provisions	98	-	-1	-6	-	91	-2	-	-	89
Results of disposal of assets	10	5	5	-6	-42	-28	3	-	-1	-26
EBIT	-3,364	-227	1,497	163	-24	-1,955	-434	-	73	-2,316
Other financial result										-290
Profit/loss before income taxes										-2,606
Capital employed ³⁾	9,905	1,145	2,458	4,030	927	18,465	5,608	-	-194	23,879
of which from investments accounted for using the equity method	-	103	67	195	68	433	-	-	1	434
Segment capital expenditure ⁴⁾	1,035	254	164	95	23	1,571	49	-	-264	1,356
of which from investments accounted for using the equity method	-	-	-	24	-	24	-	-	-	24
Number of employees at end of period	53,295	3,563	4,162	20,569	15,626	97,215	8,075	-	-	105,290
Average number of employees	54,918	3,290	4,210	21,328	15,546	99,292	8,351	-	-	107,643

¹⁾ The result from equity investments does not include any impairment losses on investments accounted for using the equity method.

²⁾ For reconciliation from Adjusted EBIT to EBIT → T022, p. 43, in the Group management report.

³⁾ The capital employed results from total assets adjusted for non-operating items (deferred taxes, positive market values, derivatives) less non-interest bearing liabilities (including trade payables and liabilities from unused flight documents).

⁴⁾ Investment in intangible assets and property, plant and equipment, as well as in loans to and shares in companies. Investment is shown without capitalised borrowing costs.

T141 SEGMENT INFORMATION FOR THE 2020 REPORTING SEGMENTS

in €m	Network Airlines	Eurowings	Logistics	MRO	Catering	Total reportable operating segments	Additional Businesses and Group Functions	Reconciliation		Group
								Not allocated	Consolidation	
External revenue	6,167	589	2,733	2,724	1,064	13,277	312	-	-	13,589
of which traffic revenue	5,488	579	2,596	-	-	8,663	-	415	-	9,078
Inter-segment revenue	455	9	24	1,023	241	1,752	158	-	-1,910	-
Total revenue	6,622	598	2,757	3,747	1,305	15,029	470	-	-1,910	13,589
Other operating income	994	147	69	437	143	1,790	1,571	-	-1,356	2,005
Total operating income	7,616	745	2,826	4,184	1,448	16,819	2,041	-	-3,266	15,594
Operating expenses	12,258	1,346	2,082	4,502	1,698	21,886	2,361	-	-3,401	20,846
of which cost of materials and services	5,101	699	1,300	2,372	545	10,017	203	-	-1,767	8,453
of which staff costs	3,340	176	377	1,113	742	5,748	660	-	-3	6,405
of which depreciation and amortisation	1,814	199	178	197	117	2,505	124	-	-68	2,561
of which other operating expenses	2,003	272	227	820	294	3,616	1,374	-	-1,563	3,427
Results of equity investments	-32	-102	28	-65	-34	-205	6	-	-	-199
of which result of investments accounted for using the equity method	-39	-102	17	-52	-34	-210	-	-	-	-210
Adjusted EBIT¹⁾	-4,674	-703	772	-383	-284	-5,272	-314	-	135	-5,451
Reconciliation items	-1,425	-99	-55	-125	-147	-1,851	-49	-	-2	-1,902
Impairment losses/gains	-1,398	-97	-55	-108	-201	-1,859	-43	-	32	-1,870
Effects from pension provisions	-27	-	-	-3	1	-29	-2	-	-	-31
Results of disposal of assets	-	-2	-	-14	53	37	-4	-	-34	-1
EBIT	-6,099	-802	717	-508	-431	-7,123	-363	-	133	-7,353
Other financial result										-1,278
Profit/loss before income taxes										-8,631
Capital employed ²⁾	12,171	950	2,287	3,467	943	19,818	3,399	-	-131	23,086
of which from investments accounted for using the equity method	17	77	49	173	86	402	2	-	-1	403
Segment capital expenditure ³⁾	958	106	222	152	28	1,466	48	-	-202	1,312
of which from investments accounted for using the equity method	-	-	-	31	-	31	-	-	-	31
Number of employees at end of period	57,363	3,088	4,373	22,745	13,227	100,796	9,269	-	-	110,065
Average number of employees	59,191	3,203	4,436	23,519	25,288	115,637	9,570	-	-	125,207

¹⁾ For reconciliation from Adjusted EBIT to EBIT → T022, p. 43, in the Group management report.

²⁾ The capital employed results from total assets adjusted for non-operating items (deferred taxes, positive market values, derivatives) less non-interest bearing liabilities (including trade payables and liabilities from unused flight documents).

³⁾ Investment in intangible assets and property, plant and equipment, as well as in loans to and shares in companies. Investment is shown without capitalised borrowing costs.

The reconciliation column includes both the effects of consolidation activities and the amounts resulting from different definitions of segment item contents compared with the corresponding Group items.

The amounts in the reconciliation column for Group EBIT include the effects of consolidation procedures on profit or loss in which income and expense do not reconcile for two companies at the same amount, or in the same period.

Eliminated segment revenue generated with other consolidated segments is shown in the reconciliation column for revenue.

NOTES ON GEOGRAPHICAL REGIONS IN 2021

The allocation of traffic revenue to geographic regions is based on the original location of sale. Non-current assets are allocated according to the location of the relevant asset. The allocation of other revenue to the individual regions is based on the geographical location of the customer.

The regions are defined on a geographical basis. As an exception to this rule, traffic revenue generated in Turkey is attributed to Europe.

The Lufthansa Group controls its air traffic operations on the basis of network results and not on the basis of regional earnings contributions. The same applies to the Catering segment. Consequently, the presentation of regional segment results is of no informational value for the Lufthansa Group.

A presentation of traffic revenue generated in the Network Airlines, Eurowings and Logistics segments by traffic region, rather than by original location of sale, is included in the information on the respective segments in the management report.

External revenue, non-current assets and capital expenditure are as follows:

T142 EXTERNAL REVENUE AND NON-CURRENT ASSETS BY REGION FOR 2021

in €m	Europe	North America	Central and South America	Asia / Pacific	Middle East	Africa	Group
Traffic revenue ¹⁾	7,692	1,636	277	1,774	231	266	11,876
Other revenue	1,942	1,853	162	673	201	104	4,935
Non-current assets ^{2) 3) 4)}	19,554	488	27	198	2	11	20,280
Capital expenditure on non-current assets ³⁾	1,327	14	1	4	-	-	1,346

¹⁾ Traffic revenue is allocated according to the original location of sale.

²⁾ Non-current assets include property, plant and equipment and intangible assets with the exception of repairable spare parts for aircraft.

³⁾ Aircraft are allocated according to their location of registration.

⁴⁾ Including rights of uses in accordance with first-time application of IFRS 16.

The figures for the main countries are as follows:

T143 EXTERNAL REVENUE AND NON-CURRENT ASSETS BY COUNTRIES FOR 2021

in €m	Germany	USA
Traffic revenue ¹⁾	3,555	1,491
Other revenue	764	1,655
Non-current assets ^{2) 3)}	13,730	440
Capital expenditure on non-current assets ³⁾	1,160	13

¹⁾ Traffic revenue is allocated according to the original location of sale.

²⁾ Non-current assets include property, plant and equipment and intangible assets with the exception of repairable spare parts for aircraft.

³⁾ Aircraft are allocated according to their location of registration.

NOTES ON GEOGRAPHICAL REGIONS IN 2020

External revenue, non-current assets and capital expenditure were as follows:

T142 EXTERNAL REVENUE AND NON-CURRENT ASSETS BY REGION FOR 2020

in €m	Europe	North America	Central and South America	Asia/Pacific	Middle East	Africa	Group
Traffic revenue ¹⁾	5,852	1,113	222	1,541	166	184	9,078
Other revenue	1,875	1,474	160	704	179	119	4,511
Non-current assets ^{2) 3)}	20,123	777	37	201	2	11	21,151
Capital expenditure on non-current assets ³⁾	1,224	33	-	10	-	1	1,268

¹⁾ Traffic revenue is allocated according to the original location of sale.

²⁾ Non-current assets include property, plant and equipment and intangible assets with the exception of repairable spare parts for aircraft.

³⁾ Aircraft are allocated according to their location of registration.

The figures for the main countries were as follows:

T143 EXTERNAL REVENUE AND NON-CURRENT ASSETS BY COUNTRIES FOR 2020

in €m	Germany	USA
Traffic revenue ¹⁾	2,691	1,005
Other revenue	677	1,200
Non-current assets ^{2) 3)}	14,183	527
Capital expenditure on non-current assets ³⁾	991	27

¹⁾ Traffic revenue is allocated according to the original location of sale.

²⁾ Non-current assets include property, plant and equipment and intangible assets with the exception of repairable spare parts for aircraft.

³⁾ Aircraft are allocated according to their location of registration.

In 2021 and in the previous year, no more than 10% of Lufthansa Group revenue was generated with any one customer.

NOTES TO THE CONSOLIDATED CASH FLOW STATEMENT

44 Notes to cash flow from operating, investing and financing activities

The cash flow statement shows how cash and cash equivalents have changed over the reporting period at the Lufthansa Group. In accordance with IAS 7, cash flows are divided into cash inflows and outflows from operating activities, from investing activities and from financing activities. The cash and cash equivalents shown in the cash flow statement comprise the statement of financial position items bank balances and cash-in-hand, without fixed-term deposits with terms of four to twelve months, amounting to EUR 2m (previous year: EUR 2m). The amount of liquidity in the broader sense is reached by adding securities that can be liquidated at short notice.

Interest paid and interest income from the corresponding interest rate hedges are netted to avoid overemphasising the items interest income and interest paid in the cash flow statement.

ADDITIONAL INFORMATION ON THE CASH FLOW STATEMENT

Cash flow from operating activities

Cash flow from operating activities is derived from profit/loss before income taxes using the indirect method. It is adjusted for non-cash income and expenses as well as changes in trade working capital and in other assets/liabilities that are not attributable to investing or financing activities.

Lease accounting in line with IFRS 16 means that payments under operating leases are presented as capital repayments or interest payments within cash flow from financing activities. In the financial year this had a positive impact of EUR 413m on cash flow from operating activities (of which EUR 354m capital repayment) and a corresponding negative effect in cash flow from financing activities.

In the current financial year, the Group primarily recognised the following non-cash income and expenses:

T144 SIGNIFICANT NON-CASH INCOME AND EXPENSES

in €m	2021	2020
Result of miscellaneous financial items	-151	306
Write-down on receivables	73	248
Reversal of write-downs on receivables	-108	-36
Income from the reversal of provisions and accruals	-209	-338
Adjustments to retirement and transitional benefit systems	-89	32
Total	-484	212

Trade working capital consists of changes in the carrying amounts of inventories, trade receivables and payables, contract assets and down payments, other current assets and other current liabilities, contract liabilities and current deferrals and prepaid expenses.

Other assets/liabilities mainly include corrections between pension expenses and payments, changes in other provisions, accruals/deferrals and corrections for non-cash effects from currency translation.

The following cash outflows resulted from other measures implemented in the previous year to strengthen the Group's liquidity: The expiry of repo agreements with emissions certificates, or the conclusion of new ones, resulted in net outflows of EUR 103m (previous year: inflow of EUR 275m). Deferrals of taxes and charges (mainly import VAT and air traffic tax) in Germany and Austria resulted in net outflows of EUR 810m (previous year: positive effect of EUR 918m). In addition, an inflow of EUR 428m was realised due to the restriking of currency hedges with positive market values in the previous year.

Cash flow from investing (and cash management) activities

Cash flows from investing and financing activities are calculated on the basis of payments.

Cash flow from investing activities results mainly from investments and disinvestments in non-current assets. The negative cash effect from disposals of consolidated companies in the previous year resulted from the net total of the purchase price received and the decrease in cash and cash equivalents through the sale of the LSG group's European business.

The Lufthansa Group contributed EUR 486m to pension assets in 2021 (previous year: EUR 235m). These payments were categorised as cash flow from investing and cash management activities. By contrast, pension payments from

fund assets led to cash inflows from investments (EUR 270m; previous year: EUR 510m). They correspond to cash outflows from operating activities. In total, the cash outflows from pensions reported in cash flow from operating activities amount to EUR 630m (previous year: EUR 602m).

Cash flow from financing activities

Cash flow from financing activities also includes capital repayments and interest payments on lease liabilities.

Capital repayments related to the repayment of funds drawn down in the financial year to the ESF under Silent Participation I. Of the EUR 1,500m received, EUR 282m was contributed in the form of shares as part of the capital increase, with the remaining EUR 1,218m being repaid to the ESF. The capital increase was reduced by payments for costs relating to the implementation of the measure amounting to EUR 71m.

Borrowing and the instruments used to hedge it changed as follows in the financial year:

T145 FINANCIAL LIABILITIES 2021

	31 Dec 2020	Cash effective	Non-cash effective						31 Dec 2021
			Addition due to changes in consoli- dation	Addition due to lease liabilities	Currency translation differences	Accrued interest	Reclassi- fication/ Reclassi- fication in held for sale	Changes in fair value	
in €m									
Non-current borrowings	12,252	6,136	-	69	276	60	-3,571	-181	15,041
Current borrowings	3,116	-5,067	-	2	16	-1	3,570	-7	1,629
Other borrowings ¹⁾	14	5	-	-	-	-	-	-	19
Total financial liabilities	15,382	1,074	-	71	292	59	-1	-188	16,689
Interest rate swaps and currency futures used for hedging – assets	-156	78	-	-	-	-	-	-103	-181
Interest rate swaps and currency futures used for hedging – liabilities	44	-	-	-	-	-	-	-17	27

¹⁾ Mainly relate to bank overdrafts.

Changes in borrowing in the previous year were as follows:

T145 FINANCIAL LIABILITIES 2020

	31 Dec 2019	Cash effective	Non-cash effective						31 Dec 2020
			Addition due to changes in consoli- dation	Addition due to lease liabilities	Currency translation differences	Accrued interest	Reclassi- fication/ Reclassi- fication in held for sale	Changes in fair value	
in €m									
Non-current borrowings	8,396	5,547	-	340	-278	25	-2,022	244	12,252
Current borrowings	1,634	-532	-	2	-19	-	2,036	-5	3,116
Other borrowings ¹⁾	17	-1	-	-	-2	-	-	-	14
Total financial liabilities	10,047	5,014	-	342	-299	25	14	239	15,382
Interest rate swaps and currency futures used for hedging – assets	-205	69	-	-	-	-	-	-20	-156
Interest rate swaps and currency futures used for hedging – liabilities	27	-	-	-	-	-	-	17	44

¹⁾ Mainly relate to bank overdrafts.

OTHER DISCLOSURES

45 Additional disclosures on financial instruments

FINANCIAL ASSETS BY MEASUREMENT CATEGORY

As of the current reporting date, the financial assets can be broken down into measurement categories with the following carrying amounts:

T146 FINANCIAL ASSETS IN THE BALANCE SHEET AS OF 31 DEC 2021

in €m	Amortised cost	At fair value through profit or loss	At fair value through other comprehensive income (with recycling)	At fair value through other comprehensive income (without recycling)	Derivative financial instruments which are an effective part of a hedging relationship	Total
Other equity investments	-	24	-	-	-	24
Non-current securities	13	-	-	25	-	38
of which equity instruments	-	-	-	25	-	25
of which debt instruments	13	-	-	-	-	13
Loans	81	-	-	-	-	81
Non-current receivables	443	-	-	-	-	443
Non-current derivative financial instruments	-	4	-	-	890	894
Trade receivables and other current receivables	3,672	-	-	-	-	3,672
Current derivative financial instruments	-	8	-	-	534	542
Current securities	-	4,201	1,158	-	-	5,359
of which equity instruments	-	4,201	-	-	-	4,201
of which debt instruments	-	-	1,158	-	-	1,158
Cash and cash equivalents	2,307	-	-	-	-	2,307
Total	6,516	4,237	1,158	25	1,424	13,360

T146 FINANCIAL ASSETS IN THE BALANCE SHEET AS OF 31 DEC 2020

in €m	Amortised cost	At fair value through profit or loss	At fair value through other comprehensive income (with recycling)	At fair value through other comprehensive income (without recycling)	Derivative financial instruments which are an effective part of a hedging relationship	Total
Other equity investments	-	34	-	-	-	34
Non-current securities	31	-	-	23	-	54
of which equity instruments	-	-	-	23	-	23
of which debt instruments	31	-	-	-	-	31
Loans	121	-	-	-	-	121
Non-current receivables	318	-	-	-	-	318
Non-current derivative financial instruments	-	-	-	-	363	363
Trade receivables and other current receivables	2,793	-	-	-	-	2,793
Current derivative financial instruments	-	2	-	-	258	260
Current securities	-	3,654	-	-	-	3,654
of which equity instruments	-	3,654	-	-	-	3,654
of which debt instruments	-	-	-	-	-	-
Cash and cash equivalents	1,806	-	-	-	-	1,806
Total	5,069	3,690	-	23	621	9,403

The category “At fair value through other comprehensive income” includes derivatives that do not meet the requirements for applying hedge accounting and so are accounted for as stand-alone derivatives. This category also includes equity instruments, consisting of money market funds and equity investments, for which the instrument-specific option of fair value through other comprehensive income without recycling has not been exercised. As of the reporting date, the fair-value option without effect on profit and loss and without recycling was chosen for one share position, in order to avoid the recognition of changes in market value through profit or loss. The item includes shares in VISA Inc. (market value: EUR 25m, dividend payments: EUR 0.1m in the 2021 financial year) whose market valuation reserve increased by EUR 1m in 2021 (cumulative EUR 16m). The increase in debt instruments designated as at fair value (with recycling) without effect on profit and loss was due to the establishment of bond positions as part of the investment of liquidity in the financial year.

FINANCIAL LIABILITIES BY MEASUREMENT CATEGORY

The financial liabilities can be divided into measurement categories with the following carrying amounts, whereby the category “at fair value through profit or loss” includes derivatives that do not meet the requirements for applying hedge accounting and so are accounted for as stand-alone derivatives. In addition, the instrument-specific option to designate the convertible bond issued in 2019 as “at fair value through profit or loss” was also exercised; its fair value as of the reporting date was EUR 647m. The total change of EUR -65m in the market value of the convertible bond was therefore split into a credit-risk-induced share of EUR 22m, which is recognised as an expense in other comprehensive income, and a price-induced share of EUR -93m, which is recognised as an expense in the trading result, as well as the recognition of transaction costs of EUR 6m as an expense.

T147 FINANCIAL LIABILITIES IN THE BALANCE SHEET AS OF 31 DEC 2021

	Liabilities at fair value through profit or loss	Derivative financial instruments which are an effective part of a hedging relationship	Other financial liabilities at cost	Total
in €m				
Borrowings (without IFRS 16 lease liabilities)	647	0	13,653	14,300
Derivative financial instruments	29	508	-	537
Trade payables	-	-	2,881	2,881
Other financial liabilities	-	-	1,372	1,372
Total	676	508	17,906	19,090

T147 FINANCIAL LIABILITIES IN THE BALANCE SHEET AS OF 31 DEC 2020

	Liabilities at fair value through profit or loss	Derivative financial instruments which are an effective part of a hedging relationship	Other financial liabilities at cost	Total
in €m				
Borrowings (without IFRS 16 lease liabilities)	712	-	12,020	12,732
Derivative financial instruments	85	738	-	823
Trade payables	-	-	2,087	2,087
Other financial liabilities	-	-	1,320	1,320
Total	797	738	15,427	16,962

The net result of the different categories of financial assets and liabilities is made up as follows:

T148 NET RESULT 2021 FOR FINANCIAL ASSETS AND LIABILITIES BY MEASUREMENT CATEGORY

in €m	Interest expenses	Interest income	Depreciation	Result from valuation and sale	Currency result	Net result
Assets at amortised cost	-	2	36	-	9	47
At fair value through other comprehensive income (with recycling)	-2	2	-	-5	-	-5
At fair value through other comprehensive income (without recycling)	-	-	-	2	-	2
Assets at fair value through profit or loss ¹⁾	-	-25	-	-3	-	-28
Liabilities at amortised cost	-367	-	-	-	-34	-401
Liabilities at fair value through profit or loss	-10	-	-	125	-	115
Total	-379	-21	36	119	-25	-270

¹⁾ The negative interest income of the money market funds included in this category represents the current negative interest rates on money market investments.

T148 NET RESULT 2020 FOR FINANCIAL ASSETS AND LIABILITIES BY MEASUREMENT CATEGORY

in €m	Interest expenses	Interest income	Depreciation	Result from valuation and sale	Currency result	Net result
Assets at amortised cost	-	3	-213	-	-11	-221
At fair value through other comprehensive income (with recycling)	-3	4	-	15	-2	14
At fair value through other comprehensive income (without recycling)	-	-	-	1	-	1
Assets at fair value through profit or loss	-	-	-	24	-	24
Liabilities at amortised cost	-169	-	-	-	39	-130
Liabilities at fair value through profit or loss	-1	-	-	-886	-	-887
Total	-173	7	-213	-846	26	-1,199

The table to the right shows the carrying amounts and market values for individual classes of financial liabilities. The stated market values of bonds reflect their stock market listings (Level 1 of the fair value hierarchy). The market values for other types of financial liability have been calculated using the applicable interest rates for the remaining term to maturity and repayment structures at the reporting date based on the available market information (Bloomberg) (Level 2 of the fair value hierarchy). For other assets and liabilities, non-current receivables, trade receivables and cash-in-hand carried at amortised cost, the carrying amount is deemed to be a reasonable approximation of the fair value.

T149 FINANCIAL LIABILITIES

in €m	31 Dec 2021		31 Dec 2020	
	Carrying amount	Market value	Carrying amount	Market value
Bonds	6,697	6,719	2,707	2,643
Commercial Paper to banks	-	-	200	199
Borrower's note loans	1,626	1,803	1,900	1,894
Credit lines	-	-	763	740
State-guaranteed loans	1,082	1,072	2,907	3,147
Aircraft financing	4,464	4,586	3,603	3,590
Other borrowings	431	521	651	705
Leasing liabilities ¹⁾	2,370	-	2,637	-
Total	16,670	14,701	15,368	12,918

¹⁾ With the introduction of IFRS 16, declaration of market value no longer applies as of 1 January 2019.

FINANCIAL ASSETS HELD AT FAIR VALUE BY LEVEL OF FAIR VALUE HIERARCHY

The following table shows financial assets and liabilities held at fair value by level of fair value hierarchy. The levels are defined as follows:

Level 1: Financial instruments traded on active markets, the quoted prices for which are taken for measurement unchanged.

Level 2: Measurement is made by means of valuation methods with parameters derived directly or indirectly from observable market data.

Level 3: Measurement is made by means of valuation methods with parameters not based exclusively on observable market data.

In the financial year 2021, the fair value hierarchy for assets and liabilities held at fair value was as follows:

T150 FAIR VALUE HIERARCHY OF ASSETS AS OF 31 DEC 2021

in €m	Level 1	Level 2	Level 3	Total
Financial assets at fair value through profit and loss	4,201	12	24	4,237
Financial derivatives classified as held for trading	-	12	-	12
Securities	4,201	-	-	4,201
Investments	-	-	24	24
Derivative financial instruments which are an effective part of a hedging relationship	-	1,424	-	1,424
Financial assets at fair value through other comprehensive income	13	1,170	-	1,183
Equity instruments	13	12	-	25
Debt instruments	-	1,158	-	1,158
Total assets	4,214	2,606	24	6,844

T151 FAIR VALUE HIERARCHY OF LIABILITIES AS OF 31 DEC 2021

in €m	Level 1	Level 2	Level 3	Total
Financial liabilities at fair value through profit or loss	-	-647	-	-647
Derivative financial instruments at fair value through profit or loss	-	-29	-	-29
Derivative financial instruments which are an effective part of a hedging relationship	-	-508	-	-508
Total liabilities	-	-1,184	-	-1,184

Level 3 investments held at fair value through profit or loss include a total of 36 individual investments as of the reporting date (previous year: 38), for which the acquisition costs are considered to be the best estimate of a fair value, for reasons of materiality.

T150 FAIR VALUE HIERARCHY OF ASSETS AS OF 31 DEC 2020

in €m	Level 1	Level 2	Level 3	Total
Financial assets at fair value through profit and loss	3,654	2	34	3,690
Financial derivatives classified as held for trading	-	2	-	2
Securities	3,654	-	-	3,654
Investments	-	-	34	34
Derivative financial instruments which are an effective part of a hedging relationship	-	620	-	620

in €m	Level 1	Level 2	Level 3	Total
Financial assets at fair value through other comprehensive income	11	12	-	23
Equity instruments	11	12	-	23
Debt instruments	-	-	-	-
Total assets	3,665	634	34	4,333

T151 FAIR VALUE HIERARCHY OF LIABILITIES AS OF 31 DEC 2020

in €m	Level 1	Level 2	Level 3	Total
Financial liabilities at fair value through profit or loss	-	-712	-	-712
Derivative financial instruments at fair value through profit or loss	-	-85	-	-85
Derivative financial instruments which are an effective part of a hedging relationship	-	-738	-	-738
Total liabilities	-	-1,535	-	-1,535

NETTING OF FINANCIAL ASSETS AND LIABILITIES

The following financial assets and liabilities are subject to global netting agreements and other agreements.

T152 NETTING OF FINANCIAL ASSETS AS OF 31 DEC 2021

in €m	Gross amount	Netted amounts	Reported net amount	Amounts not netted	Cash collateral	Net amount
Trade receivables and other current receivables	3,764	92	3,672	-	-	3,672
Derivative financial instruments - assets	1,436	-	1,436	-52	134	1,354
Cash and cash equivalents	2,329	22	2,307	-	-	2,307
Total assets	7,529	114	7,415	-52	134	7,333

T153 NETTING OF FINANCIAL LIABILITIES AS OF 31 DEC 2021

in €m	Gross amount	Netted amounts	Reported net amount	Amounts not netted	Cash collateral	Net amount
Trade payables and other financial liabilities	2,995	114	2,881	-	134	2,881
Derivative financial instruments - liabilities	537	-	537	-52	-	589
Total liabilities	3,532	114	3,418	-52	134	3,470

In the previous year, the net balances were as follows:

T152 NETTING OF FINANCIAL ASSETS AS OF 31 DEC 2020

in €m	Gross amount	Netted amounts	Reported net amount	Amounts not netted	Cash collateral	Net amount
Trade receivables and other current receivables	2,837	44	2,793	-	2	2,793
Derivative financial instruments - assets	623	-	623	39	38	546
Cash and cash equivalents	1,822	16	1,806	-	-	1,806
Total assets	5,282	60	5,222	39	40	5,145

T153 NETTING OF FINANCIAL LIABILITIES AS OF 31 DEC 2020

in €m	Gross amount	Netted amounts	Reported net amount	Amounts not netted	Cash collateral	Net amount
Trade payables and other financial liabilities	2,144	60	2,084	-	38	2,084
Derivative financial instruments - liabilities	823	-	823	39	2	782
Total liabilities	2,967	60	2,907	39	40	2,866

PRINCIPLES OF HEDGING POLICY

As an aviation group with worldwide operations, the Lufthansa Group is exposed to exchange rate, interest rate and fuel price movement risks, as well as to credit and liquidity risks. Limiting these risks by means of systematic financial management is part of Company policy.

Market risk

The major market and price risks to which the Lufthansa Group is exposed are exchange rate fluctuations between the euro and other currencies, interest rate fluctuations in international money and capital markets, and price fluctuations in the crude oil and oil products markets. Hedging policy for limiting these risks is laid down by the Executive Board and documented by internal Group guidelines. It also provides for the use of financial derivatives. The corresponding financial transactions are concluded only with first-rate counterparties.

Foreign exchange risk

For US dollars, the Lufthansa Group is in a net payer position as regards currency risks from its operating business, since fuel payments are dollar-denominated. There is always a net surplus for other currencies. This is especially true of the Chinese renminbi, the British pound sterling, the Japanese yen and the Indian rupee. Depending on market liquidity, currency risks from projected operational exposure are hedged gradually over a period of 24 months by means of futures contracts, which are accounted for as cash flow hedges.

At the end of the financial year 2021, exposure from operations for the next 24 months was as follows:

T154 CURRENCY EXPOSURE, AS OF 2021

in millions	USD	CNY	JPY	GBP	INR
Exposure (currency)	-6,544	5,635	67,336	596	44,353
Exposure (EUR at spot rate)	-5,778	783	517	709	527
Hedges (currency)	1,020	-1,369	-13,406	-122	-
Hedging level	16%	24%	20%	21%	0%
Hedging rate	1.16	7.73	126.14	0.88	-

50% of currency risks from capital expenditure on aircraft are hedged when the contract is signed. The hedging level is reviewed and increased, where necessary, if, over the life-time of the contract, the exchange rate goes significantly above or below that used to calculate the investment. In the last 24 months before payment, the hedging level is increased in half-yearly steps of 10%, reaching 90% by the end. These investment hedges are therefore also accounted for as cash flow hedges. Capital expenditure on aircraft takes place in US dollars and is hedged in euros or in Swiss francs, depending on the functional currency of the Group company making the purchase. There was no exposure in Swiss francs as of the reporting date.

US dollar exposure for capital expenditure as of year-end 2021 was as follows, broken down by the hedged currency:

T155 USD INVESTMENT EXPOSURE, HEDGED IN EUR

in millions	2022	2023	2024	2025	2026	2027	2028	2029	2030
Exposure from net capital expenditure (USD)	-1,861	-2,354	-2,573	-2,900	-2,014	-1,351	-486	-168	-
Exposure from net capital expenditure (EUR at spot rate)	-1,645	-2,080	-2,274	-2,563	-1,780	-1,194	-430	-149	-
Hedges (USD)	1,636	1,664	1,600	1,908	1,434	876	243	84	-
Hedging level	88%	71%	62%	66%	71%	65%	50%	50%	0%
Hedging rate EUR/USD	1.18	1.22	1.27	1.28	1.28	1.30	1.32	1.35	-

The following sensitivity analysis shows how net profit and equity would have changed if the currencies identified as price risk variables had been different from those at the reporting date.

T156 SENSITIVITY ANALYSIS BY CURRENCY

in €m	Effects on earnings after taxes ¹⁾	Effects on equity ¹⁾
Currency – USD		
+10%	-336	785
-10%	277	-642
Currency – JPY		
+10%	-51	-9
-10%	42	7
Currency – CHF		
+10%	44	-3
-10%	-37	3
Currency – GBP		
+10%	4	-12
-10%	-3	10
Currency – CNY		
+10%	11	-15
-10%	-8	13
Currency – INR		
+10%	2	-
-10%	-2	-

¹⁾ All amounts after deferred tax effects; +/- signs relate to net profit and/or equity.

Interest rate risk

The Lufthansa Group generally aims to pay interest on its financial liabilities in euros. To do so, interest rate swaps can be arranged for interest-bearing, fixed-rate financial debt and leasing liabilities. Financial liabilities denominated in euros are hedged using “plain vanilla” interest rate swaps, while cross-currency interest rate swaps are used to hedge financial liabilities in foreign currencies. Depending on the interest rate structure of the exposure to be hedged, hedges are either classified as fair value hedges or cash flow hedges. The interest rate risk is monitored constantly; strategic interest rate hedges are used as needed in response to different market situations. Depending on the counterparties and the instruments used, cash collateral for interest rate swaps is either deposited with or received from counterparties (➔ T152, T153, p. 229).

The tables below describe the floating/fixed ratio for non-current borrowing as of financial year-end 2021 after taking into consideration interest rate hedging, as well as the distribution of the nominal volume of interest rate hedges. The variable interest rate exposure remaining after interest rate hedges in relation to non-current borrowing corresponds more or less to the floating rate investment exposure.

T157 INTEREST RATE EXPOSURE AFTER HEDGING

in €m	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Fix	7,158	7,104	6,435	5,511	4,084	2,429	1,391	534	27	20	12
Variable	5,941	5,041	4,408	3,029	2,534	2,064	1,758	1,387	873	482	88
Float/Fix-Ratio	45%	42%	41%	35%	38%	46%	56%	72%	97%	96%	88%

T158 NOMINAL VOLUME OF INTEREST RATE HEDGES

in €m	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Fix	-2,730	-2,350	-1,292	-1,050	-1,102	-1,382	-1,091	-649	-338	-50	-
Variable	2,695	2,330	1,283	1,063	1,108	1,384	1,087	646	335	49	-

The sensitivity analysis to the right shows how net profit and equity would have changed if the interest rate identified as a price risk variable had been different from the perspective of the reporting date. In view of the current low interest rates, a reduction of more than 50 basis points is not considered likely, which is why the analysis was limited to this figure. Only stand-alone interest rate derivatives have been included, because in fair value hedge accounting, interest rate derivatives offset the movements in the underlying hedged items.

T159 SENSITIVITY ANALYSIS BY INTEREST RATE

in €m	Effects on earnings after taxes ¹⁾	Effects on equity ¹⁾
Interest		
+100 basis points	27	-
-50 basis points	-14	-

¹⁾ All amounts after deferred tax effects; +/- signs relate to net profit and/or equity.

Effects of the EU benchmark regulation of global reference interest rates

In terms of the financial instruments used by the Lufthansa Group, the global reform of variable reference interest rates means that the variable reference interest rates for transactions that are available today will no longer be so in future or will be calculated differently. As of 31 December 2021, the Lufthansa Group held EUR 6.9bn in outstanding financial transactions, floating rate liabilities and hedging instruments based on variable interest rates. The following table shows the absolute nominal volume of the transactions as of the reporting date.

T160 NOMINAL VOLUME OF FLOATING RATE FINANCIAL INSTRUMENTS IN HEDGING RELATIONSHIPS

Reference floating interest rate by currency	Nominal volume of floating interest rate derivatives in €m	Nominal volume of floating interest rate financial liabilities (without derivatives) in €m
EUR - EURIBOR	4,326	1,156
USD - LIBOR	677	760
CHF - LIBOR	-	-
Total	5,003	1,916

EURIBOR's calculation method was adjusted in 2019 to ensure that it complies with the rules of the EU benchmark regulation. The change therefore has no effect on the Lufthansa Group for financial instruments based on EURIBOR. Since October 2019, the European Central Bank has also published €STR, a benchmark-compliant overnight interest rate. Clearing houses and the Lufthansa Group have switched their mark-to-market accounting to the new overnight reference rates €STR (EUR) and SOFR (USD). The current status is that USD LIBOR rates will be published for the last time as of 30 June 2023, so another reference interest rate will have to be used from this point at the latest but none has yet become established in the market. However, the outstanding changes to USD LIBOR will not have any significant impact on the Group portfolio due to the small volume of transactions.

The Lufthansa Group applied the "Amendments to IFRS 9, IAS 39 and IFRS 7, Reform of Reference Interest Rates" of Phase 1 and the pronouncements on Phase 2 of the reform of reference interest rates "Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16" from January 2021 early in the 2020 financial year. These include transitional provisions and accounting exemptions for interest rate hedges. The outstanding changes to the benchmarks will not have any impact

on the USD and CHF hedging relationships designated by the Lufthansa Group. Contracts for derivatives and for financial liabilities have been analysed by the Lufthansa Group and fallback clauses added if necessary. Systematic adjustments will also be made to the extent required.

Fuel price risk

In 2021, fuel costs accounted for 11.6% of the Lufthansa Group's operating expenses (previous year: 9.0%). Significant changes in fuel prices can therefore have a significant effect on the Lufthansa Group's result.

Fuel price risk is limited by the use of crude oil hedges. As a rule, up to 4% of exposure is hedged monthly for up to 24 months by spread options and other combinations of hedges. Executive Board approval may be obtained to extend the hedging period and to increase the monthly hedging volume in order to exploit market opportunities. The target hedging level is up to 65%. The hedging strategy described was revised in the financial year from the previous target hedging level of up to 85%.

From a year-end perspective, fuel exposure was as follows:

T161 FUEL EXPOSURE

		2022	2023
Fuel requirement	in 1,000 tonnes	7,668	8,712
Hedges	in 1,000 tonnes	4,569	1,703
Hedging level	%	60	20
Hedging rate	USD/bbl	72.12	78.73

The following sensitivity analysis shows how equity would have been affected by changes in the market value of hedging instruments held as of the reporting date if the fuel price, the identified risk variable, had been different. Since hedge accounting rules mean that changes in the market value of the instruments are only recognised directly in equity without effect on profit and loss, the change in the fuel price of the hedges alone has no effect on earnings.

T162 SENSITIVITY ANALYSIS BY FUEL PRICE

in €m	Effects on earnings after taxes ¹⁾	Effects on equity ¹⁾
Fuel price		
+10%	-	170
-10%	-	-148

¹⁾ All amounts after deferred tax effects; +/- signs relate to net profit and/or equity.

Market values of the derivative financial instruments used for hedging

Hedging instruments in designated hedging relationships are used to hedge exchange rate, interest rate and fuel price risks as of the reporting date. They changed as follows in the financial year:

T163 DERIVATIVE FINANCIAL INSTRUMENTS USED FOR HEDGING AS OF 31 DEC 2021

in €m	Positive market value	Negative market value	Change in fair value of hedging instrument – designated risk	Change in fair value of hedging instrument – non-designated risk	Basis adjustment of hedged items	OCI – cash flow hedge reserve	OCI – cost of hedging	Ineffective portion of hedges – designated risk	Ineffective portion of hedges – non designated risk
Fair value hedge									
Interest rate hedges – interest rate swaps	133	-27	31	-	-30	-	-	1	-
Cash flow hedge									
Fuel hedging – options	305	-	146	159	-	144	156	2	3
Exchange rate hedging – forward transactions	937	-480	789	-137	-	681	-66	107	-71
Interest rate hedges – interest rate swaps	49	-	25	-	-	28	-	-3	-
Total	1,424	-507	991	22	-30	853	90	107	-68
of which current	535	-247							

T163 DERIVATIVE FINANCIAL INSTRUMENTS USED FOR HEDGING AS OF 31 DEC 2020

in €m	Positive market value	Negative market value	Change in fair value of hedging instrument – designated risk	Change in fair value of hedging instrument – non-designated risk	Basis adjustment of hedged items	OCI – cash flow hedge reserve	OCI – cost of hedging	Ineffective portion of hedges – designated risk	Ineffective portion of hedges – non designated risk
Fair value hedge									
Interest rate hedges – interest rate swaps	131	-41	-41	-	60	-	-	19	0
Cash flow hedge									
Fuel hedging – options	6	-42	-61	6	-	-63	7	2	-1
Exchange rate hedging – forward transactions	458	-651	-1,151	129	-	-1,019	140	-132	-10
Interest rate hedges – interest rate swaps	26	-3	-21	-	-	-19	-	-2	0
Total	621	-737	-1,274	135	60	-1,101	147	-113	-11
of which current	258	-354							

The market values stated for financial derivatives correspond to the price at which an independent third party would assume the rights and/or obligations from the financial instrument. The fair values of interest rate derivatives correspond to their respective market values, which are measured using appropriate mathematical methods, such as discounting expected future cash flows. Discounting takes market standard interest rates and the residual term of the respective instruments into account. Currency forward transactions and interest rate swaps are individually discounted to the balance sheet date based on their respective forward rates and the appropriate interest rate curve. The market prices of options used to hedge fuel prices are determined using acknowledged option pricing models.

Depending on the hedged exposure, the Lufthansa Group designates interest rate hedges as both fair value hedges and cash flow hedges and accounts for them accordingly. Interest rate swaps are designated as part of a hedging relationship and are not broken down into individual components. Ineffectiveness in these hedging relationships result largely from different parameters in the hedged item and the hedging instrument and the basis spread in cross currency swaps. Ineffectiveness in fair value hedges and cash flow hedges are recognised and presented as part of the financial result, below the other financial items.

Derivatives used in the context of fuel hedging to hedge future kerosene purchases are designated as cash flow hedges. The Lufthansa Group applies the IFRS 9 component approach, using crude oil, based on Brent Crude ICE, as the designated risk component of the hedging instrument. The hedged item is composed of a global mix of crude oil types. The base risk between individual crude oil components in the hedging instrument and the crude oil mix in the hedged item is reduced by rebalancing the volumes that make up the hedged item on a quarterly basis. In 2021, the quarterly rebalancing factors for adjusting the hedged item were as follows: 1.013 (Q1), 1.012 (Q2), 1.013 (Q3) and 1.011 (Q4). The Lufthansa Group generally uses options and combinations

of options to hedge fuel prices. The intrinsic value of the option is designated as the hedging instrument, so that effective changes in the intrinsic values are recognised in other comprehensive income in the cash flow hedge reserve. The time value of an option is not designated as a hedging instrument and effective changes in the time value are therefore recognised as a cost of hedging. This rule was applied for the first time retroactively. Ineffectiveness in fuel price hedges results from the base risk between the crude oil component and the crude oil mix in the component approach. Ineffectiveness in hedges is recognised and presented as part of the financial result, below the other financial items.

The Lufthansa Group applies the spot-to-spot method for exchange rate forward transactions designated as cash flow hedges. The spot component of a forward contract is designated as a hedging instrument and effective value changes are recognised in the cash flow hedge reserve. The other effective components of a forward contract, the forward component and the cross-currency basis spread are presented in a separate OCI component in line with the legal requirements for the cost of hedging. Ineffectiveness in hedging relationships results from changes in the timing of the planned aircraft purchases. Ineffectiveness in hedges is recognised as part of the financial result, below the other financial items. ➤ **Note 14, p. 181.**

The decline in flight traffic due to the coronavirus crisis meant that fuel prices and foreign currencies were, in some cases, still “overhedged” in the financial reporting year, meaning hedging relationships previously designated under hedge accounting rules had to be terminated early. The corresponding hedges were therefore accounted for as stand-alone derivatives. As of 31 December 2021, the realised result of expired, stand-alone derivatives was EUR 4m (previous year: EUR -730m), which was recognised in the financial result. Fuel hedges accounted for income of EUR 18m (previous year: EUR -758m) and foreign currency hedges for expenses of EUR -14m (previous year: EUR 28m).

The Lufthansa Group uses the hypothetical derivative method to calculate changes in the value of hedged items designated as being part of a hedging relationship.

T164 DESIGNATED HEDGED ITEMS IN HEDGING RELATIONSHIPS 2021

in €m	Carrying amount of liabilities	Change in fair value of hedged items – designated risk	Change in fair value of hedged items – non-designated risk	Basis adjustment of hedged items from fair value hedges – cumulative
Fair value hedge				
Interest rate hedges – interest rate swaps	-4,875	-30	-	-228
Cash flow hedge				
Fuel hedging – options	-	-144	-156	-
Exchange rate hedging – forward transactions	-	-735	60	-
Interest rate hedges – interest rate swaps	-	-25	-	-
Total	-4,875	-934	-96	-228

T164 DESIGNATED HEDGED ITEMS IN HEDGING RELATIONSHIPS 2020

in €m	Carrying amount of liabilities	Change in fair value of hedged items – designated risk	Change in fair value of hedged items – non-designated risk	Basis adjustment of hedged items from fair value hedges – cumulative
Fair value hedge				
Interest rate hedges – interest rate swaps	-4,920	60	-	-18
Cash flow hedge				
Fuel hedging – options	-	63	-7	-
Exchange rate hedging – forward transactions	-	770	-148	-
Interest rate hedges – interest rate swaps	-	-25	-	-
Total	-4,920	868	-155	-18

T165 STATEMENT OF EQUITY RECONCILIATION FOR CASH FLOW HEDGES 2021

in €m	As of 1 Jan 2021	Gains or losses from effective hedging relationships	Reclassification to profit or loss	Reclassification to acquisition costs of inventories	Reclassification to acquisition costs of aircraft	As of 31 Dec 2021
OCI – cash flow hedge reserve	-54	999	-10	207	37	711
Fuel hedging – options	-21	373	22	207	-	123
Exchange rate hedging – futures	-42	638	-32	-	37	591
Interest rate hedges – interest rate swaps	9	-12	-	-	-	-3
OCI – cost of hedging	468	96	-	-	-	564
Fuel hedging – options	-68	162	-	-	-	94
Exchange rate hedging – futures	536	-66	-	-	-	470
Total	414	1,095	-10	207	37	1,275

T165 STATEMENT OF EQUITY RECONCILIATION FOR CASH FLOW HEDGES 2020

in €m	As of 1 Jan 2020	Gains or losses from effective hedging relationships	Reclassification to profit or loss	Reclassification to acquisition costs of inventories	Reclassification to acquisition costs of aircraft	As of 31 Dec 2020
OCI – cash flow hedge reserve	477	-1,463	-811	-163	41	-54
Fuel hedging – options	43	-1,169	-943	-163	-	-21
Exchange rate hedging – futures	440	-309	132	-	41	-42
Interest rate hedges – interest rate swaps	-6	15	-	-	-	9
OCI – cost of hedging	326	142	-	-	-	468
Fuel hedging – options	-70	2	-	-	-	-68
Exchange rate hedging – futures	396	140	-	-	-	536
Total	803	-1,321	-811	-163	41	414

Derivative financial instruments that do not meet the requirements for applying hedge accounting are measured at fair value through profit or loss. As a rule, these derivatives were originally in an economic hedging relationship with a particular exposure, but the exposure can either not be measured for hedge accounting purposes or no longer exists.

Fair values are all calculated solely on the basis of recognised financial and mathematical methods, using publicly available market information.

Changes in the market values of derivatives that do not qualify as effective hedging transactions under IFRS 9 can be seen in the income statement and in the overview of other financial items ↗ **Note 14, p. 181.**

Liquidity risk

Complex financial planning systems enable the Lufthansa Group to identify its future liquidity position at an early stage. Based on the results of the Group strategy and planning processes, a monthly rolling liquidity plan differentiated by currency is drawn up with a planning horizon of 24 months. This planning method offers an up-to-date picture of anticipated liquidity developments within the Company and corresponding currency effects.

The Lufthansa Group held unused lines of credit as of 31 December 2021 totalling EUR 735m (previous year: EUR 0m).

The Group has taken specific and general measures to safeguard and manage its liquidity to avoid any future potential liquidity restrictions that could result from the coronavirus pandemic. They include the implementation of monitoring on the basis of detailed, rolling short-term cash plans in order

to manage liquidity effectively and track the current financing requirement closely. Specific liquidity risks resulting from reimbursements for cancelled flights were also analysed and managed. In addition, liquidity management in connection with current orders for goods and services was also optimised, greater transparency was achieved across the Group, including an early warning system and an escalation process for outstanding receivables, additional signatures were required to place orders and monitoring concerning short-time working requirements was introduced.

A maturity analysis for the financial liabilities and the derivative financial instruments based on undiscounted gross cash flows including the relevant interest payments shows the following projected cash inflows and outflows considered from the 31 December 2021 reporting date. As a result of the hedges used, there are generally direct connections between the cash inflows and outflows for the derivative financial instruments shown.

T166 MATURITY ANALYSIS OF LIABILITIES FROM DERIVATIVE FINANCIAL INSTRUMENTS

in €m	From fuel derivatives	Cash inflow from gross settlement of interest rate and exchange rate derivatives	Cash outflow from gross settlement of interest rate and exchange rate derivatives	Net
1st quarter	-	-1,912	1,987	75
Up to 1 year ¹⁾	-	-3,223	3,395	172
1–5 years	-	-4,993	5,339	346
Later	-	-344	359	15

¹⁾ Without payments in 1st quarter.

**T167 MATURITY ANALYSIS OF LIABILITIES FROM
NON-DERIVATIVE FINANCIAL INSTRUMENTS**

in €m	Outflows
1st quarter	-4,046
Up to 1 year ¹⁾	-2,039
1-5 years	-9,994
Later	-4,770

¹⁾ Without payments in 1st quarter.

Credit risk

The sale of passenger travel and freight documents mostly takes place via agencies. These agencies are mostly connected to national clearing systems for billing passenger and freight sales. The credit rating of the agencies is reviewed by the responsible clearing systems. Due to the broad diversification, credit risk for the agencies is relatively low worldwide. Nonetheless, credit terms for agencies in some markets were tightened significantly in cooperation with the International Air Transport Association (IATA) in order to reduce credit risks even further.

Receivables and liabilities between airlines are offset through bilateral arrangements or via the IATA clearing house, insofar as the contracts underlying services do not explicitly specify otherwise. Systematic settlement of weekly receivables and liability balances significantly reduces the default risk. Fidelity guarantee insurance also covers partial risks within a certain range. Service contracts occasionally require collateral for miscellaneous transactions. All other contractual relationships are subject to credit rules, which, depending on the type and volume of the contract involved, require collateral, credit ratings/references or historical data from prior dealings, particularly payment history, in order to avoid defaults. Credit risks from the MRO business are monitored and managed via a separate credit risk management system. It comprises the calculation, authorisation and monitoring of customer-specific credit limit and the daily monitoring of payments received and receivables past due.

Counterparty risks in connection with credit card companies are monitored closely and incoming payments are reviewed daily. To reduce risks even further, a permanent analysis

process examines whether to further tighten credit terms for some settlement partners. In addition to the monitoring of receivables at the Company or segment level, there is also counterparty monitoring at Group level, with individually assigned limits, in order to identify the accumulation of portfolio risks across the entire Group and take appropriate action where necessary. The maximum credit risk for financial assets from the potential insolvency of customers is their carrying amount.

In addition to individual write-downs on receivables if a default event occurs, IFRS 9 requires risk provisions to be recognised for expected losses. The Lufthansa Group's trade receivables are exposed to external credit risks for which expected losses have already been taken into consideration in accordance with IFRS 9, in addition to individual write-downs. A simplified impairment model based on an impairment matrix is used for the portion of the receivables portfolio that does not consist of credit card receivables but is subject to external credit risks. The portfolio is divided into clusters based on customer groups, regions and days past due. A default matrix is calculated on the basis of historical default events in the Lufthansa Group's receivables portfolio, which is supplemented to include forward-looking, publicly available insolvency forecasts. This impairment matrix is applied to trade receivables that are exposed to external credit risk and are not credit card receivables. An impairment matrix is also used for trade and other receivables in the MRO segment. It entails dividing the customer portfolio into four risk classes, with a low, medium, high and very high risk of default. Customers are assigned to each category using the MRO segment's credit risk management system, which is based on fundamental data, market information and payment history. Probabilities of default are derived from historic default events and current market information. Available collateral is taken into account. In addition, the receivables portfolio includes credit card receivables for which the Lufthansa Group is the credit card issuer. Expected losses for these credit card receivables are calculated in a separate model, based on counterparty-specific external ratings and default probabilities. The Lufthansa Group uses a definition of default of 90 days past due for receivables, which are written off in full if the default event occurs. Exceptions are permitted in justified cases, however.

In the following tables, Levels 1 and 2 describe expected credit losses, whereas Level 3 shows individual impairment losses on the basis of actual default events.

T168 STATEMENT OF RISK PROVISIONS 2021

in €m	Opening balance risk provision as of 1 Jan 2021	Additions through profit or loss	Reversals through profit or loss	Utilisation	Closing balance risk provision as of 31 Dec 2021	Opening balance gross carrying amount as of 1 Jan 2021	Closing balance gross carrying amount as of 31 Dec 2021
Trade receivables and other receivables (simplified approach)	551	59	-81	-24	505	1,475	1,951
of which from expected losses	63	19	-31	0	51	926	1,453
of which from individual loss allowances	488	40	-50	-24	454	549	498
Trade receivables and other receivables (credit card receivables)	14	3	-7	-2	8	210	458
of which Level 1	12	0	-6	0	6	204	450
of which Level 2	0	0	0	0	0	1	0
of which Level 3	2	3	-1	-2	2	5	8
Total	565	62	-88	-26	513	1,685	2,409

T168 STATEMENT OF RISK PROVISIONS 2020

in €m	Opening balance risk provision as of 1 Jan 2020	Additions through profit or loss	Reversals through profit or loss	Utilisation	Closing balance risk provision as of 31 Dec 2020	Opening balance gross carrying amount as of 1 Jan 2020	Closing balance gross carrying amount as of 31 Dec 2020
Trade receivables and other receivables (simplified approach)	398	217	-23	-41	551	2,457	1,475
of which from expected losses	12	61	-10	0	63	2,066	926
of which from individual loss allowances	386	156	-13	-41	488	391	549
Trade receivables and other receivables (credit card receivables)	17	4	-4	-4	14	1,060	210
of which Level 1	14	0	-3	0	12	1,051	204
of which Level 2	0	0	0	0	0	0	1
of which Level 3	3	4	-1	-4	2	9	5
Total	415	221	-27	-45	565	3,517	1,685

An expected loss of EUR 4m was recognised for contract assets as of the reporting date.

The outbreak of the coronavirus pandemic caused a significant rise in credit risk and in expected and actual losses in the 2020 financial year. The customer portfolio in the

MRO segment was particularly affected. Particularly in this business segment, the recovery in business operations in the financial reporting year, coupled with successful credit risk management and management of accounts receivable, resulted in a drop in default rates and, as a result, in impairment losses in the receivables portfolio.

In the reporting year, the Lufthansa Group used the following default rates for each past due category in the impairment matrix for the simplified approach of the impairment model.

T169 IMPAIRMENT MATRIX FOR TRADE RECEIVABLES 2021

		Not overdue	1 - 30 days overdue	31 - 60 days overdue	61 - 90 days overdue	More than 90 days overdue	Total
Default rate	%	2.8	3.2	6.3	6.3	12.0	-
Carrying amounts for trade receivables	€m	1,142	188	32	16	75	1,453
Expected loss	€m	33	6	2	1	9	51

T169 IMPAIRMENT MATRIX FOR TRADE RECEIVABLES 2020

		Not overdue	1 - 30 days overdue	31 - 60 days overdue	61 - 90 days overdue	More than 90 days overdue	Total
Default rate	%	3.0	6.0	6.7	10.0	22.0	-
Carrying amounts for trade receivables	€m	610	117	30	10	159	926
Expected loss	€m	18	7	2	1	35	63

In order to determine expected losses of credit card receivables according to IFRS 9, the off-balance sheet exposure must be considered, in addition to the on-balance sheet exposure. The off-balance sheet exposure describes the portion of a credit card's unused or free limit. The following overview shows the risk data for the credit card portfolio. Expected losses are calculated at the level of the individual credit card, so that the sizes of the average default probability and the average loss relate to the individual credit card.

T170 CONCENTRATION OF CREDIT RISK FROM CREDIT CARD RECEIVABLES

Internal credit rating	Probability of default according to external credit rating	Average probability of default	Average expected loss per concerned credit card in €	Exposure Level 1 impairment model in €m	Exposure Level 2 impairment model in €m	Exposure Level 3 impairment model in €m
On-balance sheet exposure						
Low risk	≤ 2%	0.5%	9	448	-	1
Medium risk	> 2.0% to ≤ 6.5%	3.1%	30	2	-	-
High risk	> 6.5%	58.4%	1,703	-	-	7
Total				450	-	8
Off-balance sheet exposure						
Low risk	≤ 2%	0.5%	39	1,298	1	-
Medium risk	> 2.0% to ≤ 6.5%	3.2%	298	11	-	-
High risk	> 6.5%	58.4%	90	-	-	-
Total				1,309	1	-

Securities representing debt instruments are rated as follows (Standard & Poor's):

T171 SECURITIES RATINGS - DEBT INSTRUMENTS

in €m	
AAA	151
AA+	47
AA	67
AA-	59
A+	74
A	136
A-	269
BBB+	170
BBB	86
Below BBB or unrated	112
Total	1,171

The credit risk for derivative financial instruments and securities held at fair value through or without effect on profit and loss is the risk that a counterparty defaults. The maximum credit risk from these instruments is their carrying amount. The counterparty default risk for financial market transactions is limited by defining a maximum risk, taking the credit score given by recognised rating agencies into account.

46 Contingencies and events after the reporting period

T172 CONTINGENT LIABILITIES

in €m	31 Dec 2021	31 Dec 2020
From guarantees, bills of exchange and cheque guarantees	1,102	664
From warranty contracts	224	192
From providing collateral for third-party liabilities	6	16
	1,332	872

An amount of EUR 3m (previous year: EUR 2m) within guarantees relates to collateral furnished for joint ventures. Warranties include an amount of EUR 146m (previous year: EUR 68m) relating to contingent liabilities towards creditors of joint ventures. Liabilities under collateral agreements included contingent liabilities of EUR 4m (previous year: EUR 4m) towards creditors of joint ventures. A total of EUR 1,145m (previous year: EUR 721m) relates to joint and several guarantees and warranties. These are matched by compensatory claims against the other co-debtors amounting to EUR 1,112m (previous year: EUR 692m). Insofar as annual financial statements have yet to be published, these figures are preliminary.

Otherwise, provisions for other risks could not be made because utilisation was not sufficiently probable. The potential financial effect of these provisions on the result would have been EUR 76m (previous year: EUR 61m).

LEGAL RISKS

The Lufthansa Group is exposed to a number of legal risks in the course of its normal business. Based on current knowledge, the assumption is that these will not have any major, lasting effects on the net assets, financial and earnings position, beyond those for which provisions for litigation risks have been made (➔ Note 36, p. 208ff.).

Legal disputes and other claims made against the Group are always subject to uncertainty, however. Management estimates of these risks may also change over time. The actual outcome of these legal disputes may differ from earlier management estimates, which could have significant effects on the net assets, financial and earnings position and the reputation of our Company.

Due to the existing uncertainties and to those described below, we cannot make an assessment of the amount of the respective contingent liabilities or of the group of contingent liabilities. The legal disputes that these statements refer to include:

Risk of successful claims for damages in ongoing antitrust proceedings

Various cargo airlines, including Lufthansa Cargo AG and Swiss International Air Lines AG, were involved in a cargo cartel in the period between December 1999 and February 2006. Deutsche Lufthansa AG, Lufthansa Cargo AG and Swiss International Air Lines AG are at risk of civil claims for damages in Norway, Israel, Korea and the Netherlands. The lawsuits have been brought by both direct and indirect customers and are addressed to the airlines as co-debtors.

At present, it is not possible to give a concrete assessment of the outcome of the lawsuits still pending or of the number and amount of any other claims. When evaluating the risk, it should nonetheless be borne in mind that the European Commission's decision on the cargo cartel, which the claimants in the civil lawsuits refer to, among others, is still not legally binding. Following the appeal of this 2010 decision by the European Court of Justice (ECJ) in December 2015, the European Commission sent revised penalty notices in March 2017 in which the content was the same but the reasoning had been altered. The airlines concerned, including Lufthansa Group airlines, again contested them, so the penalty notices are still not effective.

Moreover, an expert economic opinion commissioned by Lufthansa Cargo AG and Swiss International Air Lines AG has come to the conclusion that the cartel did not inflict any actual damage on customers. Even if there were damages (i.e. allegedly higher cartel prices), the court would have to examine whether the claimants passed them on to their own customers (in the case of the freight forwarders) or whether they were passed on to the claimants (in the case of the final customers). Nonetheless, significant effects on the net assets, financial and earnings position of the Group cannot be ruled out if it should lose any of these legal proceedings.

Investigations in connection with work and service contracts

The investigations by the customs authorities in previous years into possible breaches of the German Law on Labour Leasing (Arbeitnehmerüberlassungsgesetz – AÜG) concerning the procurement of services by the Lufthansa Group have been concluded amicably. No penalties were imposed on individual employees of the Lufthansa Group nor on companies in accordance with Section 30 of the Administrative Offences Act (Gesetz über Ordnungswidrigkeiten – OWiG). Administrative proceedings with the German Statutory Pension Insurance Scheme concerning the legal status of two workers have been submitted for judicial review to the Higher Social Court in Berlin.

Legal action by Ryanair against the European Commission's decision on state aid

Ryanair DAC has appealed to the European Court of Justice against the decisions by the European Commission approving stabilisation measures for companies in the Lufthansa Group. Stabilisation measures of around EUR 7.6bn in total are affected for Deutsche Lufthansa AG, Austrian Airlines and Brussels Airlines SA/NV. The lawsuit relating to the state aid for Austrian Airlines has since been dismissed in the first instance, although Ryanair has launched an appeal with the European Court of Justice. The Lufthansa Group considers the chances of success of the plaintiffs in all of the proceedings referred to above to be low. If the appeals are successful, however, the decisions by the European Commission would be declared null and void. If the respective public-sector agencies are prevented from continuing to grant the stabilisation measures, the funds concerned would have to be cancelled and repaid.

Covenants in connection with the funds granted by the Economic Stabilisation Fund

As well as information and auditing rights for the Economic Stabilisation Fund, the framework agreement with the Economic Stabilisation Fund provides for extensive obligations for the Lufthansa Group including the ban on dividend payments and the ban on cross-subsidising Lufthansa Group companies which were already in difficulty within the meaning of EU Regulation No. 651/2014 on 31 December 2019.

There are potential risks resulting from possible differences in opinion between the Lufthansa Group and the European Commission regarding the applicability of these obligations. The German government, the European Commission and the Lufthansa Group are continuing to exchange information (including relevant documents) in order to fully clarify these matters.

With regard to the ban on dividend payments, the Lufthansa Group has received preliminary statements from departments of the European Commission that are not consistent with the Group's line of argument regarding the inapplicability of the ban to certain companies. Within this context, provisions of EUR 49m were set up in the 2021 consolidated financial statements, in particular due to distributions made by equity investments, also to external shareholders. As things stand, Lufthansa must assume that, based on its preliminary statements, the European Commission will continue to see the payment of dividends as a breach of the aforementioned obligation, meaning that it will demand payment of the amount mentioned above by the Company in a formal decision, even if the European Commission is still analysing the matter. Based on the Group's line of argument and the assessment of the statements to the contrary made by the departments of the European Commission, the Lufthansa Group believes there is an overwhelming probability, in respect of almost all dividend payments, that the accusation made by the European Commission, namely that the aforementioned obligation has been breached, would not stand up to a judicial review. Corresponding further statements, also on the overall conditions for the companies concerned, vis-à-vis the responsible department of the European Commission are still pending. A possible decision reversing the payment obligation would only be made at a later date, most likely in 2024 or 2025. Since, however, it is impossible to assume the almost complete certainty of a court ruling in favour of the Company, as would be required in order to recognise a reimbursement claim in accordance with IAS 37, a probable payment obligation has been set up for the aforementioned provision.

No reliable statements can be made at the present time on the outcome of the discussions regarding the "ban on cross-subsidising" obligation. Further significant financial risks for the Company due to ultimately determined violations of agreed obligations therefore cannot be ruled out.

TAX RISKS

Tax risks exist largely because of differences in legal opinions between the German tax authorities and the Company. In tax audits for the financial years 2003 to 2018, the tax authorities came to a number of different conclusions to those on which the Company had based its tax returns, relating, in particular, to partial write-downs on shareholder loans, the treatment of various lease structures and the acquisition of a foreign

subsidiary, as well as the recognition and measurement of certain provisions and assets. The Lufthansa Group has appealed against the resulting tax assessments. Without abandoning its legal position, almost all the disputed matters were settled in the past by paying the back taxes demanded by the authorities. The Federal Finance Court adopted a different position on partial write-downs in 2019, which led to a more negative assessment of the current proceedings. Further court decisions in 2021, however, resulted in more adjustments to this changed case law. Based on the current assessment, there is now a chance that deductibility will be recognised, at least for partial amounts. No final decision on this matter has yet been taken. To the extent that success in the disputed points is considered to be more likely than not, the corresponding receivables against the tax authorities have been recognised in accordance with IFRIC 23. Appropriate provisions have been set up for other potentially disputed aspects to the extent that a claim is likely to be made. No provisions have been set up for matters that the Company believes are more likely than not to result in a decision in its favour. They could give rise to back payments of around EUR 200m in total. The assessment of the amount is subject to uncertainty.

EVENTS AFTER THE REPORTING PERIOD

The intensification of the conflict between Russia and Ukraine, which led to armed conflicts in Ukraine on 24 February 2022, has created uncertainty regarding the development of the world economy, the airline industry and the Lufthansa Group. The Group has incorporated these uncertainties into its financial outlook for the 2022 financial year. ➔ [Forecast, p. 136ff.](#)

47 Other financial obligations

As of 31 December 2021, there were order commitments of EUR 14.6bn for capital expenditure on property, plant and equipment, including repairable spare parts, and for intangible assets (previous year: EUR 13.0bn). There were also capital and shareholder loan commitments of EUR 216m towards equity investments (previous year: EUR 228m).

In addition, as of 31 December 2021 there were payment obligations of EUR 172m in total under leases for which the leased items had not yet been received. EUR 22m of the total relates to 2022, EUR 115m to the years 2023 to 2026 and EUR 35m to the period thereafter.

48 Auditors' fees

The fees paid to the auditors in the financial year and charged to expenses in accordance with Section 314 Paragraph 1 No. 9 HGB are made up as follows:

T173 AUDITORS' FEES

in €m	2021	2020
Annual audit	4.6	3.2
Other assurance services	1.6	0.2
Tax advisory services	0.1	0.1
Other services	-	1.6
Total	6.3	5.1

The auditing services mainly consist of fees for auditing the consolidated financial statements, the review of the half-yearly financial statements and the audit of the financial statements of Deutsche Lufthansa AG and its consolidated subsidiaries. Expenses for other assurance services were incurred primarily in connection with the measures to raise equity and debt capital taken in the financial reporting year. Tax advisory services mainly relate to tax advice on tax declarations, transfer pricing, international taxes and inspections by tax authorities.

The following fees paid to the global EY group, especially abroad, were additionally recognised as expenses:

T174 ADDITIONAL AUDITORS' FEES

in €m	2021	2020
Annual audit	2.4	2.3
Other assurance services	0.1	-
Tax advisory services	0.3	0.5
Other services	-	0.1
Total	2.8	2.9

The auditor at Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft responsible for the Lufthansa Group is Siegfried Keller. He held this position for the second time in financial year 2021.

COMPOSITION OF THE GROUP

49 Group of consolidated companies

The consolidated financial statements of Deutsche Lufthansa AG include all major subsidiaries, joint ventures and associated companies.

Subsidiaries are entities over which Deutsche Lufthansa AG has rights that give it the ability to control the entity's relevant activities. Relevant activities are those activities that have a significant influence on the entity's return. Deutsche Lufthansa AG therefore only has control over a company when it is exposed to variable returns from the company and its power over the company's relevant activities enables it to influence these returns. This definition of control also applies to structured entities that are identified as such in the list of significant Group companies. In general, the ability to control subsidiaries arises when Deutsche Lufthansa AG holds a direct or indirect majority of voting shares. In structured entities, the ability to control does not come from holding the majority of voting shares, but rather from contractual agreements. Entities are consolidated from the time that the ability to control begins. They cease to be consolidated when the ability to control ends.

Joint arrangements are classified either as joint ventures or as joint operations. A joint arrangement exists when the Lufthansa Group carries on joint business activities with third parties on the basis of a contractual agreement. Joint management or control only exists when decisions on activities that have a significant effect on the returns from an agreement require the unanimous approval of the parties sharing control.

Significant interests in companies that are managed jointly with one or more partners (joint ventures) are accounted for using the equity method. Joint operations are defined by the fact that the parties exercising joint control over the arrangement have rights to the assets attributed to the arrangement and are liable for its debts. Assets and liabilities, revenue and expenses from the significant joint operations are recognised in the consolidated financial statements of the Lufthansa Group in proportion to these rights and obligations.

Associated companies are companies in which Deutsche Lufthansa AG has the opportunity to exercise major influence over financial and operating policy based on an interest of between 20% and 50%. Significant associated companies are accounted for in the consolidated financial statements using the equity method.

A list of major subsidiaries, joint arrangements and associated companies can be found in [↗ T181 – T184, p. 249ff.](#), and the list of shareholdings in [↗ T185, p. 256ff.](#)

In addition to Deutsche Lufthansa AG as the parent company, the group of consolidated companies includes 48 domestic and 253 foreign companies, including structured entities (previous year: 50 domestic and 242 foreign companies).

One material joint operation was also included in the consolidated financial statements on a pro rata basis in accordance with IFRS 11. It consists of a German cargo airline operated jointly by Deutsche Post AG and Deutsche Lufthansa AG, which each hold 50% of the share capital and voting rights. The two shareholders are also customers of the company and use the capacities of its cargo aircraft. In contrast to its capital and voting rights, the company's assets and liabilities, as well as its income and expenses, are allocated based on the user relationship of the shareholders according to their contracts.

Changes in the group of consolidated companies during the 2021 financial year are shown in the following table:

T175 CHANGES IN THE GROUP OF CONSOLIDATED COMPANIES FROM 1 JAN 2021 TO 31 DEC 2021

Name, registered office	Additions	Disposals	Reasons
Network Airlines business segment			
EW Discover GmbH, Frankfurt/Main	1 Jan 2021		Commencement of business activity
NBB-8783 Lease Partnership, Tokyo, Japan	16 Mar 2021		Established
NBB-8761 Lease Partnership, Tokyo, Japan	28 Jan 2021		Established
NBB Goshawk Co., Ltd., Tokyo, Japan	18 Feb 2021		Established
NBB Dresden Lease Co., Ltd., Tokyo, Japan	28 Apr 2021		Established
LS-Aviation No.35 Co., Ltd., Tokyo, Japan	28 Apr 2021		Established
LS-Aviation No.26 Co., Ltd., Tokyo, Japan	30 Apr 2021		Established
Lufthansa Leasing Austria GmbH & Co. OG Nr. 46, Salzburg, Austria	10 Jun 2021		Established
Lufthansa Leasing Austria GmbH & Co. OG Nr. 47, Salzburg, Austria	10 Jun 2021		Established
Lufthansa Leasing Austria GmbH & Co. OG Nr. 48, Salzburg, Austria	23 Jun 2021		Established
Lufthansa Leasing Austria GmbH & Co. OG Nr. 49, Salzburg, Austria	10 Jun 2021		Established
Lufthansa Leasing Austria GmbH & Co. OG Nr. 51, Salzburg, Austria	10 Jun 2021		Established
NTL8 Ltd., Tokyo, Japan	29 Jul 2021		Established
LS-Aviation No.36 Co., Ltd., Tokyo, Japan	28 Oct 2021		Established
LS-Aviation No.37 Co., Ltd., Tokyo, Japan	28 Oct 2021		Established
LS-Aviation No.38 Co., Ltd., Tokyo, Japan	28 Oct 2021		Established
Oriental Leasing 24 Company Limited, Dublin, Ireland	28 Oct 2021		Established
Oriental Leasing 37 Company Limited, Dublin, Ireland	28 Oct 2021		Established
Austrian Airlines Lease and Finance Company Ltd., Guernsey, UK		3 Dec 2021	Liquidation
Gina Leasing Co., Ltd., Tokyo, Japan		16 Dec 2021	Liquidation
NBB Cologne Lease Co., Ltd., Tokyo, Japan		13 Dec 2021	Liquidation
Lufthansa Leasing Austria GmbH & Co. OG Nr. 36, Salzburg, Austria		1 Oct 2021	Fusion
AirNavigator Ltd., Tokyo, Japan		29 Jun 2020	Liquidation
ALIP No. 4 Co., Ltd., Tokyo, Japan		26 Oct 2021	Liquidation
ALIP No. 6 Co., Ltd., Tokyo, Japan		26 Oct 2021	Liquidation
Heike LH8 Kumiai, Okayama, Japan		28 Sep 2021	Liquidation
ALIP No. 5 Co., Ltd., Tokyo, Japan		26 Oct 2021	Liquidation
ALIP No. 7 Co., Ltd., Tokyo, Japan		26 Oct 2021	Liquidation
Logistics business segment			
Flip No. 252 Co., Ltd., Tokyo, Japan	26 Feb 2021		Established
Flip No. 251 Co., Ltd., Tokyo, Japan	26 Feb 2021		Established
Flip No. 250 Co., Ltd., Tokyo, Japan	26 Feb 2021		Established
FLIP No. 267 Co., Ltd., Tokyo, Japan	21 Apr 2021		Established
FLIP No. 268 Co., Ltd., Tokyo, Japan	21 Apr 2021		Established
FLIP No. 269 Co., Ltd., Tokyo, Japan	21 Apr 2021		Established
Flip No. 275 Co., Ltd., Tokyo, Japan	17 Nov 2021		Established
Flip No. 276 Co., Ltd., Tokyo, Japan	17 Nov 2021		Established
Flip No. 277 Co., Ltd., Tokyo, Japan	17 Nov 2021		Established
time:matters GmbH, Neu-Isenburg		1 Jan 2021	Fusion
time:matters Spare Parts Logistics GmbH, Neu-Isenburg		1 Jan 2021	Fusion
Lufthansa Leasing Austria GmbH & Co. OG Nr. 50, Salzburg, Austria		30 Nov 2021	Fusion
Catering business segment			
LSG Sky Chefs Malmö AB, Kungsör, Sweden		30 Oct 2020	Liquidation
AVIAPIT-SOCHI OOO, Sotschi, Russian Federation		9 Jun 2021	Liquidation
LSG Sky Chefs Sverige AB, Kungsör, Sweden		9 Jun 2021	Liquidation
LSG Sky Chefs Norge AS, Gardemoen, Norway		9 Jun 2021	in liquidation
Additional Businesses and Group Functions			
Aquila FFM S.à.r.l., Luxembourg, Luxembourg	4 Aug 2021		Established
Strategic Liquidity, Dusseldorf	28 Oct 2021		Established
TGV DLH, Dusseldorf		8 Sep 2020	Liquidation
Crane Strategic Investment S.C.S., Grevenmacher, Luxembourg		25 May 2021	Liquidation
Lufthansa Aviation Training Berlin GmbH, Berlin		10 Nov 2021	Fusion

USE OF EXEMPTION PROVISIONS

The following fully consolidated German Group companies made use of the exemption provisions in Section 264 Paragraph 3 and Section 264b HGB in 2021.

T176 USE OF EXEMPTION PROVISIONS

Company name	Registered office
Eurowings Aviation GmbH	Cologne
Eurowings Digital GmbH	Cologne
Eurowings GmbH	Düsseldorf
Eurowings Technik GmbH	Cologne
Germanwings GmbH	Cologne
Jettainer GmbH	Raunheim
LSG Asia GmbH	Neu-Isenburg
LSG Lufthansa Service Europa/Afrika GmbH	Neu-Isenburg
LSG Lufthansa Service Holding AG	Neu-Isenburg
LSG South America GmbH	Neu-Isenburg
LSY GmbH	Norderstedt
Lufthansa AirPlus Servicekarten GmbH	Neu-Isenburg
Lufthansa Asset Management GmbH	Frankfurt/Main
Lufthansa Asset Management Leasing GmbH	Frankfurt/Main
Lufthansa Aviation Training Germany GmbH	Frankfurt/Main
Lufthansa Aviation Training GmbH	Hallbergmoos
Lufthansa Cargo AG	Frankfurt/Main
Lufthansa CityLine GmbH	Munich Airport
Lufthansa Commercial Holding GmbH	Frankfurt/Main
Lufthansa Global Business Services GmbH	Frankfurt/Main
Lufthansa Industry Solutions AS GmbH	Norderstedt
Lufthansa Industry Solutions BS GmbH	Raunheim
Lufthansa Industry Solutions GmbH & Co. KG	Norderstedt
Lufthansa Process Management GmbH	Neu-Isenburg
Lufthansa Seeheim GmbH	Seeheim-Jugenheim
Lufthansa Systems GmbH & Co. KG	Raunheim
Lufthansa Technik AERO Alzey GmbH	Alzey
Lufthansa Technik AG	Hamburg
Lufthansa Technik Immobilien- und Verwaltungsgesellschaft mbH	Hamburg
Lufthansa Technik Logistik GmbH	Hamburg
Lufthansa Technik Logistik Services GmbH	Hamburg
Lufthansa Technik Maintenance International GmbH	Frankfurt/Main
Hamburger Gesellschaft für Flughafenanlagen mbH	Hamburg
Lufthansa Technik Objekt- und Verwaltungsgesellschaft mbH	Hamburg
Miles & More GmbH	Frankfurt/Main
Retail in Motion GmbH	Neu-Isenburg
time:matters GmbH	Neu-Isenburg

The companies are affiliated with Deutsche Lufthansa AG by means of direct or indirect profit and loss transfer agreements.

The consolidated financial statements include equity investments in 28 joint ventures and 34 associates (previous year: 29 joint ventures and 35 associates), of which nine joint ventures (previous year: ten) and 14 associates (previous year: 14) were accounted for using the equity method. The other joint ventures and associated companies were valued at amortised cost due to their minor overall significance.

50 Related party disclosures

According to the notification of voting rights dated 6 October 2021, the Federal Republic of Germany has an indirect equity interest of 14.09% in Deutsche Lufthansa AG via the Economic Stabilisation Fund (ESF). The ESF can exercise significant influence and represents a related party of Deutsche Lufthansa AG. The full repayment of the stabilisation funds drawn down in Germany in 2021 and the participation in the capital increase in October 2021 represent significant transactions with the ESF. ↗ **Note 2, p. 160ff.**

Aside from the Economic Stabilisation Fund – ESF, no individual shareholders of Deutsche Lufthansa AG exercise significant influence over the Group. For transactions involving members of the Executive Board and Supervisory Board (“directors’ dealings”), ↗ **Note 51, p. 248.**

Balances and transactions between the Company and its fully consolidated subsidiaries, which constitute related parties, have been eliminated in the course of consolidation and are not commented on in this Note. Details of transactions between the Lufthansa Group and other related parties are disclosed below.

The Lufthansa Group segments render numerous services to related parties within the scope of their ordinary business activities. Conversely, the companies in question provide services to the Lufthansa Group as part of their normal business. These extensive supply and service relationships take place on the basis of market prices.

In addition, the Lufthansa Group and certain non-consolidated subsidiaries have concluded numerous billing agreements, partly governing the joint use of services. In these cases, the administrative services provided are charged as cost allocations.

The Lufthansa Group's cash management is centralised, and, in this respect, the Lufthansa Group also performs a "banking function" vis-à-vis the non-consolidated companies of the Group. Non-consolidated Group companies included in the Group's cash management invest their available cash with the Group or borrow funds from the Group and carry out their derivative hedging transactions with the Group. All transactions take place at market conditions.

Due to geographical proximity in many cases, a large number of subletting contracts exists between the Lufthansa Group and related parties. In these cases, the Lufthansa Group usually charges the rental costs and incidental expenses incurred to the companies in question on a pro rata basis.

The following table shows the volume of significant services provided to or by related parties:

T177 VOLUME OF SIGNIFICANT SERVICES PROVIDED TO OR BY RELATED PARTIES

in €m	Volume of services rendered		Volume of services received	
	2021	2020	2021	2020
Non-consolidated subsidiaries				
Albatros Versicherungsdienste GmbH, Germany	1	0	40	40
Austrian Airlines Technik-Bratislava, s.r.o., Slovakia	1	1	14	15
Aviation Services Network GmbH, Germany	0	0	5	2
Cargo Future Communications (CFC) GmbH, Germany	0	0	10	5
Delvag Versicherungs-AG, Germany	6	5	2	4
DLH Fuel Company mbH, Germany	0	0	201	131
handling counts GmbH, Germany	1	0	7	9
LGSP Lufthansa Ground Service Portugal, Unipessoal Lda., Portugal	0	0	7	5
Lufthansa Aviation Training Austria GmbH, Austria	2	2	6	7
Lufthansa Aviation Training Operations Germany GmbH, Germany	1	2	11	13
Lufthansa Aviation Training Pilot Academy GmbH, Germany	1	1	3	6
Lufthansa Aviation Training USA Inc., USA	3	1	3	11
Lufthansa Engineering and Operational Services GmbH, Germany	3	3	20	26
Lufthansa Global Business Services Sp. z o. o., Poland	1	2	26	30
Lufthansa Global Tele Sales GmbH, Germany	6	3	48	57
Lufthansa Group Business Services New York LLC, USA	0	0	5	5
Lufthansa Group Security Operations GmbH, Germany	1	1	20	6
Lufthansa Industry Solutions SHPK, Albania	0	0	7	6
Lufthansa Industry Solutions TS GmbH, Germany	2	2	13	13
Lufthansa Innovation Hub GmbH, Germany	0	0	11	0
Lufthansa Services (Thailand) Ltd., Thailand	0	0	2	5
Lufthansa Systems FlightNav AG, Switzerland	0	0	21	22
Lufthansa Systems Hungaria Kft, Hungary	0	0	25	24
Lufthansa Systems Poland Sp. z o.o., Poland	1	1	37	33
Lufthansa Technical Training GmbH, Germany	4	5	14	15
Lufthansa Technik Component Services Asia Pacific Limited, China	0	2	2	6
Lufthansa Technik Middle East FZE, United Arab Emirates	1	3	5	10
Lufthansa Technik Miskolc Kft., Hungary	1	2	0	7
Lufthansa Technik Shenzhen Co. Ltd., China	15	15	24	26
Lufthansa Technik Turbine Shannon Limited, Ireland	1	3	9	9
LZ-Catering GmbH, Germany	2	3	9	11
time:matters (Shanghai) International Freight Forwarding Ltd., China	25	17	5	12
time:matters Americas, Inc., USA	13	1	1	0
time:matters Austria GmbH, Austria	2	25	0	0
time:matters Courier Terminals GmbH, Germany	4	1	11	9
time:matters Netherlands B.V., Netherlands	7	2	1	0
Wings Handling Palma S.L., Spain	0	0	5	0

T177 VOLUME OF SIGNIFICANT SERVICES PROVIDED TO OR BY RELATED PARTIES (continued)

in €m	Volume of services rendered		Volume of services received	
	2021	2020	2021	2020
Joint ventures				
EME Aero Sp.z.o.o, Poland	0	0	149	18
LG-LHT Aircraft Solutions GmbH, Germany	6	3	0	0
Shanghai Pudong International Airport Cargo Terminal Co. Ltd., China	0	1	5	6
Spairliners GmbH, Germany	20	30	8	36
Star Alliance Services GmbH, Germany	0	1	3	5
Terminal 2 Gesellschaft mbH & Co oHG, Germany	1	0	8	11
Terminal One Group Association, L.P., USA	0	0	9	7
XEOS Sp.z.o.o., Poland	2	10	3	16
Associated companies				
AFS Aviation Fuel Services GmbH, Germany	0	0	6	1
Aircraft Maintenance and Engineering Corporation, China	9	4	0	6
Airmail Center Frankfurt GmbH, Germany	0	0	13	9
AviationPower GmbH, Germany	0	0	1	7
HEICO Aerospace Holdings Corp., USA	0	0	5	5
Other affiliated companies				
Shanghai Pudong International Airport Public Cargo Terminal Co. Ltd. (West), Shanghai, China	0	0	10	17
SunExpress Deutschland GmbH i.L., Germany	0	7	0	65

The following tables show receivables owed by and liabilities to related parties:

T178 RECEIVABLES FROM AFFILIATED COMPANIES

in €m	2021	2020
Trade receivables from non-consolidated subsidiaries	40	39
Trade receivables from joint ventures	4	11
Trade receivables from associated companies	6	5
Trade receivables from other affiliated companies	2	5
Total trade receivables	52	60
Other receivables from non-consolidated subsidiaries	68	19
Other receivables from joint ventures	18	19
Other receivables from associated companies	11	11
Other receivables from other affiliated companies	-	5
Total other receivables	97	54
Loans to non-consolidated subsidiaries	68	99
Loans to joint ventures	4	5
Loans to associated companies	-	-
Total non-current receivables	72	104

T179 LIABILITIES TO AFFILIATED COMPANIES

in €m	2021	2020
Trade payables to non-consolidated subsidiaries	35	37
Trade payables to joint ventures	11	15
Trade payables to associated companies	2	2
Trade payables to other affiliated companies	1	1
Total trade payables	49	55
Other liabilities to non-consolidated subsidiaries	286	282
Other liabilities to joint ventures	6	26
Other liabilities to associated companies	0	0
Other liabilities to other affiliated companies	0	8
Total other liabilities	292	316

51 Supervisory Board and Executive Board

The disclosure of remuneration for key managers required by IAS 24 includes the remuneration of the active members of the Executive Board and Supervisory Board.

The members of the Executive Board and the Supervisory Board as well as the other offices that they hold are named in the combined management report in the section [Corporate governance, p. 141ff.](#)

The principles of the remuneration system and the amount of remuneration paid to Executive Board and Supervisory Board members are shown and explained in detail in the remuneration report. The remuneration report forms part of the Annual Report 2021 [p. 271ff.](#)

Total Executive Board remuneration under IFRS was EUR 10.0m (previous year: EUR 9.7m), including current service costs for pensions of EUR 3.2m (previous year: EUR 3.2m).

The active members of the Executive Board in past reporting years were remunerated as follows:

T180 EXECUTIVE BOARD REMUNERATION (IFRS)

in thousands €	2021	2020
Basic salary	5,934	5,226
Other ¹⁾	1,241	58
One-year variable remuneration	-	1,058
Total short-term remuneration	7,175	6,342
Long-term variable remuneration ²⁾	-84	-1,339
Share-based remuneration	-297	-1,976
Current service cost for retirement benefits	3,159	3,179
Total long-term remuneration	2,778	-136
Severance payments	-	3,500
Total	9,953	9,706

¹⁾ Other remuneration includes in particular benefits from the use of company cars, discounts in connection with cash outflows from share programmes ([Note 39, p. 212ff.](#)) and concessionary travel in accordance with the relevant IATA regulations. This item also includes a compensation payment to Remco Steenberg for the forfeiture of benefits with his previous employer totalling EUR 975k.

²⁾ Expenses recognised in the reporting year for long-term variable remuneration for the financial years 2019 to 2020.

Pension provisions for Executive Board members active in the 2021 financial year came to EUR 18.3m (previous year: EUR 17.9m).

No additions were made to the provisions for the one-year variable remuneration in the 2021 financial year (previous year: EUR 1,058k).

Provisions totalling EUR -84k were recognised for the future payment of long-term variable remuneration for the Executive Board members active in the financial year 2021 (previous year: reduction of EUR 1,339k). In addition, provisions of EUR 8k were recognised for the future payment of long-term, share-based remuneration for the Executive Board members active as of 31 December 2021 (previous year: EUR 519k).

Total remuneration (HGB) paid to the Executive Board of Deutsche Lufthansa AG in the financial year 2021 came to EUR 7,147k (previous year: EUR 12,078k).

Current payments and other benefits for former members of the Executive Board and their surviving dependants came to EUR 5.6m (previous year: EUR 6.9m). This includes payments by subsidiaries as well as benefits in kind and concessionary travel.

Pension obligations towards former Executive Board members and their surviving dependants amount to EUR 67.2m (previous year: EUR 67.8m). They are included in pension provisions (see [Note 35, p. 200ff.](#)).

Expenses for the fixed remuneration of Supervisory Board members came to EUR 2,170k in 2021 (previous year: EUR 1,887k). Other remuneration, mainly attendance fees, amounted to EUR 29k (previous year: EUR 23k). The Deutsche Lufthansa AG Supervisory Board members were also paid EUR 26k for work on supervisory boards of Group companies (previous year: EUR 16k).

In the reporting year, as in the previous year, no loans or advance payments were made to members of the Executive Board or to members of the Supervisory Board.

In addition to their Supervisory Board remuneration, employee representatives on the Supervisory Board received compensation for their work in the form of wages and salaries including pension entitlements amounting to EUR 1.0m in total in 2021 (previous year: EUR 1.1m).

Major subsidiaries

T181 MAJOR SUBSIDIARIES AS OF 31 DEC 2021

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
Network Airlines business segment			
Air Dolomiti S.p.A. Linee Aeree Regionali Europee, Dossobuono di Villafranca (Verona), Italy	100.00	100.00	
AirTrust AG, Zug, Switzerland	100.00	100.00	
AUA Beteiligungen Gesellschaft m.b.H., Vienna Airport, Austria	100.00	100.00	
Aura Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Auslese Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Austrian Airlines AG, Vienna Airport, Austria	100.00	100.00	
Austrian Asset Holding GP S.à r.l., Luxembourg, Luxembourg	100.00	100.00	
Austrian Asset Holding S.C.S., Luxembourg, Luxembourg	100.00	100.00	
Bayern Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Bremen Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Brussels Airlines SA/NV, Brussels, Belgium	100.00	100.00	
CASTOR Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Celine Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
CRANE LTD., Tokyo, Japan	0.00	0.00 ¹⁾	
Dia Adler Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Dia Bach Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Dia Falke Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Dia Flamingo Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Dia Hausen Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Dia Himmel Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Dia Ibis Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Dia Orff Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Dia Vogel Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Dia Wagner Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Doppeladler Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Dunkel Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Edelweiss Air AG, Zurich, Switzerland	100.00	100.00	
Eifel Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Ellen Finance 2010 S.N.C., Puteaux, France	0.00	0.00 ¹⁾	
Empyrée S.A.S., Paris-Cedex, France	0.00	0.00 ¹⁾	
Evans Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
EW Discover GmbH, Frankfurt/Main	100.00	100.00	
FG Honest Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
FG Unity Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
FG Vision Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
FK Yocasta Leasing Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
FL Falcon Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
FL Uranus Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Gabriela Finance 2012 Limited, Dublin, Ireland	0.00	0.00 ¹⁾	
Germanwings GmbH, Cologne	100.00	100.00	
Global Brand Management AG, Basel, Switzerland	100.00	100.00	
Helles Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Ingrid Finance 2010 S.N.C., Puteaux, France	0.00	0.00 ¹⁾	
Lahm Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
LHBD Holding Limited, London, UK	100.00	100.00 ²⁾	
LS-Aviation No.26 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
LS-Aviation No.35 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
LS-Aviation No.36 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
LS-Aviation No.37 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
LS-Aviation No.38 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Lufthansa CityLine GmbH, Munich Airport	100.00	100.00	

T181 MAJOR SUBSIDIARIES AS OF 31 DEC 2021 (continued)

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
Lufthansa Leasing Austria GmbH & Co. OG Nr. 10, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 12, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 14, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 15, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 16, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 17, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 18, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 20, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 21, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 22, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 24, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 25, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 26, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 27, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 28, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 29, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 30, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 32, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 33, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 34, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 35, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 37, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 38, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 39, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 42, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 43, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 44, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 45, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 46, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 47, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 48, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 49, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 51, Salzburg, Austria	100.00	100.00	
Lufthansa Malta Aircraft-Leasing Ltd., St. Julians, Malta	100.00	100.00	
Lufthansa Process Management GmbH, Neu-Isenburg	100.00	100.00	
Miles & More GmbH, Frankfurt/Main	100.00	100.00	
Muller Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
NBB Dresden Lease Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
NBB Goshawk Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
NBB Harz Lease Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
NBB Koblenz Lease Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
NBB Rhine Valley Lease LLC, Tokyo, Japan	0.00	0.00 ¹⁾	
NBB Rothenburg Lease Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
NBB Saxon Lease Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
NBB-8761 Lease Partnership, Tokyo, Japan	0.00	0.00 ¹⁾	
NBB-8783 Lease Partnership, Tokyo, Japan	0.00	0.00 ¹⁾	
NTL8 Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
ÖLB Österreichische Luftverkehrs-Beteiligungs GmbH, Vienna Airport, Austria	100.00	100.00	
ÖLH Österreichische Luftverkehrs-Holding GmbH, Vienna Airport, Austria	100.00	100.00 ³⁾	
ÖLP Österreichische Luftverkehrs-Privatstiftung, Vienna Airport, Austria	0.00	0.00 ⁴⁾	
Oriental Leasing 24 Company Limited, Dublin, Ireland	0.00	0.00 ¹⁾	

T181 MAJOR SUBSIDIARIES AS OF 31 DEC 2021 (continued)

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
Oriental Leasing 37 Company Limited, Dublin, Ireland	0.00	0.00 ¹⁾	
ORIX Aquila Corporation, Tokyo, Japan	0.00	0.00 ¹⁾	
ORIX Himalia Corporation, Tokyo, Japan	0.00	0.00 ¹⁾	
ORIX Lysithea Corporation, Tokyo, Japan	0.00	0.00 ¹⁾	
ORIX Miranda Corporation, Tokyo, Japan	0.00	0.00 ¹⁾	
ORIX Telesto Corporation, Tokyo, Japan	0.00	0.00 ¹⁾	
Raft Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Schloss Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
SL Aurora Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
SL Prairie Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
SL Victoria Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
SMFL Y Lease Nin-i-Kumiai, Tokyo, Japan	0.00	0.00 ¹⁾	
SMFL Y Lease Nin-i-Kumiai Two, Tokyo, Japan	0.00	0.00 ¹⁾	
SN Airholding SA/NV, Brussels, Belgium	100.00	100.00	
Swiss Aviation Software AG, Allschwil, Switzerland	100.00	100.00	
Swiss International Air Lines AG, Basel, Switzerland	100.00	100.00	
Sylvaner Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
TI DC Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
TI DD Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
TimBenNico Finance 2011 S.N.C., Puteaux, France	0.00	0.00 ¹⁾	
TLC Amaryllis Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
TLC Petunia Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
TLC Salvia Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Tusker Leasing Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH9 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH10 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH11 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH12 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH13 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH14 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH15 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH16 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH17 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH18 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH19 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH20 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH21 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH22 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Yamasa Aircraft LH23 Kumiai, Okayama, Japan	0.00	0.00 ¹⁾	
Eurowings business segment			
Eurowings Aviation GmbH, Cologne	100.00	100.00	
Eurowings Digital GmbH, Cologne	100.00	100.00	
Eurowings Europe GmbH, Vienna Airport, Austria	100.00	100.00	
Eurowings GmbH, Dusseldorf	100.00	100.00	
Eurowings Technik GmbH, Cologne	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 19, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 31, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 40, Salzburg, Austria	100.00	100.00	
Lufthansa Leasing Austria GmbH & Co. OG Nr. 41, Salzburg, Austria	100.00	100.00	

T181 MAJOR SUBSIDIARIES AS OF 31 DEC 2021 (continued)

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
Logistics business segment			
Flip No. 250 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Flip No. 251 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Flip No. 252 Co. Ltd, Tokyo, Japan	0.00	0.00 ¹⁾	
FLIP No. 267 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
FLIP No. 268 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
FLIP No. 269 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Flip No. 275 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Flip No. 276 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Flip No. 277 Co., Ltd., Tokyo, Japan	0.00	0.00 ¹⁾	
Jettainer Americas, Inc., East Meadow, USA	100.00	100.00	
Jettainer GmbH, Raunheim	100.00	100.00	
Lufthansa Cargo Aktiengesellschaft, Frankfurt/Main	100.00	100.00	
time:matters GmbH, Neu-Isenburg	100.00	100.00	
MRO business segment			
BizJet International Sales & Support, Inc., Tulsa, USA	100.00	100.00	
Hamburger Gesellschaft für Flughafenanlagen mbH, Hamburg	100.00	100.00	
Hawker Pacific Aerospace, Sun Valley, USA	100.00	100.00	
JASEN Grundstücksgesellschaft mbH & Co. oHG, Grünwald	100.00	50.00 ¹⁾	
Lufthansa Industry Solutions AS GmbH, Norderstedt	100.00	100.00	
Lufthansa Industry Solutions BS GmbH, Raunheim	100.00	100.00	
Lufthansa Industry Solutions GmbH & Co. KG, Norderstedt	100.00	100.00	
Lufthansa Technik AERO Alzey GmbH, Alzey	100.00	100.00	
Lufthansa Technik AG, Hamburg	100.00	100.00	
Lufthansa Technik Airmotive Ireland Holdings Ltd., Dublin, Ireland	100.00	100.00	
Lufthansa Technik Airmotive Ireland Leasing Ltd., Dublin, Ireland	100.00	100.00	
Lufthansa Technik Budapest Repülögép Nagyjavító Kft., Budapest, Hungary	100.00	100.00	
Lufthansa Technik Component Services LLC, Tulsa, USA	100.00	100.00	
Lufthansa Technik Immobilien- und Verwaltungsgesellschaft mbH, Hamburg	100.00	100.00	
Lufthansa Technik Landing Gear Services UK Ltd., Kestrel Way, Hayes, UK	100.00	100.00	
Lufthansa Technik Logistik GmbH, Hamburg	100.00	100.00	
Lufthansa Technik Logistik Services GmbH, Hamburg	100.00	100.00	
Lufthansa Technik Maintenance International GmbH, Frankfurt/Main	100.00	100.00	
Lufthansa Technik Malta Limited, Luqa, Malta	92.00	92.00	
Lufthansa Technik North America Holding Corp., Tulsa, USA	100.00	100.00	
Lufthansa Technik Objekt- und Verwaltungsgesellschaft mbH, Hamburg	100.00	100.00	
Lufthansa Technik Philippines, Inc., Manila, Philippines	51.00	51.00	
Lufthansa Technik Puerto Rico LLC, San Juan, Puerto Rico	100.00	100.00	
Lufthansa Technik Shannon Limited, Claire, Ireland	100.00	100.00	
Lufthansa Technik Sofia OOD, Sofia, Bulgaria	75.10	75.10	
Catering business segment			
Aerococina S.A. de C.V., Mérida City, Mexico	51.98	100.00	
Airo Catering Services Eesti OÜ, Tallinn, Estonia	100.00	100.00	
Airo Catering Services Latvija SIA, Marupe, Latvia	100.00	100.00	
Airo Catering Services Sweden AB, Stockholm, Sweden	100.00	100.00	
Airo Catering Services Ukraine, Boryspil, Ukraine	100.00	100.00	
AO AeroMEAL, Yemelyanovo, Russian Federation	100.00	100.00	
Arlington Services Mexico, S.A. de C.V., Mexico City, Mexico	100.00	100.00	
Arlington Services Panama, S.A., Panama City, Panama	100.00	100.00	
Bahia Catering Ltda., Salvador, Brazil	100.00	100.00	
Belém Serviços de Bordo Ltda., Belém, Brazil	70.00	70.00	
Capital Gain International (1986) Ltd., Hong Kong, China	100.00	100.00	
Cater Suprimento de Refeições, Ltda., Rio de Janeiro, Brazil	100.00	100.00	

T181 MAJOR SUBSIDIARIES AS OF 31 DEC 2021 (continued)

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
Caterair Serviços de Bordo e Hotelaria Ltda., Rio de Janeiro, Brazil	100.00	100.00	
Charm Food Service Co. Ltd., Incheon, South Korea	80.00	100.00	
CLS Catering Services Ltd., Vancouver, British Columbia, Canada	70.00	70.00	
Comercializadora de Servicios Limitada, ENEA, Pudahuel, Santiago, Chile	100.00	100.00	
Comisariato de Baja California, S.A. de C.V., Tijuana, Mexico	51.00	51.00	
Comisariatos Gotre, S.A. de C.V., Toluca, Mexico	51.00	51.00	
Constance Food Group, Inc., New York, USA	100.00	100.00	
Fortaleza Serviços de Bordo Ltda., Fortaleza, Brazil	70.00	70.00	
Inflight Catering (Proprietary) Limited, Johannesburg, South Africa	100.00	100.00	
Inflight Catering Services Limited, Dar es Salaam, Tanzania	61.99	61.99	
International Food Services Ltd., Hong Kong, China	100.00	100.00	
LSG Asia GmbH, Neu-Isenburg	100.00	100.00	
LSG Catering (Thailand) Ltd., Bangkok, Thailand	100.00	100.00	
LSG Catering China Ltd., Hong Kong, China	100.00	100.00	
LSG Catering Guam, Inc., Tamuning, USA	100.00	100.00	
LSG Catering Hong Kong Ltd., Hong Kong, China	100.00	100.00	
LSG Catering Saipan, Inc., Saipan, Micronesia	100.00	100.00	
LSG Holding Asia Ltd., Hong Kong, China	86.88	80.00	
LSG Lufthansa Service – Sky Chefs do Brasil Catering, Participações Ltda., Guarulhos, Brazil	100.00	100.00	
LSG Lufthansa Service Asia Ltd., Hong Kong, China	100.00	100.00	
LSG Lufthansa Service Cape Town (Pty) Ltd., Boksburg, South Africa	100.00	100.00	
LSG Lufthansa Service Enterprises Ltd., Hong Kong, China	100.00	100.00	
LSG Lufthansa Service Europa/Afrika GmbH, Neu-Isenburg	100.00	100.00	
LSG Lufthansa Service Guam, Inc., Tamuning, Guam, USA	100.00	100.00	
LSG Lufthansa Service Holding AG, Neu-Isenburg	100.00	100.00	
LSG Lufthansa Service Hong Kong Ltd., Hong Kong, China	41.62	50.00 ⁴⁾	
LSG Lufthansa Service Saipan, Inc., Saipan, Micronesia	100.00	100.00	
LSG Sky Chefs Argentina S.A., Ezeiza, Argentina	100.00	100.00	
LSG Sky Chefs de Venezuela C.A., Caracas, Venezuela	99.99	99.93	
LSG Sky Chefs Havacılık Hizmetleri A.S., İstanbul, Turkey	100.00	100.00	
LSG Sky Chefs (India) Private Ltd., Bangalore, India	100.00	100.00	March
LSG Sky Chefs İstanbul Catering Hizmetleri A.S., İstanbul, Turkey	100.00	100.00 ⁴⁾	
LSG Sky Chefs Kenya Limited, Nairobi, Kenya	50.20	50.20	
LSG Sky Chefs Korea Co., Ltd., Incheon, South Korea	80.00	80.00	
LSG Sky Chefs New Zealand Limited, Auckland, New Zealand	100.00	100.00	
LSG Sky Chefs (Qingdao) Co., Ltd., Laixi City, China	100.00	100.00	
LSG Sky Chefs South Africa (Proprietary) Limited, Johannesburg, South Africa	100.00	100.00	
LSG Sky Chefs Supply Chain Solutions, Inc., Wilmington, USA	100.00	100.00	
LSG Sky Chefs TAAG Angola, S.A., Luanda, Angola	40.00	40.00 ⁴⁾	
LSG Sky Chefs (Thailand) Ltd., Bangkok, Thailand	64.30	100.00	
LSG Sky Chefs UK Ltd. i.L., Sidcup, UK	100.00	100.00	
LSG Sky Chefs USA, Inc., Wilmington, USA	100.00	100.00	
LSG South America GmbH, Neu-Isenburg	100.00	100.00	
LSG/Sky Chefs Europe Holdings Ltd., Hounslow, UK	100.00	100.00	
Myanmar LSG Lufthansa Service Ltd., Yangon, Myanmar	100.00	100.00	
Natal Catering Ltda., Aeroporto São Gonçalo do Amarante, Brazil	70.00	70.00	
Oakfield Farms Solutions, L.L.C., Wilmington, USA	100.00	100.00	
OOO LSG Sky Chefs Rus, Moscow, Russian Federation	100.00	100.00	
Retail In Motion Asia Limited, Hong Kong, China	100.00	100.00	
Retail in Motion GmbH, Neu-Isenburg	100.00	100.00	
Retail in Motion Latin America SpA, ENEA, Pudahuel, Santiago, Chile	100.00	100.00	
Retail in Motion Limited, Dublin, Ireland	100.00	100.00	
Retail In Motion México S. de R.L. de C.V., Mexico City, Mexico	51.00	100.00	

T181 MAJOR SUBSIDIARIES AS OF 31 DEC 2021 (continued)

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
Retail inmotion Middle East L.L.C., Abu Dhabi, United Arab Emirates	100.00	100.00	
Retail in Motion North America, Inc., Wilmington, USA	100.00	100.00	
SCIS Air Security Corporation, Wilmington, USA	100.00	100.00	
ServCater Internacional Ltda., Guarulhos, Brazil	90.00	90.00	
Servicios Complementarios de Cabina, S.A. de C.V., Mexico City, Mexico	51.88	99.80	
Siam Flight Services Ltd., Bangkok, Thailand	49.00	66.67	
Silver Wings Bulgaria OOD, Sofia, Bulgaria	28.75	28.75 ⁵⁾	
Sky Chefs Chile SpA, Santiago, Chile	100.00	100.00	
Sky Chefs De Mexico, S.A. de C.V., Mexico City, Mexico	51.00	51.00	
Sky Chefs de Panamá S.A., Panama City, Panama	100.00	100.00	
Sky Chefs Things Remembered Services FZE, Ikeja, Nigeria	51.00	51.00	
Sky Chefs Things Remembered Services Limited, Lagos, Nigeria	51.00	51.00	
Sky Chefs, Inc., Wilmington, USA	100.00	100.00	
Western Aire Chef, Inc., Wilmington, USA	100.00	100.00	
Additional Businesses and Group Functions			
AirPlus International AG, Kloten, Switzerland	100.00	100.00	
AirPlus International, Inc., Alexandria, USA	100.00	100.00	
AirPlus International Limited, London, UK	100.00	100.00	
AirPlus International S.r.l., Bologna, Italy	100.00	100.00	
AirPlus Payment Management Co. Ltd., Shanghai, China	100.00	100.00	
Aquila FFM S.à.r.l., Luxembourg, Luxembourg	0.00	0.00 ¹⁾	
LCH Grundstücksgesellschaft Berlin mbH, Frankfurt/Main	100.00	100.00	
LHAMI LEASING LIMITED, Dublin, Ireland	100.00	100.00	
LHAMIH LIMITED, Dublin, Ireland	100.00	100.00	
LSG Sky Chefs Bremen GmbH, Neu-Isenburg	100.00	100.00	
LSG Sky Chefs Hamburg GmbH, Neu-Isenburg	100.00	100.00	
LSG Sky Chefs Leipzig GmbH, Neu-Isenburg	100.00	100.00	
LSG Sky Chefs RPC West GmbH, Neu-Isenburg	100.00	100.00	
LSY GmbH, Norderstedt	100.00	100.00	
Lufthansa AirPlus Servicekarten GmbH, Neu-Isenburg	100.00	100.00	
Lufthansa Asset Management GmbH, Frankfurt/Main	100.00	100.00	
Lufthansa Asset Management Leasing GmbH, Frankfurt/Main	100.00	100.00	
Lufthansa Aviation Training Germany GmbH, Frankfurt/Main	100.00	100.00	
Lufthansa Aviation Training GmbH, Munich	100.00	100.00	
Lufthansa Aviation Training Switzerland AG, Opfikon, Switzerland	100.00	100.00	
Lufthansa Commercial Holding Gesellschaft mit beschränkter Haftung, Frankfurt/Main	100.00	100.00	
Lufthansa Global Business Services GmbH, Frankfurt/Main	100.00	100.00	
Lufthansa Leasing Austria 1. Beteiligungs GmbH, Salzburg, Austria	100.00	100.00	
Lufthansa Malta Blues LP, St. Julians, Malta	99.99	99.99	
Lufthansa Malta Corporate Finance Limited, St. Julians, Malta	100.00	100.00	
Lufthansa Malta Finance Holding Limited, St. Julians, Malta	100.00	100.00	
Lufthansa Malta Treasury Services Limited, St. Julians, Malta	100.00	100.00	
Lufthansa Seeheim GmbH, Seeheim-Jugenheim	100.00	100.00	
Lufthansa Systems Americas, Inc., Miami Lakes, USA	100.00	100.00	
Lufthansa Systems GmbH & Co. KG, Raunheim	100.00	100.00	
MARDU Grundstücks-Verwaltungsgesellschaft mbH & Co. oHG, Grünwald	100.00	50.00 ¹⁾	
MUSA Grundstücks-Verwaltungsgesellschaft mbH & Co. oHG, Grünwald	100.00	50.00 ¹⁾	
Quinto Grundstücksgesellschaft mbH & Co. oHG, Grünwald	99.73	49.75 ¹⁾	
Strategic Liquidity, Dusseldorf	100.00	100.00	

¹⁾ Fully consolidated structured entity in accordance with IFRS 10.

²⁾ The Companies House registration number is: 06939137.

³⁾ 50.20% of the equity stakes and voting rights are attributed via ÖLP.

⁴⁾ Management responsibility for the company lies with the Group.

⁵⁾ 28.75% equity shares and voting rights are attributed via a call option.

⁶⁾ 33.34% of the equity stakes and 50.01% voting rights are attributed via a call option.

T182 MAJOR JOINT VENTURES AS OF 31 DEC 2021¹⁾

Name, registered office	Equity stake in %	Voting share in %	Different reporting period
Network Airlines business segment			
Terminal 2 Gesellschaft mbH & Co oHG, Munich Airport ³⁾	40.00	40.00	
Eurowings business segment			
Günes Ekspres Havacilik Anonim Sirketi (Sun Express), Antalya, Turkey	50.00	50.00	
Logistics business segment			
Shanghai Pudong International Airport Cargo Terminal Co. Ltd., Shanghai, China ³⁾	29.00	22.22	
MRO business segment			
EME Aero Sp. z.o.o., Jasionka, Poland	50.00	50.00	
LG-LHT Aircraft Solutions GmbH, Hamburg	51.00	50.00	
LG-LHT Passenger Solutions GmbH, Hamburg	51.00	50.00	
N3 Engine Overhaul Services GmbH & Co. KG, Arnstadt	50.00	50.00	
Spairliners GmbH, Hamburg	50.00	50.00	
XEOS Sp. z.o.o., Środa Śląska, Poland	51.00	50.00	

T183 JOINT OPERATIONS AS OF 31 DEC 2021²⁾

Aerologic GmbH, Leipzig	50.00	50.00	
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T184 MAJOR ASSOCIATED COMPANIES AS OF 31 DEC 2021¹⁾

MRO business segment			
Aircraft Maintenance and Engineering Corporation, Beijing, China	25.00	28.57	
HEICO Aerospace Holdings Corp., Florida, USA	20.00	20.00	October
Catering business segment			
AO Aeromar, Moscow region, Russia	49.00	49.00	
Cosmo Enterprise Co., Ltd., Narita, Japan	20.00	20.00	March
Gansu HNA LSG Sky Chefs Co. Ltd., Lanzhou, China	49.00	40.00	
Hong Kong Beijing Air Catering Ltd., Hong Kong, China	45.00	40.00	
Hong Kong Shanghai Air Catering Ltd., Hong Kong, China	45.00	40.00	
Inflite Holdings (Cayman) Ltd., George Town, Cayman Islands	49.00	49.00	September
Inflite Holdings (St. Lucia) Ltd., Castries, St. Lucia	49.00	49.00	September
Nanjing Lukou International Airport LSG Catering Co. Ltd., Nanjing City, China	40.00	40.00	
Tolmachevo Catering OOO, Novosibirsk, Russian Federation	26.00	26.00	
Wenzhou Longwan International Airport LSG Sky Chefs Co. Ltd., Wenzhou City, China	40.00	40.00	
Xian Eastern Air Catering Co. Ltd., Xian, China	30.00	28.57	
Yunnan Eastern Air Catering Co. Ltd., Kunming, China	24.90	28.57	

¹⁾ Accounted for using the equity method.

²⁾ Included on a pro rata basis in accordance with IFRS 11.

³⁾ Reported as a joint venture due to joint management.

Miscellaneous equity investments

T185 MISCELLANEOUS EQUITY INVESTMENTS AS OF 31 DEC 2021

Name, registered office	Equity stake in %	Voting share in %
Subsidiaries, not consolidated		
26. INCORPORATION, Inc., East Meadow, USA	100.00	100.00
Air Dolomiti Deutschland GmbH, Munich	100.00	100.00
Airline Marketing Services India Private Limited, Mumbai, India	100.00	100.00
AirPlus International Soluções de Pagamento Limitada, São Paulo, Brazil	100.00	100.00
Airport Services Dresden GmbH, Dresden	100.00	100.00
Airport Services Leipzig GmbH, Schkeudiz	100.00	100.00
Albatros Financial Solutions GmbH, Cologne	100.00	100.00
Albatros Versicherungsdienste GmbH, Cologne	100.00	100.00
Austrian Airlines Technik-Bratislava, s.r.o., Bratislava, Slovakia	100.00	100.00
Austrian Airlines Tele Sales Service GmbH, Innsbruck, Austria	100.00	100.00
AVIATION Data Hub GmbH, Hamburg	100.00	100.00
Aviation Quality Services GmbH, Frankfurt/Main	100.00	100.00
Aviation Services Network GmbH, Friedrichshafen	100.00	100.00
Avionic Design GmbH, Hamburg	100.00	100.00
Cargo Future Communications (CFC) GmbH, Büchenbeuren	100.00	100.00
Caterair Portugal - Assistencia A Bordo, Lda., Sacavém, Portugal	100.00	100.00
CB Customs Broker GmbH, Kelsterbach	100.00	100.00
Delvag Versicherungs-AG, Cologne	100.00	100.00
Deutsche Lufthansa Unterstützungswerk Gesellschaft mit beschränkter Haftung, Frankfurt/Main	100.00	100.00
DLH Fuel Company mbH, Hamburg	100.00	100.00
DLH Malta Pension Ltd., St. Julians, Malta	100.00	100.00
DLH Malta Transition Limited, St. Julians, Malta	100.00	100.00
FLYdocs Inc. (Delaware Corp.), City of Wilmington, New Castle, USA	100.00	100.00
FLYdocs India Private Limited, Vadoora, India	100.00	100.00
FLYdocs Systems Limited, Tamworth, Staffordshire, UK	100.00	100.00
FLYdocs Systems (MIDCO) Limited, Tamworth, Staffordshire, UK	100.00	100.00
Flydocs Systems (TOPCO) Limited, Staffordshire, UK	100.00	100.00
Gen2 Systems Limited, Tamworth, UK	100.00	100.00
Global Load Control (PTY) LTD, Cape Town, South Africa	100.00	100.00
Global Tele Sales (PTY) Ltd., Cape Town, South Africa	100.00	100.00
Global Tele Sales Brno s.r.o., Brno, Czech Republic	100.00	100.00
Global Telesales of Canada, Inc., Peterborough, Canada	100.00	100.00
handling counts GmbH, Frankfurt/Main	100.00	100.00
help alliance gGmbH, Frankfurt/Main	100.00	100.00
heyworld GmbH, Frankfurt/Main	100.00	100.00
Hinduja Lufthansa Cargo Holding B.V., Amsterdam, Netherlands	100.00	100.00
Idair GmbH, Hamburg	100.00	100.00
In-Flight Management Solutions Latin America, S.A. de C.V., Mexico City, Mexico	100.00	100.00
IND Beteiligungs GmbH, Raunheim	100.00	100.00
LCAG Malta Pension Ltd., St. Julians, Malta	100.00	100.00
LCAG Malta Transition Limited, St. Julians, Malta	100.00	100.00
LGSP Lufthansa Ground Service Portugal, Unipessoal Lda., Maia/Oporto, Portugal	100.00	100.00
LHT Malta Pension Ltd., St. Julians, Malta	100.00	100.00
LSG Malta Pension Ltd., St. Julians, Malta	100.00	100.00
LSG Sky Chefs Norge AS i.L., Gardermoen, Norway	100.00	100.00
LSI Malta Pension Ltd., St. Julians, Malta	100.00	100.00
Lufthansa Aviation Training Austria GmbH, Vienna Airport, Austria	100.00	100.00
Lufthansa Aviation Training Crew Academy GmbH, Frankfurt/Main	100.00	100.00

T185 MISCELLANEOUS EQUITY INVESTMENTS AS OF 31 DEC 2021 (continued)

Name, registered office	Equity stake	Voting share
	in %	in %
Lufthansa Aviation Training Operations Germany GmbH, Berlin	100.00	100.00
Lufthansa Aviation Training Pilot Academy GmbH, Frankfurt/Main	100.00	100.00
Lufthansa Aviation Training USA Inc., Goodyear, USA	100.00	100.00
Lufthansa Blues Beteiligungs GmbH, Frankfurt/Main	100.00	100.00
Lufthansa Cagri Merkezi ve Müsteri Hizmetleri A.S., Istanbul, Turkey	100.00	100.00
Lufthansa Cargo Servicios Logísticos de Mexico, S.A. de C.V., Mexico City, Mexico	100.00	100.00
Lufthansa City Center International GmbH, Frankfurt/Main	50.00	50.00
Lufthansa Consulting Brasil Ltda., Rio de Janeiro, Brazil	99.90	99.90
Lufthansa Consulting GmbH, Frankfurt/Main	100.00	100.00
Lufthansa Engineering and Operational Services GmbH, Frankfurt/Main	100.00	100.00
Lufthansa Global Business Services Ltd., Bangkok, Thailand	100.00	100.00
Lufthansa Global Business Services S.A. de C.V., Mexico City, Mexico	100.00	100.00
Lufthansa Global Business Services Sp. z o.o., Krakow, Poland	100.00	100.00
Lufthansa Global Tele Sales GmbH, Berlin	100.00	100.00
Lufthansa Group Business Services Hong Kong Limited, Hong Kong, China	100.00	100.00
Lufthansa Group Business Services Johannesburg (pty) Ltd., Gauteng, South Africa	100.00	100.00
Lufthansa Group Business Services New York LLC, Wilmington, Delaware, USA	100.00	100.00
Lufthansa Group Business Services Wien GmbH, Vienna, Austria	100.00	100.00
Lufthansa Group Security Operations GmbH, Frankfurt/Main	100.00	100.00
Lufthansa Industry Solutions SHPK, Tirana, Albania	100.00	100.00
Lufthansa Industry Solutions TS GmbH, Oldenburg	100.00	100.00
Lufthansa Innovation Hub GmbH, Berlin	100.00	100.00
Lufthansa International Finance (Netherlands) N. V., Amsterdam, Netherlands	100.00	100.00
Lufthansa Job Services Norderstedt GmbH, Norderstedt	100.00	100.00
Lufthansa Malta Blues General Partner GmbH & Co. KG, Frankfurt/Main	100.00	100.00
Lufthansa Malta Pension Holding Ltd., St. Julians, Malta	100.00	100.00
Lufthansa Pension Beteiligungs GmbH, Frankfurt/Main	100.00	100.00
Lufthansa Pension GmbH & Co. KG, Frankfurt am Main	100.00	100.00
Lufthansa Services Philippines, Inc., Manila, Philippines	100.00	100.00
Lufthansa Services (Thailand) Ltd., Bangkok, Thailand	100.00	100.00
Lufthansa Super Star Gesellschaft mit beschränkter Haftung i.L., Berlin	100.00	100.00
Lufthansa Systems 25. GmbH, Raunheim	100.00	100.00
Lufthansa Systems Asia Pacific Pte. Ltd., Singapore, Singapore	100.00	100.00
Lufthansa Systems FlightNav AG, Opfikon, Switzerland	100.00	100.00
Lufthansa Systems Hungaria Kft, Budapest, Hungary	100.00	100.00
Lufthansa Systems Poland Sp. z o.o., Danzig, Poland	100.00	100.00
Lufthansa Systems Verwaltungs GmbH, Raunheim	100.00	100.00
Lufthansa Technical Training GmbH, Hamburg	100.00	100.00
Lufthansa Technik Brussels N.V., Steenokkerzeel-Melsbroek, Belgium	100.00	100.00
Lufthansa Technik Component Services Asia Pacific Limited, Hong Kong, China	100.00	100.00
Lufthansa Technik Intercoat GmbH, Kaltenkirchen	51.00	51.00
Lufthansa Technik Middle East FZE, Dubai, United Arab Emirates	100.00	100.00
Lufthansa Technik Milan s.r.l., Somma Lombardo (VA), Italy	100.00	100.00
Lufthansa Technik Miskolc Kft., Budapest, Hungary	100.00	100.00
Lufthansa Technik Services India Private Limited, New Delhi, India	100.00	100.00
Lufthansa Technik Shenzhen Co. Ltd., Shenzhen, China	80.00	67.00
Lufthansa Technik Turbine Shannon Limited, Shannon, Ireland	100.00	100.00
Lufthansa Technik Vostok Services OOO, Moscow, Russia	100.00	100.00
Lufthansa UK Pension Trustee Limited, West Drayton, Middlesex, UK	100.00	100.00
LZ-Catering GmbH, Hamburg	100.00	100.00
Malta Pension Investments, St. Julians, Malta	0.00	100.00

T185 MISCELLANEOUS EQUITY INVESTMENTS AS OF 31 DEC 2021 (continued)

Name, registered office	Equity stake in %	Voting share in %
Marriott Export Services, C.A., Caracas, Venezuela	99.99	100.00
Marriott International Trade Services, C.A., Caracas, Venezuela	99.99	100.00
Oscar Bravo GmbH, Munich	100.00	100.00
Quinto Grundstücks-Verwaltungsgesellschaft mbH, Grünwald	94.80	94.80
Reservation Data Maintenance India Private Ltd., New Delhi, India	51.00	51.00
Retail inMotion Asia Pacific Limited, San Po Kong, Kowloon, China	100.00	100.00
Shared Services International India Private Limited, New Delhi, India	100.00	100.00
Shared Services International, Singapore PTE. LTD, Singapore, Singapore	100.00	100.00
Star Risk Services Inc., Southlake, USA	100.00	100.00
Swiss WorldCargo (India) Private Limited, Mumbai, India	100.00	100.00
TATS - Travel Agency Technologies & Services GmbH, Frankfurt/Main	100.00	100.00
time:matters (Shanghai) International Freight Forwarding Ltd., Shanghai, China	100.00	100.00
time:matters Americas, Inc., Miami, USA	100.00	100.00
time:matters Asia Pacific Pte. Ltd., Singapore, Singapore	100.00	100.00
time:matters Austria GmbH, Vienna Airport, Austria	100.00	100.00
time:matters Belgium BVBA, Mechelen, Belgium	100.00	100.00
time:matters Courier Terminals GmbH, Frankfurt/Main	100.00	100.00
time:matters Netherlands B.V., Schiphol-Rijk, Netherlands	100.00	100.00
VPF Malta Pension Ltd., St. Julians, Malta	100.00	100.00
Wings Handling Palma S.L., Madrid, Spain	100.00	100.00
Yilu Travel Services GmbH, Berlin	100.00	100.00
ZeroG GmbH, Raunheim	100.00	100.00
Other equity investments		
AFS Aviation Fuel Services GmbH, Hamburg	33.33	33.33
Airfoil Services Sdn. Bhd., Kuala Lumpur, Malaysia	50.00	50.00
Airline Tariff Publishing Co., Dulles, USA	9.77	9.77
Airmail Center Frankfurt GmbH, Frankfurt/Main	40.00	40.00
ATLECON Fuel LLC, Atlanta, USA	14.29	14.29
AUS Fuel Company, LLC, Austin, USA	6.67	6.67
AviationPower GmbH, Hamburg	40.83	40.83
Beijing Lufthansa Center Co. Ltd., Beijing, China	11.23	12.50
Berlin Fuelling Services GbR, Berlin	12.50	12.50
Cargo One GmbH, Berlin	14.35	14.35
Charlotte Fuel Facilities LLC, Wilmington, USA	10.00	10.00
Chelyabinsk Catering Service OOO, Chelyabinsk, Russia	26.00	26.00
Düsseldorf Fuelling Services (DFS) GbR, Dusseldorf	33.33	33.33
EFM - Gesellschaft für Enteisen und Flugzeugschleppen am Flughafen München mbH, Freising	51.00	51.00
Egyptian Aviation Services Company (S.A.E.), Cairo, Egypt	5.83	5.83
Entebbe Handling Services Limited (ENHAS), Entebbe, Uganda	5.00	5.00
Finairport Service S.r.l. i.L., Rome, Italy	100.00	100.00
Fleet Logistics Inc. i.L., Wilmington, USA	18.33	18.33
Flight Training Alliance GmbH, Frankfurt/Main	50.00	50.00
Flughafen München Baugesellschaft mbH, Munich Airport	40.00	40.00
FraAlliance GbR, Frankfurt	50.00	50.00
FraCareServices GmbH, Frankfurt/Main	49.00	49.00
FSH Flughafen Schwechat-Hydranten-Gesellschaft GmbH & Co OG, Vienna Airport, Austria	14.29	14.29
GOAL German Operating Aircraft Leasing GmbH & Co. KG, Grünwald	40.00	39.99
GOAL German Operating Aircraft Leasing GmbH, Munich	40.00	40.00
Guangzhou Baiyun International Airport LSG Sky Chefs Co. Ltd., Guangzhou, China	30.00	28.57
Hamburg Fuelling Services GbR, Hamburg	25.00	25.00
Hamburg Tank Service GbR, Hamburg	33.30	33.30
Hangzhou Xiaoshan Airport LSG Air Catering Co. Ltd., Hangzhou, China	25.00	28.57

T185 MISCELLANEOUS EQUITY INVESTMENTS AS OF 31 DEC 2021 (continued)

Name, registered office	Equity stake in %	Voting share in %
Hydranten-Betriebs OHG, Frankfurt/Main	49.00	20.00
INAIRVATION GmbH, Edlitz-Thomasberg, Austria	50.00	50.00
Kulinary Holding AG, Opfikon, Switzerland	40.00	40.00
LSG Sky Chefs Catering Egypt S.A.E., Cairo, Egypt	15.00	15.00
Luftfahrzeugverwaltungsgesellschaft GOAL mbH i.L., Grünwald	40.00	40.00
Lufthansa HNA Technical Training Co. Ltd., Meilan Airport, Hainan, China	50.00	1.00
Lufthansa Leasing GmbH, Grünwald	49.00	49.00
Lumics GmbH & Co. KG, Hamburg	50.00	50.00
Lumics Verwaltungs GmbH, Hamburg	50.00	50.00
Montreal International Fuel Facilities Corporation, Dorval, Canada	11.20	11.20
N3 Engine Overhaul Services Verwaltungsgesellschaft mbH, Hamburg	50.00	50.00
Orlando Fuel Facilities LLC, Orlando, USA	5.88	5.88
PHL Fuel Facilities LLC, Philadelphia, USA	10.00	10.00
Rydes GmbH, Berlin	8.00	8.00
SAN Fuel Company, LLC, San Diego, USA	5.56	5.56
Sanya LSG Air Catering Co. Ltd., Sanya, China	45.00	40.00
SCA Schedule Coordination Austria GmbH, Vienna Airport, Austria	25.00	25.00
Shenzhen Airport International Cargo Terminal Company Limited, Shenzhen, China	50.00	50.00
Sichuan Airlines LSG Air Catering Co. Ltd., Chengdu, China	40.00	40.00
Tanklager-Gesellschaft Tegel GbR, Tegel	12.50	12.50
Terminal One Group Association, L.P., New York, USA	24.75	0.00
Terminal One Management Inc., New York, USA	25.00	25.00
THBG BBI GmbH, Schönefeld	46.45	46.45
Turbo Fuel Services Sachsen (TFSS) GbR, Hamburg	20.00	20.00
UBAG Unterflurbetankungsanlage Flughafen Zürich AG, Rümlang, Switzerland	12.00	12.00
Universal Air Travel Plan, Inc., Washington, DC, USA	5.26	5.26
Vancouver Airport Fuel Facilities Corporation, Dorval, Canada	5.72	5.72
Xinjiang HNA LSG Sky Chefs Co. Ltd., Urumqi, China	49.00	40.00
Zentrum für Angewandte Luftfahrtforschung GmbH, Hamburg	20.00	20.00

Declaration by the legal representatives

We declare that, to the best of our knowledge and according to the applicable accounting standards, the consolidated financial statements give a true and fair view of the net assets, the financial and earnings positions of the Group, and that the Group management report, which has been combined with the management report for Deutsche Lufthansa AG, includes a fair view of the course of business, including the business result, and the situation of the Group, and suitably presents the principal opportunities and risks to its future development.

Frankfurt, 25 February 2022
Executive Board



Carsten Spohr
Chief Executive Officer



Christina Foerster
Chief Customer Officer



Harry Hohmeister
Chief Commercial Officer



Detlef Kayser
Chief Operations Officer



Michael Niggemann
Chief HR & Legal Officer



Remco Steenbergen
Chief Financial Officer

The following Auditor's Report also includes a "Report on the audit of the electronic reproductions of the financial statements and the management report prepared for the purpose of disclosure in accordance with Section 317 Paragraph 3a HGB" ("ESEF Report"). The subject matter on which the ESEF Report is based (ESEF documents to be audited) is not included. The audited ESEF documents can be viewed in or retrieved from the German Federal Gazette (in German language only).

Independent auditor's report

To Deutsche Lufthansa Aktiengesellschaft

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

Opinions

We have audited the consolidated financial statements of Deutsche Lufthansa Aktiengesellschaft, Cologne, and its subsidiaries (the "Group" or "Lufthansa Group"), which comprise the consolidated income statement and consolidated statement of comprehensive income for the fiscal year from 1 January to 31 December 2021, and the consolidated statement of financial position as at 31 December 2021, consolidated statement of changes in shareholders' equity and consolidated cash flow statement for the fiscal year from 1 January to 31 December 2021, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the Group management report of Deutsche Lufthansa Aktiengesellschaft, which is combined with the management report of Deutsche Lufthansa Aktiengesellschaft, for the fiscal year from 1 January to 31 December 2021. In accordance with the German legal requirements, we have not audited the content of the Group corporate governance declaration which is published on the website stated in the "Corporate Governance" section of the combined management report and the Group non-financial declaration included in the "Combined non-financial declaration" section. In addition, we have not audited the content of the other information extending beyond the prior year in the tables with multi-year comparisons of the combined management report (information pertaining to fiscal years 2017, 2018 and 2019). Other information in the combined management report relates to any information whose disclosure in the management report is not required pursuant to Secs. 315, 315a or Secs. 315b to 315d HGB ["Handelsgesetzbuch": German Commercial Code] or GAS 20.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB and, in

compliance with these requirements, give a true and fair view of the net assets and financial position of the Group as at 31 December 2021 and of its earnings position for the fiscal year from 1 January to 31 December 2021, and

- the accompanying Group management report as a whole provides an appropriate view of the Group's position. In all material respects, this Group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on the Group management report does not cover the content of the aforementioned Group corporate governance declaration, the content of the aforementioned Group non-financial declaration or the aforementioned multi-year comparisons included in the Group management report.

Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the Group management report.

Basis for the opinions

We conducted our audit of the consolidated financial statements and of the Group management report in accordance with Sec. 317 HGB and the EU Audit Regulation (No 537/2014, referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). We performed the audit of the consolidated financial statements in supplementary compliance with the International Standards on Auditing (ISAs). Our responsibilities under those requirements, principles and standards are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the Group management report" section of our auditor's report. We are independent of the Group companies in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Art. 10 (2) f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Art. 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the Group management report.

Key audit matters in the audit of the consolidated financial statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the fiscal year from 1 January to 31 December 2021. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon; we do not provide a separate opinion on these matters.

Below, we describe what we consider to be the key audit matters:

1. Implications of the COVID-19 pandemic for the going concern basis

Reasons why the matter was determined to be a key audit matter

The COVID-19 pandemic has had a particularly strong impact on the airline industry. Since the outbreak of the pandemic in spring 2020 and also as a result of new variants such as Omicron, national and international travel restrictions have led to a significant reduction in air travel. The restrictions once again had a major impact on the operations and liquidity of the Lufthansa Group in fiscal year 2021.

While the solvency of the Lufthansa Group was safeguarded by way of stabilization measures and loans of up to EUR 9b agreed with the Economic Stabilization Fund in the Federal Republic of Germany (WSF) as well as with the governments of Switzerland, Austria and Belgium, in the reporting year the Lufthansa Group refinanced itself on the capital markets through aircraft financing of EUR 1.4b, bonds of EUR 4.1b and by issuing new shares with net issue proceeds of EUR 2.1b. In this connection, all stabilization funds received from the WSF were repaid and undrawn funds cancelled. Lufthansa also made use of support measures provided by other governments around the world, such as the US, again in 2021.

The Lufthansa Group has significantly reduced available flight capacity compared with fiscal year 2019 and also initiated measures to reduce costs and capital expenditure back in 2020. The Executive Board has prepared the Group operational planning for the fiscal years 2022 to 2025, together with a liquidity forecast for the same period, and thereby mapped out the possible effects from national and international travel restrictions in connection with the COVID-19 pandemic on the available flight capacity, taking into account the countermeasures. The result of the planning depends to a large extent on the assumptions that the executive directors have made regarding future business

developments and the cash inflows and outflows derived from them. The planning for 2022 and subsequent years is based on the assumption that vaccinations will have been given, immunization and COVID tests will also be effective for variants, hygiene strategies will also be effective and accompanied by reduced travel restrictions compared with 2020 and 2021 as well as a return to normal booking behavior. Significant cost savings were also assumed based on initiated or completed restructuring and efficiency measures.

The review of the implications of the COVID-19 pandemic for the going concern basis of accounting was a key audit matter due to the wide range of political, medical and global economic effects and due to the measures taken by the executive directors in this connection to mitigate risk and their consideration in the business planning. The executive directors also considered the current geopolitical developments in Ukraine.

Auditor's response

We discussed what influence the COVID-19 pandemic, with its national and international travel restrictions, could have on Deutsche Lufthansa Aktiengesellschaft and its subsidiaries with the executive directors, both direct and indirect and short and medium term. We discussed what different assumptions and scenarios were used by the executive directors in their assessment.

With the involvement of our internal specialists from Strategy and Transactions, we analyzed the Group operational planning prepared by the executive directors and approved by the Supervisory Board, including the liquidity forecast, and discussed this with the responsible management level. We assessed the plausibility (transparency, consistency, lack of contradiction) of management's disclosures on the key planning assumptions, strategic objectives, expected developments and operational measures and their inclusion/reflection in the cash flows.

We also checked the clerical accuracy, completeness and consistency of the planning model, the conceptual design and in particular the derivation of the cash flows and their individual components. In this connection, we also reviewed the status of the measures adopted under the restructuring and efficiency programs to reduce the outflow of liquidity on the basis of resolutions, internal and external publications and observed facts for the implementation of capacity adjustments and their impact on the fleet as well as on personnel. We also checked the capital expenditures reflected in the financial planning on the basis of purchase commitments and framework agreements.

In order to assess the cash inflows included in the liquidity planning we, among other things, reviewed the agreements on state stabilization measures, aircraft and other financing schemes, as well as the relevant prospectuses, checked incoming payments and assessed the terms and conditions. The defined overarching objectives of the financing strategy and the suitability of the measures underlying them were also assessed. In addition, we examined the key planning assumptions taking into account historical developments and our understanding of the business and performed plausibility tests on the basis of various external information. Our assessment was based on analyst estimates, both for the Lufthansa Group as well as in relation to comparable companies, along with other external forecasts on the development of the airline industry (market studies) and macroeconomic forecasts.

In addition, the assessments of the executive directors concerning the development of current travel restrictions and demand as well as the current booking behavior, and the consideration of these factors in the Group planning, were discussed with the executive directors, management of the Company and Supervisory Board representatives and examined on the basis of the Group's internal assessments.

We also discussed with management other potential measures to secure liquidity which are not reflected in the liquidity planning due to a lack of necessity with the management and assessed their risk coverage potential.

We also discussed with the executive directors potential effects of the current geopolitical developments in Ukraine and the worldwide sanctions imposed in response, including any countermeasures, on the development of the global economy, the prices of important energy carriers such as oil and gas and the availability of Russian airspace for overflights and thus on the business performance and liquidity of the Lufthansa Group expected over the short to medium term.

In addition, we checked whether the consolidated financial statements and Group management report contain disclosures on the implications of the COVID-19 pandemic for the going concern basis and in particular the measures taken by the executive directors to mitigate risk.

Our audit procedures did not lead to any reservations relating to the going concern basis / the application of the going concern basis of accounting.

Reference to related disclosures

With regard to the assessment of the executive directors on the Company's ability to continue as a going concern and the related recognition and measurement policies applied, we refer to the disclosure in the notes to the consolidated financial statements under "2 Going concern," and with regard to the related information on judgment by the Executive

Board and sources of estimation uncertainty, we refer to the disclosure in the notes to the consolidated financial statements under "3 New international accounting standards in accordance with IFRS and interpretations and summary of the significant accounting policies and valuation methods."

Please also refer to the "Opportunities and risk report" as well as the "Forecast" in the Group management report and there, in particular, to the section "Overall statement by the Executive Board on the expected development of the Lufthansa Group."

2. Accounting for pension obligations

Reasons why the matter was determined to be a key audit matter

The pension obligations of the Lufthansa Group are based on numerous different pension plans and collective wage agreements for the various Group companies and employee groups. They include both defined benefit and defined contribution plans for pension entitlements and transitional benefits for employees in Germany and other countries.

Our reasons for determining the matter to be a key audit matter are, on the one hand, the variation in and complexity of the contractual landscape as well as the estimate components in the actuarial assumptions underlying the measurement, which, even if changed slightly, could have a significant effect on the pension obligations. On the other hand, the fiscal year of the Lufthansa Group was shaped by measures to adjust headcount. Especially for employees of Deutsche Lufthansa Aktiengesellschaft who meet the collective agreement conditions for transitional benefits, the uptake in the voluntary scheme offered in the reporting year led to an increase in the obligation for post-employment benefits already reported. Other significant effects on accounting for pension obligations result from the restructuring measures at Swiss International Air Lines Ltd.

Auditor's response

We involved internal specialists from People Advisory Services in our audit procedures for pension obligations. First of all, as part of our test of design we obtained an up to date understanding of the pension landscape, the classification and underlying accounting for pension plans with a view to potential changes in the fiscal year and examined changes in the basis of consolidation.

The pension obligations are measured by external actuarial experts (actuaries). We assessed their professional qualifications and independence by making inquiries about their relevant professional experience and training as well as by obtaining audit evidence for their membership in local actuary associations and their independence from the Lufthansa Group.

In terms of the quantity structure, we performed analytical audit procedures on an individual person basis by comparing year-on-year changes in the registration data, taking the demographic assumptions used into account. We discussed anomalies with the client and scrutinized their origin. In order to assess the completeness of the data transferred to the actuary, we reconciled them with employee records from the Lufthansa Group's HR system and checked a sample of the relevant master HR data in the HR system.

We checked and tested the plausibility of significant actuarial assumptions, such as the interest rate, salary and pension trends used as well as the mortality and disability rates, using publicly available data or internal assessments by the Lufthansa Group.

To assess the measurement of the defined benefit obligations, we performed analytical audit procedures on an individual person basis by comparing year-on-year changes in the obligation taking changes in the actuarial assumptions as well as additionally accrued benefits into account.

We obtained an understanding of the method used for special effects from the current restructuring and voluntary schemes, inspecting samples of termination agreements and the exit date from the Group in the master HR data. Furthermore, we scrutinized the development of the obligation for transitional benefits from the prior year until 31 December 2021 for these samples using our own alternative calculations.

Our audit procedures did not lead to any reservations relating to the accounting for pension obligations.

Reference to related disclosures

With regard to the accounting for pension obligations, we refer to the disclosures in the notes to the consolidated financial statements under "3 New international accounting standards in accordance with IFRS and interpretations and summary of the significant accounting policies and valuation methods" and "35 Pension provisions."

3. Recoverability of own and leased aircraft

Reasons why the matter was determined to be a key audit matter

The aircraft reported in the consolidated financial statements of Deutsche Lufthansa Aktiengesellschaft represent a significant portion of the assets of the Lufthansa Group. The aircraft reported include aircraft which are legally owned and used by the Group as well as leased aircraft.

The recoverability of the aircraft that are earmarked for continued use in flight operations in the Group operational planning (GOP) is determined using the recoverability of the cash-generating units (CGUs) to which they are allocated. In connection with estimating the recoverability of own and leased aircraft in the consolidated financial statements, management must make planning assumptions in the GOP which have a significant impact on the measurement of the relevant CGU.

The recoverability of aircraft affected by a decision in the prior year relating to their abandonment, deep storage or sale, were assessed individually and not on the basis of the CGU.

From our perspective, in light of the COVID-19 pandemic including the Omicron variant and its impact on the air travel industry, the recoverability of aircraft was a key audit matter in our audit as the measurement of these items significant in amount is based to a large extent on the estimates and assumptions of the executive directors, particularly in terms of the OGP underlying measurement of the CGU.

Auditor's response

An assessment of the recoverability of aircraft in the consolidated financial statements is based on the allocation of aircraft to CGUs and the recoverability of the relevant CGU as a whole. We checked the allocation of aircraft to the individual CGUs by reconciling the carrying amounts transferred in the CGU impairment test. We also checked the substance of the allocation in a reconciliation with a fleet list per airline as the aircraft are allocated to the CGU of the airline operating the aircraft. With regard to the assessment of the recoverability of the aircraft in the economic ownership of the Group and earmarked for continued use in flight operations, we examined the fleet planning in connection with the GOP for internal consistency and analyzed whether it is in line with industry forecasts. In this connection we assessed the method used in the impairment test designed by the executive directors and assessed whether it gave rise to an impairment for the relevant CGU, which needed to be allocated to the aircraft.

We also checked that aircraft subject to impairment in the prior year and not currently in use as aircraft continue to not be earmarked for flight operations in the GOP and are not allocated to a CGU. These aircraft, including the aircraft classified in accordance with IFRS 5, were measured individually on the basis of the recoverable amount, thus the sale, market or scrap value of the aircraft. In this connection, we assessed whether the assumptions made by the executive directors were transparently derived from observable market data on prices, taking into account a market price overview (TAVR) published regularly by Aircraft Value Analysis Company Ltd., Derby, UK, comparable purchase agreements from the past or from purchase agreements already concluded.

Our audit procedures did not lead to any reservations relating to the assessment of the recoverability of own and leased aircraft.

Reference to related disclosures

With regard to the accounting for aircraft, we refer to the disclosures in the notes to the consolidated financial statements under "3 New international accounting standards in accordance with IFRS and interpretations and summary of the significant accounting policies and valuation methods" and "19 Aircraft and reserve engines including right-of-use assets," "22 Leases" and "10 Depreciation, amortisation and impairment."

4. Recoverability of deferred tax assets

Reasons why the matter was determined to be a key audit matter

The deferred tax assets arising from unused tax losses and deductible temporary differences reported in the consolidated financial statements of Deutsche Lufthansa Aktiengesellschaft constitute a significant portion of the assets of Deutsche Lufthansa Aktiengesellschaft and its subsidiaries. When accounting for the deferred tax assets, the Lufthansa Group assesses the extent to which it is probable that sufficient taxable profit will be available in the future to allow the deferred tax assets to be utilized.

The recoverability of the deferred tax assets is based on estimates and assumptions made by the Executive Board in relation to the future operating performance of the taxable Group entity. For fiscal years 2022 to 2025, the Executive Board has prepared a Group operational planning for the periods thereafter and, based thereon, forecast taxable profit for the taxable Group companies.

From our perspective, the assessment of the recoverability of this item significant in amount was a key audit matter in our audit as it is based to a large extent on the judgments, estimates and assumptions of the executive directors regarding sufficient taxable profit, particularly in light of the ongoing COVID-19 pandemic and the related uncertainty surrounding future development of air travel.

Auditor's response

We firstly scrutinized the internal control system established by the executive directors for the determination and recognition of deferred taxes by testing the design of the processes and assessing the risk of material misstatement.

To assess the recoverability of the deferred tax assets, with the involvement of our Strategy and Transaction specialists we analyzed the executive directors' forecasts of the further taxable profit, checked their mathematical accuracy and discussed them with the responsible management level. We analyzed management's disclosures on the key planning assumptions, strategic objectives, expected developments and operational measures and their inclusion/reflection in the cash flows and assessed their plausibility (transparency, consistency, lack of contradiction). Our analysis was based on analyst estimates, both for the Lufthansa Group as well as in relation to comparable companies, along with other external forecasts on the development of the airline industry (market studies) and macroeconomic forecasts. We also checked the reconciliation from the GOP to the tax planning by making inquiries of the responsible employees of Deutsche Lufthansa Aktiengesellschaft and its subsidiaries and of management as well as through recalculations, plausibility testing and analysis of the reconciliation items.

We assessed the positive and negative evidence of sufficient taxable profit likely being available in the future considered by management for the recognition of deferred tax assets and their individual significance for the overall assessment, discussed them with the responsible management level and examined their plausibility (transparency, consistency, lack of contradiction).

Our tax specialists were involved in all phases of the audit.

Our audit procedures did not lead to any reservations relating to the assessment of the recoverability of deferred tax assets.

Reference to related disclosures

With regard to the recognition of deferred tax assets and judgments by the Executive Board and the sources of estimation uncertainty, we refer to the disclosures in the notes to the consolidated financial statements under "3 New international accounting standards in accordance with IFRS and interpretations and summary of the significant accounting policies and valuation methods" and "15 Income taxes."

Other information

The Supervisory Board is responsible for the report of the Supervisory Board in the "Report of the Supervisory Board" section. The executive directors and the Supervisory Board are responsible for the declaration pursuant to Sec. 161 AktG ["Aktiengesetz": German Stock Corporation Act] on the German Corporate Governance Code, which is part of the Group corporate governance declaration. In all other respects, the executive directors are responsible for the other information. The other information comprises the aforementioned Group corporate governance declaration, the aforementioned Group non-financial declaration and the aforementioned other information included in the Group management report. The other information also comprises parts to be included in the annual report, of which we received a version prior to issuing this auditor's report, in particular:

- The letter from the Executive Board to the shareholders in the "Letter from the Executive Board" section of the annual report
- The explanations on the Deutsche Lufthansa Aktiengesellschaft share in the "Lufthansa share" section of the annual report
- The declaration by the executive directors in the "Declaration by the legal representatives" section of the annual report
- The remuneration report in the "Remuneration report" section of the annual report
- The Ten-year overview in the "Ten-year overview" section of the annual report

but not the consolidated financial statements, not the management report disclosures whose content is audited and not our auditor's report thereon.

Our opinions on the consolidated financial statements and on the Group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the Group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the executive directors and the Supervisory Board for the consolidated financial statements and the Group management report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB, and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the net assets, financial and earnings position of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the Group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a Group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the Group management report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the Group management report.

Auditor's responsibilities for the audit of the consolidated financial statements and of the Group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the Group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the Group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sec. 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the IDW and supplementary compliance with the ISAs will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this Group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the Group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the Group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the Group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the net assets, financial and earnings position of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the Group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- Evaluate the consistency of the Group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the Group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Report on the assurance on the electronic rendering of the consolidated financial statements and the Group management report prepared for publication purposes in accordance with Sec. 317 (3a) HGB

Opinion

We have performed assurance work in accordance with Sec. 317 (3a) HGB to obtain reasonable assurance about whether the rendering of the consolidated financial statements and the Group management report (hereinafter the "ESEF documents") contained in the attached file "Deutsche_Lufthansa_AG_KA_LB_ESEF-2021-12-31.zip" (SHA-256 checksum: c20500f07665d33f40a5db0dd8f00985fa0d55d8961cf13dc555d2f8ba0f44eb) and prepared for publication purposes complies in all material respects with the requirements of Sec. 328 (1) HGB for the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance work extends only to the conversion of the information contained in the consolidated financial statements and the Group management report into the ESEF format and therefore relates neither to the information contained within these renderings nor to any other information contained in the file identified above.

In our opinion, the rendering of the consolidated financial statements and the Group management report contained in the file identified above and prepared for publication purposes complies in all material respects with the requirements of Sec. 328 (1) HGB for the electronic reporting format. Beyond this assurance opinion and our audit opinions on the accompanying consolidated financial statements and the accompanying Group management report for the fiscal year from 1 January to 31 December 2021 contained in the "Report on the audit of the consolidated financial statements and of the Group management report" above, we do not express any assurance opinion on the information contained within these renderings or on the other information contained in the file identified above.

Basis for the opinion

We conducted our assurance work on the rendering of the consolidated financial statements and the Group management report contained in the file identified above in accordance with Sec. 317 (3a) HGB and the IDW Assurance Standard: Assurance on the Electronic Rendering of Financial Statements and Management Reports Prepared for Publication Purposes in Accordance with Sec. 317 (3a) HGB (IDW AsS 410) (10.2021) and the International Standard on Assurance Engagements 3000 (Revised). Our responsibility in accordance therewith is further described in the "Group auditor's responsibilities for the assurance work on the ESEF documents" section. Our audit firm applies the IDW Standard on Quality Management 1: Requirements for Quality Management in the Audit Firm (IDW QS 1).

Responsibilities of the executive directors and the Supervisory Board for the ESEF documents

The executive directors of the Company are responsible for the preparation of the ESEF documents including the electronic rendering of the consolidated financial statements and the Group management report in accordance with Sec. 328 (1) Sentence 4 No. 1 HGB and for the tagging of the consolidated financial statements in accordance with Sec. 328 (1) Sentence 4 No. 2 HGB.

In addition, the executive directors of the Company are responsible for such internal control as they have determined necessary to enable the preparation of ESEF documents that are free from material intentional or unintentional non-compliance with the requirements of Sec. 328 (1) HGB for the electronic reporting format.

The Supervisory Board is responsible for overseeing the preparation of the ESEF documents as part of the financial reporting process.

Group auditor's responsibilities for the assurance work on the ESEF documents

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material intentional or unintentional non-compliance with the requirements of Sec. 328 (1) HGB. We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material intentional or unintentional non-compliance with the requirements of Sec. 328 (1) HGB, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance opinion.

- Obtain an understanding of internal control relevant to the assurance on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.
- Evaluate the technical validity of the ESEF documents, i.e., whether the file containing the ESEF documents meets the requirements of Commission Delegated Regulation (EU) 2019/815, in the version in force at the date of the financial statements, on the technical specification for this file.
- Evaluate whether the ESEF documents enable an XHTML rendering with content equivalent to the audited consolidated financial statements and to the audited Group management report.
- Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) in accordance with the requirements of Arts. 4 and 6 of Commission Delegated Regulation (EU) 2019/815, in the version in force at the date of the financial statements, enables an appropriate and complete machine-readable XBRL copy of the XHTML rendering.

Further information pursuant to Art. 10 of the EU Audit Regulation

We were elected as group auditor by the Annual General Meeting on 4 May 2021. We were engaged by the Supervisory Board on 5 May 2021. We have been the group auditor of Deutsche Lufthansa Aktiengesellschaft without interruption since fiscal year 2020.

We declare that the opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Art. 11 of the EU Audit Regulation (long-form audit report).

In addition to the financial statement audit, we have provided or were engaged to provide to Group companies the following services that are not disclosed in the consolidated financial statements or in the Group management report:

- Review of the interim financial statements of Deutsche Lufthansa Aktiengesellschaft as of 31 March 2021
- Engagement to obtain limited assurance on the non-financial declaration pursuant to Secs. 289b et seq. and 315b et seq. HGB
- Engagement to obtain limited assurance on the report on the status of compliance with the conditions and requirements pursuant to Art. 18 (1) and (2) of the framework agreement for the granting of stabilization measures
- Support in providing information to the office carrying out the enforcement procedure

- Agreed-upon procedures in connection with the immigration air passenger user fee calculation
- Reasonable assurance engagement relating to the system of Deutsche Lufthansa Aktiengesellschaft designed to ensure compliance with the requirements under Sec. 32 (1) WpHG [“Wertpapierhandelsgesetz”: German Securities Trading Act] for the period from 1 January to 31 December 2020
- Review of the remuneration report pursuant to Sec. 162 (3) AktG
- Voluntary audits of financial statements as of 31 December 2021
- Project-based assurance engagement involving a related audit of a migration of IT-based accounting-related systems pursuant to IDW AsaS 850 for Lufthansa AirPlus Servicekarten GmbH, Neu-Isenburg
- Project-related review in connection with IT general controls in accounting-related systems for Lufthansa Cargo AG, Kelsterbach, and Miles & More GmbH, Frankfurt am Main
- Assurance report on revenue reporting for Miles & More GmbH, Frankfurt am Main
- Audit of Albatros Service Center GmbH, Cologne, in accordance with Sec. 24 FinVermV [“Finanzanlagenvermittlungsverordnung”: German Ordinance on Financial Investment Mediation]
- Agreed-upon procedures relating to a compliance issue of a foreign subsidiary of Deutsche Lufthansa Aktiengesellschaft

OTHER MATTER – USE OF THE AUDITOR’S REPORT

Our auditor’s report must always be read together with the audited consolidated financial statements and the audited Group management report as well as the assured ESEF documents. The consolidated financial statements and the Group management report converted to the ESEF format – including the versions to be published in the Bundesanzeiger [German Federal Gazette] – are merely electronic renderings of the audited consolidated financial statements and the audited Group management report and do not take their place. In particular, the ESEF report and our assurance opinion contained therein are to be used solely together with the assured ESEF documents made available in electronic form.

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Siegfried Keller.”

Eschborn/Frankfurt/Main, 1 March 2022

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Prof. Dr. Sven Hayn
Wirtschaftsprüfer
[German Public Auditor]

Siegfried Keller
Wirtschaftsprüfer
[German Public Auditor]

REMUNERATION REPORT

The remuneration report provides detailed, individualised information about the remuneration paid and due to active and former members of the Executive Board and Supervisory Board of Deutsche Lufthansa AG in the 2021 reporting year, as well as the agreed target remuneration for the financial year. The report complies with the requirements of Section 162 AktG and the relevant financial reporting standards (HGB, IFRS). A summary of the remuneration system for the Executive Board in financial year 2021 can be found in [T186, p. 273](#). Further detailed information about the remuneration systems for the members of the Executive Board and Supervisory Board of Deutsche Lufthansa AG is provided on the Company's website. www.lufthansagroup.com/corporate-governance.

Remuneration of Executive Board members

The system for remunerating Executive Board members takes account of the Company's size, complexity and economic situation, as well as its prospects. It is also aligned with the Company strategy and so creates an incentive for successful and sustainable business practices. At the same time, it takes into account the responsibilities and performance of the Executive Board as a whole and of the individual members, as well as the Company's current position. For this reason, the remuneration system is based on transparent, performance-related parameters relevant to Company performance and sustainability.

The Supervisory Board is responsible for the structure of the remuneration system for Executive Board members and for defining the individual benefits. The Steering and Remuneration Committee assists the Supervisory Board, monitors the appropriateness of the remuneration system and prepares the Supervisory Board's resolutions. In the event of material changes to the remuneration system, but at least every four years, the remuneration system is presented at the Annual General Meeting for approval.

Remuneration year 2021

CORONAVIRUS CRISIS STILL THE DOMINANT ECONOMIC INFLUENCE

In economic terms, the financial year 2021 was again defined by the ongoing impact of the global spread of the coronavirus on global air traffic and thus on the business of the Lufthansa Group. The coronavirus pandemic continues to have a negative impact on demand for flights, due to which the revenue and therefore the earnings of the Lufthansa Group as a whole are still severely affected.

However, the 2021 financial year also marked a turning point following the dramatic collapse in business and steps to avert insolvency in 2020. The KfW loan of EUR 1bn was thus repaid ahead of schedule in February 2021, and by November all the silent participations held by the Federal Republic of Germany had been either repaid or cancelled. This means that all the German government loans and silent participations, including interest, have now been repaid or cancelled. The Economic Stabilisation Fund (ESF) has committed to selling its equity investment in Deutsche Lufthansa AG by October 2023 at the latest. This was all largely possible thanks to renewed demand for flights and the associated trust of our customers, the rapid restructuring and transformation of the Lufthansa Group driven by the Executive Board, as well as the confidence of capital markets in the Company.

REMUNERATION RESTRICTIONS DURING THE ESF STABILISATION MEASURES

The framework agreement of 29 June 2020 between Deutsche Lufthansa AG and the ESF includes significant restrictions on Executive Board remuneration. Subject to claims against the Company arising before 21 June 2020, no bonuses or other variable or similar remuneration components may be paid to Executive Board members for the duration of the stabilisation measures. The same applies to special payments in the form of share packages, gratuities and other forms of compensation in addition to the fixed salary, other discretionary payments by the Company and severance payments not required by law.

At the same time, no Executive Board member was allowed to receive a basic salary (including any payments for work on executive or supervisory boards of Group companies) which was higher than their basic salary as of 31 December 2019 until at least 75% of the total of Silent Participations I and II (including interest and any additional payment) and the equity interest had been satisfied, repaid or redeemed, sold or otherwise settled by means of a capital contribution or otherwise. Analogously, the upper limit for new Executive Board members was set by the lowest fixed salary of an Executive Board member with an equivalent position as of 31 December 2019.

These restrictions on basic salary no longer apply now that the stabilisation measures have been repaid in full in the reporting year. However, the restrictions in the ESF framework agreement on the payment of bonuses continue to apply until the ESF has sold its equity investment in Deutsche Lufthansa AG in full.

Deutsche Lufthansa AG has signed supplements to the existing service contracts with all Executive Board members to implement the remuneration restrictions agreed with the ESF.

DEVIATION FROM REMUNERATION SYSTEM IN FINANCIAL YEAR 2021

As the economic situation remains tense, and in view of the requirements of the aforementioned framework agreement with the ESF, the Supervisory Board has suspended variable remuneration components for the Executive Board members for financial year 2021. As a result, the members of the Executive Board do not receive any variable remuneration components – representing around two thirds of the target remuneration provided for in the remuneration system.

This represents a deviation from the remuneration structure for 2021, which in the reporting year consists solely of non-performance-related remuneration components. In view of the economic situation and the government stabilisation measures, this is in the interests of the Company's long-term prosperity.

Executive Board remuneration in 2021

OVERVIEW OF THE REMUNERATION SYSTEM

The current remuneration system for the members of the Executive Board has been in place since 2020 and was approved by the Annual General Meeting on 5 May 2020 in accordance with Section 120a (1) AktG with a majority of 88.2%.

The following table provides an overview of the components of the remuneration system generally applicable for Executive Board members for 2021, the structure of the individual remuneration components and the targets on which these are based:

T186 EXECUTIVE BOARD REMUNERATION SYSTEM 2021

Component	Objective	Structure
Performance-unrelated remuneration		
Basic salary	Shall reflect the role and responsibilities in the Executive Board. Should ensure a reasonable basic income and prevent unreasonable risk-taking	<ul style="list-style-type: none"> – Annual basic salary – Paid in twelve monthly rates – Chairman of the Executive Board and CEO: EUR 1,634,000 – Ordinary Executive Board members: EUR 860,000
Ancillary benefits		<ul style="list-style-type: none"> – Company car with driver, industry-standard concessionary flights for private travel in accordance with IATA standards for airline employees, insurance premiums
Retirement benefits	Shall ensure adequate retirement benefits	<ul style="list-style-type: none"> – Annual allocation of a fixed amount – Chairman of the Executive Board and CEO: EUR 855,000 – Ordinary Executive Board members: EUR 450,000
Performance-related remuneration (suspended for the financial year 2021)		
One-year variable remuneration (annual bonus)	Shall support profitable growth, reflecting the Executive Board's collective responsibility and the individual performance of Executive Board members	<ul style="list-style-type: none"> – Adjusted EBIT margin versus target (42.5%) – Adjusted ROCE versus target (42.5%) – Total and individual business and sustainability targets (15%) – Individual performance factor (coefficient of 0.8 - 1.2) – Cap: 200% of target amount – Payable in cash or shares
Long-term variable remuneration (LTI)	Shall promote a sustainable absolute and positive relative development of Company value - while aligning the interests of Executive Board members with those of shareholders	<ul style="list-style-type: none"> – Allocation of virtual Lufthansa shares with a four-year duration – Final number of virtual shares dependent on: <ul style="list-style-type: none"> – Average Adjusted ROCE during the performance period versus target (42.5%) – Relative TSR of Lufthansa share versus DAX (42.5%) – Strategic and sustainability targets (15%) – Performance depending on 60-day average price of Lufthansa share at end of period and dividend payments during the programme – Cap: 200% of target amount – Payable in cash or shares
End-of-service benefits		
Termination by consent	Shall avoid unreasonably high severance payments	<ul style="list-style-type: none"> – Severance payment limited to remainder of service contract or two times annual remuneration (cap)
Post-contractual non-compete clause	Protects the Company's interests	<ul style="list-style-type: none"> – One-year non-compete clause after leaving the Executive Board, with payment of compensation of 50% of basic salary – Company may waive non-compete clause (with six months' notice)
Change of control	Shall ensure independence in takeover situations	<ul style="list-style-type: none"> – Severance payment corresponding to the remuneration owed for the remainder of the service contract, up to 100% of the cap on severance pay (legacy contracts: 150% of the cap)
Other compensation rules		
Share Ownership Guidelines	Shall strengthen the equity culture and align interests of Executive Board members and shareholders	<ul style="list-style-type: none"> – Obligation to invest in Lufthansa shares over a period of four years¹⁾ <ul style="list-style-type: none"> – Chairman of the Executive Board and CEO: 200% of basic salary – Ordinary Executive Board members: 100% of basic salary – Holding obligation for the duration of work on the Executive Board: graduated annual reduction of 25% of shareholding after leaving the Executive Board
Compliance and performance clawback	Shall ensure sustainable Company development	<ul style="list-style-type: none"> – Supervisory Board has the right to withhold annual bonus and LTI or recover remuneration already paid
Maximum remuneration in accordance with Section 87a Paragraph 1 Sentence 2 No. 1 AktG	Shall prevent uncontrolled high payments	<ul style="list-style-type: none"> – Reduction in variable remuneration if maximum for a financial year is exceeded: <ul style="list-style-type: none"> – Chairman of the Executive Board and CEO: EUR 9.5m – Ordinary Executive Board members: EUR 5.0m

¹⁾ The four-year ramp-up phase is temporarily suspended during the period of the ESF stabilisation measures. For further information, see below [👉 p. 282](#).

TARGETS FOR THE EXECUTIVE BOARD IN 2021

Although the Supervisory Board suspended variable remuneration elements for Executive Board members for 2021, it nevertheless set specific targets for the Executive Board members in the sense of corporate management. On the basis of the existing remuneration system, the Supervisory Board set short-term annual targets, including individual targets, with each Executive Board member, as well as targets for the four-year period 2021 to 2024.

Since the corporate and finance strategy were modified in light of the current crisis, the Supervisory Board chose different performance criteria to those defined in the remuneration system. Thus, the focus was mainly on overcoming the crisis in the short and long term, restructuring the Company, bringing the government stabilisation measures to an end, and returning to profitability.

Achieving a balanced cash flow and implementing lasting cost-cutting measures while simultaneously maintaining employee and customer satisfaction were therefore the main objectives in 2021 (rather than the Adjusted EBIT margin and Adjusted ROCE as defined for the annual bonus in the remuneration system). At the same time, the individual target agreements for 2021 set both overarching targets for the entire Executive Board and individual targets for the Executive Board members adapted to their areas of responsibility. The following tables show the topics covered by the joint targets set by the Supervisory Board for the entire Executive Board and the topics considered in the individual target agreements in the reporting year.

T187 OVERARCHING TARGETS FOR THE ENTIRE EXECUTIVE BOARD 2021

Topic	Targets
Crisis management	<ul style="list-style-type: none"> – Managing effects of the coronavirus crisis – Achieving a balanced cash flow – Rebuilding of capacity – Implementation of lasting cost-cutting measures
Group strategy	<ul style="list-style-type: none"> – Implementation of Group strategy and transformation of the Lufthansa Group: <ul style="list-style-type: none"> – Refinement of Group portfolio towards airline focus – Implementation of Corporate Responsibility strategy – Promotion of customer-centric developments, digitalisation and innovations
Leadership and corporate culture	<ul style="list-style-type: none"> – Modernisation of management culture and corporate culture – Strengthening talent retention and management succession planning – Promotion of lean processes, acceleration of decision-making; reduction of complexity

T188 INDIVIDUAL TARGETS 2021

Executive Board Member	Topics for individual target agreements
Carsten Spohr	<ul style="list-style-type: none"> – Implementation of long-term Group strategy (10+ years) – Increasing political and regulatory Group activities – Modernisation of leadership culture
Christina Foerster	<ul style="list-style-type: none"> – Improving customer orientation: establish a comprehensive view across all customer interfaces – Refinement and implementation of ESG strategy – Design of a sustainable aviation fuel (SAF) strategy and roadmap – Continued innovation in IT and digitalisation
Harry Hohmeister	<ul style="list-style-type: none"> – Further development and implementation of the multi-traffic system – Expansion of the tourist segment and internal tourist competencies – Improvement of distribution systems to increase “global & segment reach” – Enhance qualified performance management
Detlef Kayser	<ul style="list-style-type: none"> – Optimisation of fleet investments and modernisations – Creation of a new platform with a focus on tourist business – Continued digitalisation of operations processes – Implementation of cooperation agreements with airports
Michael Niggemann	<ul style="list-style-type: none"> – Redimensioning: adjusting work-force and staff costs to crisis-related conditions – Further development of leadership and corporate culture – Talent retention and diversity; promotion of women in management – Corporate structure: development of a competitive, modern legal structure
Remco Steenberg	<ul style="list-style-type: none"> – Development of a refinancing and debt plan – Recovery of investment capability – Introduction of portfolio processes – Pushing ahead with management succession planning

For the four-year period 2021 to 2024, the focus is on repaying the stabilisation measures and return to profitability, as measured by cumulative Adjusted EBIT for 2022 to 2024 (instead of Adjusted ROCE and relative total shareholder return, as defined for the long-term variable remuneration in the remuneration system). The Supervisory Board defined the “Environment” parameter as a focus topic for the strategic and sustainability targets, because ecological sustainability remains a key objective of the long-term corporate strategy, notwithstanding the crisis. A reduction in the fleet’s specific CO₂ emissions per passenger-kilometre flown was retained as a target for the four-year period. The annual target reduction in 2024 is measured in comparison with the pre-crisis year 2019.

TARGET REMUNERATION IN 2021

The following table shows the remuneration agreed with the Executive Board members for 2021. The variable remuneration is presented based on the form recommended by the

German Corporate Governance Code as amended on 7 February 2017 as Model table 1 relating to 4.2.5 Paragraph 3. Individual caps and lower thresholds for these remuneration elements are also shown.

T189 TARGET REMUNERATION 2021

		Carsten Spohr, Chairman of the Executive Board Chairman since 1 May 2014; Member of the Executive Board since 1 Jan 2011				Christina Foerster Member of the Executive Board since 1 Jan 2020			
		2021	2020	2021 (min)	2021 (max)	2021	2020	2021 (min)	2021 (max)
in € thousands									
Fixed remuneration	Basic salary	1,634	1,471 ¹⁾	1,634	1,634	860	774 ¹⁾	860	860
	Ancillary benefits	42	19	42	42	44	1	44	44
	Total	1,676	1,490	1,676	1,676	904	775	904	904
Variable remuneration	One-year variable remuneration	-	1,140 ²⁾	-	-	-	600 ²⁾	-	-
	Long-term variable remuneration	-	2,090	-	-	-	1,100	-	-
	Total	0	3,230	0	0	0	1,700	0	0
Service cost		871	925	871	871	461	450	461	461
Total remuneration		2,547	5,645	2,547	2,547	1,365	2,925	1,365	1,365

		Harry Hohmeister Member of the Executive Board since 1 Jan 2013				Detlef Kayser Member of the Executive Board since 1 Jan 2019			
		2021	2020	2021 (min)	2021 (max)	2021	2020	2021 (min)	2021 (max)
in € thousands									
Fixed remuneration	Basic salary	860	774 ¹⁾	860	860	860	774 ¹⁾	860	860
	Ancillary benefits	41	15	41	41	33	6	33	33
	Total	901	789	901	901	893	780	893	893
Variable remuneration	One-year variable remuneration	-	600 ²⁾	-	-	-	600 ²⁾	-	-
	Long-term variable remuneration	-	1,100	-	-	-	1,100	-	-
	Total	0	1,700	0	0	0	1,700	0	0
Service cost		453	483	453	453	457	460	457	457
Total remuneration		1,354	2,972	1,354	1,354	1,350	2,940	1,350	1,350

		Michael Niggemann Member of the Executive Board since 1 Jan 2020				Remco Steenbergen Member of the Executive Board since 1 Jan 2021			
		2021	2020	2021 (min)	2021 (max)	2021	2020	2021 (min)	2021 (max)
in € thousands									
Fixed remuneration	Basic salary	860	774 ¹⁾	860	860	861	-	860	860
	Ancillary benefits	42	1	42	42	63	-	63	63
	Total	902	775	902	902	923	0	923	923
Variable remuneration	One-year variable remuneration	-	600 ²⁾	-	-	-	-	-	-
	Long-term variable remuneration	-	1,100	-	-	-	-	-	-
	Total	0	1,700	0	0	0	0	0	0
Other		-	-	-	-	975 ³⁾	-	975	975
Service cost		467	450	467	467	450	-	450	450
Total remuneration		1,369	2,925	1,369	1,369	2,348	0	2,348	2,348

¹⁾ Considering the voluntary waiver of 20% of basic salary for the period from April to September 2020.

²⁾ The Executive Board members active in the financial year waived their entitlement to the one-year variable remuneration for 2020 (annual bonus 2020) (p. 276).

³⁾ The Supervisory Board agreed to a one-off gross payment of EUR 2,925,000 to Remco Steenbergen in compensation for his loss of benefits from his previous employer. The compensation payment is being made in three instalments of EUR 975,000 in 2021, 2022 and 2023.

Remuneration paid and due in 2021 pursuant to Section 162 AktG

The following section shows the remuneration paid and due to each individual active and former Executive Board member in 2021, in accordance with Section 162 Paragraph 1 Sentence 1 AktG. The tables therefore include all the amounts due and actually paid to the individual Executive Board member in the reporting period (“remuneration paid”) and all the remuneration legally due but not yet paid (“remuneration due”).

VARIABLE REMUNERATION PAID AND DUE IN 2021

The variable remuneration components that would usually been due in the financial year comprise the annual bonus for 2020, the Deferral 2018 and payments from the option programme LH-Performance 2017.

All the active Executive Board members in 2021 have waived any rights to an annual bonus 2020. At the same time, affected active Executive Board members Carsten Spohr and Harry Hohmeister, as well as former Executive Board members Bettina Volkens and Thorsten Dirks, have declared to waive payment of their claims of the Deferral 2018 until further notice, so that these amounts were not yet due in 2021. No payments were made for the outperformance option or the performance option under LH-Performance programme 2017 either because the relevant targets were not achieved (➤ p. 212ff.). Thus, no variable remuneration at all was paid or due to active Executive Board members in 2021.

One-year variable remuneration for 2020 (annual bonus 2020)

The Adjusted EBIT margin and Adjusted ROCE each accounted for 42.5% of the financial targets for the annual bonus 2020. In 2020, the target for the Adjusted EBIT margin was 5.4%. The target for Adjusted ROCE was 5.8%. The end points of the range (lower and upper threshold) were each defined by a deviation of +/-3 percentage points from the target.

As a result of the negative impact of the global coronavirus pandemic on the Lufthansa Group's business, target achievement for the financial targets in the short-term variable remuneration for 2020 was 0%.

The Supervisory Board defined “Customer” and “Employees” as the focus topics for the business and sustainability targets. The Net Promoter Score, i.e. the proportion of customers recommending the Company, is used for the sustainability parameter “Customer” (the Net Promoter Score is a registered service mark of Bain & Company, Inc., Fred Reichheld and Satmetrix Systems, Inc.). The corresponding results were taken from the Network Airlines (Lufthansa German Airlines, Austrian Airlines, SWISS) and from Eurowings, with

three-quarters weighted for the Network Airlines and one-quarter for Eurowings. The performance curve is linear. Interim figures were interpolated on a straight-line basis.

The “Engagement Index” was used for the parameter “Employees”, which measures the extent to which employees identify with the Company, as well as their commitment and willingness to recommend the Company to others. Each index score corresponds to a performance level. The 100% target is based on the average external benchmark.

The “Customers” and “Employees” targets each accounted for 7.5% of the annual bonus. The target achievement for the Customers target in 2020 was 140% (➤ **Combined non-financial declaration in the Annual Report 2020, p. 102**) and the target achievement for the Employees target was 200% (➤ **Combined non-financial declaration in the Annual Report 2020, p. 105**). Total target achievement for the business and sustainability targets for the annual bonus 2020 was therefore 170%.

In addition, the Supervisory Board can apply an individual performance factor (bonus/malus factor) of 0.8 to 1.2 when assessing the performance of each individual Executive Board member for the annual bonus. This is based on the individual performance targets set annually by the Supervisory Board and the individual Executive Board members. At the end of the financial year, these were reviewed by the Steering and Remuneration Committee and the Supervisory Board. When setting the individual targets, the Supervisory Board emphasised overcoming the crisis as the overarching goal against the background of the already looming coronavirus pandemic. For a detailed description of the individual targets, see the ➤ **Remuneration report 2020 in the Annual report 2020, p. 255f.**

The Steering and Remuneration Committee and Supervisory Board assessed performance against the individual targets at the end of the financial year 2020. For each Executive Board member, the factor of between 0.8 and 1.2 was then multiplied with the overall target achievement from the financial and the business and sustainability targets.

On the basis of actual target achievement and the individual performance factors defined by the Supervisory Board, this results in an overall performance of 25.5% to 30.6% for the Executive Board members for the annual bonus 2020. For the individual entitlements under the annual bonus 2020, see ➤ **Remuneration report 2020 in the Annual report 2020, p. 256.**

All the Executive Board members active in 2021 waived the payment of their rights to an annual bonus for 2020 on 2 March 2021.

Deferral from the annual bonus 2018 (Deferral 2018)

In the remuneration system for Executive Board members effective until 31 December 2018, the variable remuneration was based on the Lufthansa Group's EBIT margin. For the financial year 2018, 50% of the variable remuneration was paid in the following year, the other 50% being deferred for two further years. At the end of the full three-year assessment period, the amount carried forward is multiplied by a factor determined on the basis of objective indicators, of which cumulative three-year EACC accounts for 70% and the sustainability parameters environment, customer satisfaction and employee commitment account for 30%. The factor can vary between 0.0 and 2.0 and is applied uniformly for the entire Executive Board to the amount carried forward before it is paid out. The multiplier based on EACC increases on a linear basis from a value of 0.0, which corresponds to EACC of EUR -1,000m or lower, to a maximum value of 2.0, which is attained when EACC reaches EUR 1,000m. The sustainability factor, which can also vary between 0.0 and 2.0, is determined by the Supervisory Board on the basis of a recommendation from the Steering and Remuneration Committee and represents a discretionary assessment of changes in the figures "Reduction of CO₂ emissions", "Customer satisfaction at Lufthansa German Airlines (CPI)" and "Employee survey indices in the Group". The total amount of variable remuneration that can be paid for a given financial year is capped at 175% of fixed annual salary.

Due to the collapse in business caused by the coronavirus crisis in 2020, the EACC factor for the benefit vested and deferred in financial year 2018 is 0 (cumulative three-year EACC 2018 - 2020: EUR -4,596m). The Supervisory Board has set the sustainability factor at 1.2 on the basis of a recommendation by the Steering and Remuneration Committee in view of the significant improvements in the Customer Profile Index and the Engagement Index. This gives a total multiple of 0.36. Mr Spohr is therefore entitled to a payment of EUR 498,398 for the amount deferred from 2018 and Messrs Hohmeister, Dirks, Svensson and Ms Volkens are each entitled to EUR 311,499. In March 2021 Messrs Spohr, Hohmeister and Dirks and Ms Volkens have declared to waive the payment of the Deferral 2018 until further notice. This deferral agreement remains in effect unchanged.

Share-based remuneration – LH-Performance 2017

Up to and including 2018, the Executive Board members were obliged to take part in the share programme for Lufthansa executives.

Participation in LH-Performance for Executive Board members required an investment in Lufthansa shares in tranches of EUR 4k. The CEO was obliged to hold Lufthansa shares valued at EUR 180k and an ordinary Executive Board member to hold shares valued at EUR 120k, whereby Lufthansa granted a discount of 50% on the share price. The shares held could not be sold until the end of the four-year performance period. The amount of any possible entitlement under the share programmes is linked both to the absolute performance of the Lufthansa share (performance option) and to the performance of the Lufthansa share compared with a notional index of European competitors' shares (outperformance option). The performance and outperformance of the Lufthansa shares are calculated on the principle of total shareholder return. This means that cash dividends, subscription rights, capital rights and other special rights are included in the calculation of performance/outperformance, as well as the change in the share price. The performance option for 2017 results in a cash payment if the share price goes up by more than 23%. The option is capped at a performance of more than 35%. For the outperformance option the participants receive a payment for each percentage point of outperformance. When this is more than 20 percentage points, it is capped at a defined amount. The maximum for both the performance and the outperformance options is EUR 20k per tranche.

Payments are only made to Executive Board members under the options if they are still active members of the Executive Board of Deutsche Lufthansa AG at the end of the programme. If the Executive Board member has retired or steps down once his appointment comes to an end, a payment is made pro rata temporis for the portion of the programme during which the participant was still a member of the Executive Board.

No payments were made to Executive Board members in the reporting year for the outperformance option 2017. The same applied to the performance option for 2017, since the hurdle rate of 23% was not achieved. Further information about the ongoing LH-Performance programmes can be found in [Note 39, p. 212ff.](#)

The following tables provide information about the shares or option packages held by the Executive Board members under the LH-Performance programme as of 31 December 2021 (2020), and about the development of the LH-Performance programme for Executive Board members in the reporting year.

T190 LH-PERFORMANCE PROGRAMME

Number of shares	2018 programme	
	Number of shares purchased from own funds	Number of option packages
Carsten Spohr	10,125 (10,125)	45 (45)
Thorsten Dirks (until 30 Jun 2020)	6,750 (6,750)	30 (30)
Harry Hohmeister	6,750 (6,750)	30 (30)
Ulrik Svensson (until 30 Apr 2020)	6,750 (6,750)	30 (30)
Bettina Volkens (until 31 Dec 2019)	6,750 (6,750)	30 (30)

T191 PERFORMANCE OF LH-PERFORMANCE PROGRAMME

in €	Financial year 2021			Financial year 2020		
	Payments from maturing share programmes	Change in fair value of ongoing share programmes	Total	Payments from maturing share programmes	Change in fair value of ongoing share programmes	Total
Carsten Spohr	-	-178,406	-178,406	-900,000	-248,558	-1,148,558
Thorsten Dirks	-	-118,937	-118,937	-	-15,633	-15,633
Christina Foerster	-	-	-	-	-	-
Harry Hohmeister	-	-118,937	-118,937	-600,000	-165,705	-765,705
Detlef Kayser	-	-	-	-	-	-
Michael Niggemann	-	-	-	-	-	-
Ulrik Svensson	-	-89,843	-89,843	-	-46,453	-46,453
Bettina Volkens	-	-142,053	-142,053	-600,000	-465,370	-1,065,370
	-	-648,176	-648,176	-2,100,000	-941,719	-3,041,719

EXECUTIVE BOARD MEMBERS ACTIVE IN THE FINANCIAL YEAR

The following tables show the remuneration paid and due to Executive Board members active in 2021 as defined in Section 162 Paragraph 1 Sentence 1 AktG, as well as the relative proportions of individual fixed and variable remuneration. Although the expenses for retirement benefit commitments

are not classified as paid or due remuneration within the meaning of Section 162 Paragraph 1 Sentence 1 AktG, they are also shown in the following tables for the sake of transparency and correspond to the service cost for pensions and other contractually agreed retirement benefits in accordance with IAS 19.

T192 REMUNERATION PAID AND DUE IN ACCORDANCE WITH SECTION 162 PARAGRAPH 1 SENTENCE 1 AKTG – EXECUTIVE BOARD MEMBERS ACTIVE IN 2021

in € thousands		Carsten Spohr, Chairman of the Executive Board Chairman since 1 May 2014; Member of the Executive Board since 1 Jan 2011				Christina Foerster Member of the Executive Board since 1 Jan 2020			
		2021	2021 ¹⁾	2020	2020 ¹⁾	2021	2021 ¹⁾	2020	2020 ¹⁾
Fixed remuneration	Basic salary	1,634	97.5%	1,471 ²⁾	38.4%	860	95.1%	774 ²⁾	99.9%
	Ancillary benefits	42	2.5%	19	0.5%	44	4.9%	1	0.1%
	Total	1,676	100.0%	1,490	38.9%	904	100.0%	775	100.0%
Variable remuneration	One-year variable remuneration 2020 ³⁾ (2019)	-	-	576	15.0%	-	-	-	-
	Long-term variable remuneration								
	Three-year variable remuneration Deferral 2018 ⁴⁾ (Deferral 2017)	-	-	864	22.6%	-	-	-	-
	Payment option programmes LH Performance 2017 (LH Performance 2016)	0	0.0%	900	23.5%	-	-	-	-
	Total	0	0.0%	2,340	61.1%	0	0.0%	0	0.0%
Total remuneration as defined in Section 162 AktG		1,676	100.0%	3,830	100.0%	904	100.0%	775	100.0%
Service cost		871	-	925	-	461	-	450	-
Total remuneration		2,547	-	4,755	-	1,365	-	1,225	-

in € thousands		Harry Hohmeister Member of the Executive Board since 1 Jan 2013				Detlef Kayser Member of the Executive Board since 1 Jan 2019			
		2021	2021 ¹⁾	2020	2020 ¹⁾	2021	2021 ¹⁾	2020	2020 ¹⁾
Fixed remuneration	Basic salary	860	95.4%	774 ²⁾	34.7%	860	96.3%	774 ²⁾	73.6%
	Ancillary benefits	41	4.6%	15	0.7%	33	3.7%	6	0.6%
	Total	901	100.0%	789	35.3%	893	100.0%	780	74.1%
Variable remuneration	One-year variable remuneration 2020 ³⁾ (2019)	-	-	303	13.6%	-	-	272	25.9%
	Long-term variable remuneration								
	Three-year variable remuneration Deferral 2018 ⁴⁾ (Deferral 2017)	-	-	540	24.2%	-	-	-	-
	Payment option programmes LH Performance 2017 (LH Performance 2016)	-	-	600	26.9%	-	-	-	-
	Total	0	0.0%	1,443	64.7%	0	0.0%	272	25.9%
Total remuneration as defined in Section 162 AktG		901	100.0%	2,232	100.0%	893	100.0%	1,052	100.0%
Service cost		453	-	483	-	457	-	460	-
Total remuneration		1,354	-	2,715	-	1,350	-	1,512	-

¹⁾ The relative proportions indicated here relate to the total remuneration shown in the table as defined in Section 162 AktG excluding retirement benefit expenses.

²⁾ Considering the voluntary waiver of 20% of basic salary for the period from April to September 2020.

³⁾ Considering the waiver of claims to the one-year variable remuneration in 2020.

⁴⁾ Considering the waiver of the payment of Deferral 2018 in March 2021 and the deferral of payment until further notice.

T192 REMUNERATION PAID AND DUE IN ACCORDANCE WITH SECTION 162 PARAGRAPH 1 SENTENCE 1 AKTG – EXECUTIVE BOARD MEMBERS ACTIVE IN 2021 (continued)

in Tsd. €		Michael Niggemann Member of the Executive Board since 1 Jan 2020				Remco Steenberg Member of the Executive Board since 1 Jan 2021			
		2021	2021 ¹⁾	2020	2020 ¹⁾	2021	2021 ¹⁾	2020	2020 ¹⁾
Fixed remuneration	Basic salary	860	95.3%	774 ²⁾	99.9%	860	45.3%	-	-
	Ancillary benefits	42	4.7%	1	0.1%	63	3.3%	-	-
	Total	902	100.0%	775	100.0%	923	48.6%	-	-
Variable remuneration	One-year variable remuneration 2020 ³⁾ (2019)	-	-	-	-	-	-	-	-
	Long-term variable remuneration								
	Three-year variable remuneration Deferral 2018 ⁴⁾ (Deferral 2017)	-	-	-	-	-	-	-	-
	Payment option programmes LH Performance 2017 (LH Performance 2016)	-	-	-	-	-	-	-	-
	Total	0	0.0%	0	0.0%	0	0.0%	-	-
Other	-	-	-	-	975 ⁵⁾	51.4%	-	-	
Total remuneration as defined in Section 162 AktG	902	100.0%	775	100.0%	1,898	100.0%	-	-	
Service cost	467	-	450	-	450	-	-	-	
Total remuneration	1,369	-	1,225	-	2,348	-	-	-	

¹⁾ The relative proportions indicated here relate to the total remuneration shown in the table as defined in Section 162 AktG excluding retirement benefit expenses.

²⁾ Including voluntary waiver of 20% of basic salary for the period from April to September 2020.

³⁾ Considering the waiver of claims to the one-year variable remuneration in 2020.

⁴⁾ Considering the waiver of the payment of Deferral 2018 in March 2021 and the deferral of payment until further notice.

⁵⁾ The Supervisory Board agreed to a one-off gross payment of EUR 2,925,000 to Remco Steenberg in compensation for his loss of benefits from his previous employer. The compensation payment is being made in three instalments of EUR 975,000 in 2021, 2022 and 2023.

In 2021, the members of the Executive Board received no benefits or promises of benefits from third parties relating to their work on the Executive Board.

FORMER EXECUTIVE BOARD MEMBERS

The following table shows the remuneration paid and due to former Executive Board members in 2021 in accordance with Section 162 Paragraph 1 Sentence 1 AktG. In accordance with Section 162 Paragraph 5 AktG, no personal data was disclosed for former Executive Board members who left the Executive Board before 31 December 2011.

T193 REMUNERATION PAID AND DUE IN ACCORDANCE WITH SECTION 162 PARAGRAPH 1 SENTENCE 1 AKTG FOR FORMER EXECUTIVE BOARD MEMBERS

in € thousands	Fixed and variable remuneration			Pensions		Total
	Ancillary benefits	One-year variable remuneration 2020	Three-year variable remuneration Deferral 2018	Annuity	Capital payment	
Ulrik Svensson Member of the Executive Board until 30 April 2020	-	51	311	-	-	362
Christoph Franz Member of the Executive Board until 7 February 2014	-	-	-	-	2,794	2,794
Stefan Lauer Member of the Executive Board until 6 May 2012	2	-	-	369	-	371

Total current payments and other benefits to former Executive Board members and their surviving dependants (including the individual payments shown in [T193, p. 280](#), with the exception of the capital payment to Christoph Franz) came to EUR 5.6m in the reporting year (previous year: EUR 5.2m). This also includes non-cash benefits and concessionary travel. Pension obligations towards former Executive Board members and their surviving dependants amount to EUR 67.2m (previous year: EUR 67.8m).

Malus and clawback rule

In the event of an intentional or grossly negligent breach of statutory obligations or internal policies (compliance penalty or clawback), or if variable remuneration components dependent on achieving certain targets are paid on the basis of false data (performance clawback), the Supervisory Board has the right to withhold or demand repayment of short-term and long-term variable remuneration.

Enforcement of the withholding or repayment claim is at the professional discretion of the Supervisory Board.

The Supervisory Board did not make use of the right to withhold or demand repayment of variable remuneration components in 2021.

Retirement benefits

The members of the Executive Board receive retirement benefit commitments based on a defined contribution plan. As of 2019, every Executive Board member receives, for the duration of their employment, a fixed annual amount of EUR 855k for the CEO and EUR 450k for ordinary members as a contribution to their retirement benefit account.

The investment guidelines are based on the investment concept for the Lufthansa Pension Trust, which also applies to staff members of Deutsche Lufthansa AG.

Retirement benefits are paid when the beneficiary reaches the retirement age of 60 years (if they are no longer an Executive Board member) or in the event of disability or death. If employment ends before retirement age is reached, the beneficiaries or their surviving dependants acquire a retirement benefit credit as defined in the investment concept. Deutsche Lufthansa AG guarantees the amounts paid to the retirement benefit account.

A supplementary risk capital sum will be added to the pension credit in the event of a claim for a disability pension or a pension for surviving dependants. This sum will consist of the average contributions paid into the pension account over the past three years multiplied by the number of full years by which the claimant is short of the age of 60 from the time a pension entitlement arises.

The pension credit is paid out in ten instalments. On application by the Executive Board member or his/her surviving dependants, a payment as a lump sum or in fewer than ten instalments may also be made, subject to approval by the Company. For the pension credits received until 31 December 2018 by Carsten Spohr and Harry Hohmeister, the pension credit may also be paid as an annuity, on application and with the approval of the Company.

Under his contract as a pilot, which is currently not active, Carsten Spohr is entitled to a transitional pension in accordance with the wage agreement "Transitional pensions for cockpit staff". If Carsten Spohr leaves the Executive Board before he becomes 60 and resumes his employment as a pilot, he is entitled to draw a "Transitional pension for cockpit staff at Lufthansa" once he becomes 60 or on request once he turns 55, in accordance with the provisions of the wage agreement. This additional benefit is paid if certain conditions of eligibility are met and provides for a monthly pension of up to 60% of the last modified salary until the beneficiary reaches the age of 63.

PENSION ENTITLEMENTS IN 2021

The total amount of pension entitlements acquired by active and former Executive Board members in 2021 was EUR 3.0m (previous year: EUR 4.0m) according to HGB and EUR 3.2m

(previous year: EUR 3.9m) under IFRS was included in staff costs (service cost). The individual service cost and present values of pension entitlements are as follows:

T194 PENSION ENTITLEMENTS ACCORDING TO HGB AND IFRS

in € thousands	HGB		HGB		IFRS		IFRS	
	Current service costs		Settlement amount of pension obligations		Current service costs		Defined-benefit obligations (DBO)	
	2021	2020	31.12.2021	31.12.2020	2021	2020	31 Dec 2021	31 Dec 2020
Carsten Spohr	810	797	9,413	8,018	871	925	9,415	8,024
Christina Foerster	428	651	1,114	654	461	450	1,118	666
Harry Hohmeister	431	427	4,265	3,572	453	483	4,265	3,573
Detlef Kayser	430	434	1,828	1,304	457	460	1,828	1,305
Michael Niggemann	435	680	1,154	684	467	450	1,159	701
Remco Steenbergen	513	-	513	-	450	-	514	-
Thorsten Dirks (until 30 June 2020)	-	200	-	1,770	-	251	-	1,770
Ulrik Svensson (until 30 April 2020)	-	142	-	1,890	-	160	-	1,890
Bettina Volkens (until 31 December 2019)	-	651	-	3,768	-	698	-	3,768
	3,047	3,982	18,287	21,660	3,159	3,877	18,299	21,697

Maximum remuneration

In addition to the caps on short-term and long-term variable remuneration, the Supervisory Board has capped the total amount of remuneration in the financial year (including fringe benefits and retirement benefit commitments) in accordance with Section 87a Paragraph 1 Sentence 2 No. 1 AktG. Since 2019, this maximum remuneration has been EUR 9.5m for the Chairman of the Executive Board and CEO and EUR 5m for an ordinary Executive Board member and relates to actual expenses or the actual payment of remuneration agreed for the financial year (including retirement benefit commitments). If remuneration for a financial year exceeds this cap, the variable remuneration is reduced accordingly.

Since the four-year performance period of the long-term variable remuneration results in the payment of this component only in the third year after the reporting year, compliance with the remuneration cap can only be reported definitively in the remuneration report for the third financial year following the year in which the agreement was made. As the Supervisory Board suspended the variable remuneration agreement for Executive Board members for 2021, it is already certain that the cap as defined in Section 87a Paragraph 1 Sentence 2 No. 1 AktG will not be exceeded for 2021.

Share Ownership Guidelines

The Share Ownership Guidelines (SOG) have been an integral part of the remuneration system for the Executive Board since 2019. They oblige the CEO to acquire Lufthansa shares worth twice his basic salary and ordinary Executive Board members to acquire shares worth one year's gross basic salary and to hold them for their term of office and beyond. Executive Board members must demonstrate annually that they meet this obligation.

The minimum number of Lufthansa shares to be purchased by the Executive Board members is determined at the beginning of the term of office based on the average share price over the 125 trading days before the service contract begins. Shares are to be acquired over a four-year period. Existing shareholdings can be included in the calculation. In connection with the restrictions on Executive Board remuneration for the duration of the ESF stabilisation measures, the Supervisory Board has decided to suspend the four-year acquisition period for as long as the stabilisation measures are in place. It will be resumed as soon as variable remuneration is paid again.

T195 SHAREHOLDINGS OF CURRENT EXECUTIVE BOARD MEMBERS

	Number of LH shares according to SOG	Shareholdings as of 31 Dec 2021
Carsten Spohr	155,969	309,960
Christina Foerster	56,126	9,852
Harry Hohmeister	41,044	152,096
Detlef Kayser	41,044	44,640
Michael Niggemann	56,126	100,000
Remco Steenbergen	99,113	100,000

The shares bought in accordance with the SOG are to be held until the end of the service contract with the Executive Board member. After they leave, Executive Board members may sell 25% of their SOG shares per year.

End-of-service benefits**CAP ON SEVERANCE PAY**

If a contract is terminated early for reasons other than good cause or a change of control, the Company will not remunerate more than the value of outstanding entitlements for the remainder of the contract, as recommended by the German Corporate Governance Code, whereby these payments may not exceed annual remuneration for two years (severance cap). The cap on severance pay is determined by the annual remuneration, which is made up of basic salary and the target amounts of one-year and long-term variable remuneration; in-kind benefits and ancillary benefits are not considered. This means the maximum severance pay for an ordinary Executive Board member is currently EUR 2,560,000 per annum, or EUR 4,864,000 for the CEO.

POST-CONTRACTUAL NON-COMPETE CLAUSE

As a rule, the Executive Board members are subject to a one-year non-competition clause after leaving the Executive Board. The Company pays the Executive Board member compensation of half their annual basic salary for the duration of the post-contractual non-compete clause. The Company has the option of waiving the post-contractual non-compete clause up to the end of the service contract with the effect that it is no longer obliged to pay compensation six months after the waiver is entered. Currently, only the service contracts with Harry Hohmeister, Detlef Kayser and Remco Steenbergen, which were signed after the German Corporate Governance Code as amended on 16 December 2019 came into effect, as well as future appointments and reappointments, require severance pay to be offset against the non-compete compensation.

CHANGE OF CONTROL

If the contract between an Executive Board member and Deutsche Lufthansa AG is terminated in connection with a change of control at the Company, the Executive Board member is entitled to a payment equivalent to the remuneration outstanding for the remainder of the contract. The amount of payment may not exceed 150% of the contractual cap on severance pay mentioned above. In line with the recommendation of the German Corporate Governance Code as amended on 16 December 2019 (GCGC 2019), the cap on severance pay also applies to a change of control for the service contracts with Harry Hohmeister, Detlef Kayser and Remco Steenbergen, which were signed after GCGC 2019 came into effect, as well as for future appointments and reappointments.

Review of the appropriateness of Executive Board remuneration

The Supervisory Board also reviewed the amount and structure of Executive Board remuneration in 2021. It again confirmed that the Executive Board remuneration is appropriate, particularly given that all variable remuneration components have been suspended.

When reviewing the appropriateness of Executive Board remuneration, the Supervisory Board also considers whether it is market-standard by examining the amount and structure of Executive Board remuneration at comparable companies and the relation between remuneration for the Executive Board and for senior managers and the workforce as a whole, also over time.

To determine whether it is appropriate and market-standard, the target and maximum remuneration are assessed on the basis of Deutsche Lufthansa AG's position in a comparable market, as defined by reference to revenue, employees and market capitalisation. The comparable market consists of DAX and MDAX companies of a similar size as of the assessment date.

For the vertical appropriateness review, the Supervisory Board looks at the remuneration of both senior executives and the workforce as a whole, with regard to the German Group companies in the Lufthansa collective bargaining group.

Remuneration of Supervisory Board members

Structure of Supervisory Board remuneration

The rules for the remuneration of Supervisory Board members in 2021 are based on a resolution passed at the Annual General Meeting on 8 May 2012. Since 2013, remuneration has consisted solely of fixed remuneration plus an attendance fee. It reflects the responsibility and the scope of the Supervisory Board members' work. An additional remuneration is an appropriate reflection of the higher time commitment by the Chair and the Deputy Chair of the Supervisory Board, and by the members and Chair of committees.

Section 113 Paragraph 3 AktG stipulates that the Annual General Meeting of a listed company must pass a resolution on Supervisory Board remuneration at least every four years. A resolution confirming the remuneration is permitted. The Annual General Meeting passed such a resolution on 4 May 2021 approving the remuneration system and the remuneration of Supervisory Board members by a majority of 97.6%.

Ordinary Supervisory Board members receive remuneration of EUR 80k for each financial year in accordance with Section 13 Paragraph 1 of the Articles of Association. The Chair receives EUR 240k, and the Deputy Chair EUR 120k. The Chair of the Audit Committee receives an additional EUR 60k and other members of the Audit Committee receive an additional EUR 30k. Chairs of other committees receive an additional EUR 40k and other members of other committees receive an additional EUR 20k. Remuneration for committee work is subject to the proviso that the committee must have met at least once in the financial year.

If Supervisory Board members leave the Supervisory Board or a post in one of its committees for which additional remuneration is paid during the course of a financial year, they receive their remuneration pro rata temporis. Pro rata temporis remuneration for committee work is subject to the proviso that the committee must have met at least once before their departure.

Fixed remuneration and remuneration for committee work are due at the end of each financial year, attendance fees are due in principle at the end of each meeting. Attendance fees were paid directly after the meetings in 2021. Supervisory Board remuneration was paid in January 2022.

Remuneration paid and due in 2021 pursuant to Section 162 AktG

The remuneration paid and due to the Supervisory Board members in 2021 (fixed remuneration plus remuneration for committee work) for 2021 came to EUR 2,170k (previous year: EUR 1,887k).

The following table shows the amounts for the individual Supervisory Board members.

T196 REMUNERATION PAID AND DUE IN ACCORDANCE WITH SECTION 162 PARAGRAPH 1 SENTENCE 1 AKTG - SUPERVISORY BOARD MEMBERS

	2021 ¹⁾					2020 ²⁾				
	Fixed remuneration		Remuneration for committee work		Total Supervisory Board remuneration	Fixed remuneration		Remuneration for committee work		Total Supervisory Board remuneration
	in € thousands	in %	in € thousands	in %	in € thousands	in € thousands	in %	in € thousands	in %	in € thousands
Karl-Ludwig Kley	240	80.0	60	20.0	300	210	79.8	53	20.2	263
Christine Behle	120	85.7	20	14.3	140	105	85.4	18	14.6	123
Alexander Behrens	80	72.7	30	27.3	110	70	72.9	26	27.1	96
Jörg Cebulla	80	72.7	30	27.3	110	70	72.9	26	27.1	96
Erich Clementi	80	100.0	-	0.0	80	44	100.0	-	-	44
Thomas Enders	80	66.7	40	33.3	120	44	80.0	11	20.0	55
Herbert Hainer (until 5 May 2020)	-	-	-	-	-	26	66.7	13	33.3	39
Christian Hirsch (until 31 Dec 2020)	-	-	-	-	-	70	100.0	-	-	70
Jürgen Jennerke	80	100.0	-	0.0	80	5	100.0	-	-	5
Michael Kerkloh	80	72.7	30	27.3	110	25	75.8	8	24.2	33
Carsten Knobel	80	72.7	30	27.3	110	70	72.9	26	27.1	96
Holger Benjamin Koch	80	100.0	-	0.0	80	70	100.0	-	-	70
Martin Koehler (until 31 Aug 2020)	-	-	-	-	-	45	80.4	11	19.6	56
Harald Krüger	80	57.1	60	42.9	140	44	100.0	-	-	44
Martina Merz (until 5 May 2020)	-	-	-	-	-	26	100.0	-	-	26
Michael Nilles (until 5 May 2020)	-	-	-	-	-	26	100.0	-	-	26
Monika Ribar (until 31 Aug 2020)	-	-	-	-	-	45	72.6	17	27.4	62
Birgit Rohleder	80	100.0	-	0.0	80	70	100.0	-	-	70
Miriam Sapiro	80	100.0	-	0.0	80	70	100.0	-	-	70
Ilja Schulz	80	80.0	20	20.0	100	70	80.5	17	19.5	87
Britta Seeger (since 4 May 2021)	53	100.0	-	0.0	53	-	-	-	-	-
Birgit Spineux (since 1 Jan 2021)	80	100.0	-	0.0	80	-	-	-	-	-
Astrid Stange	80	100.0	-	0.0	80	44	100.0	-	-	44
Olivia Stelz	80	100.0	-	0.0	80	70	100.0	-	-	70
Stephan Sturm	27	57.4	20	42.6	47	70	56.9	53	43.1	123
Angela Titzrath	80	100.0	-	0.0	80	25	100.0	-	-	25
Christina Weber (until 2 Dec 2020)	-	-	-	-	-	74	75.5	24	24.5	98
Klaus Winkler	80	72.7	30	27	110	70	100.0	-	-	70
Matthias Wissmann (until 5 May 2020)	-	-	-	-	-	26	100.0	-	-	26
Total	1,800	82.9	370	17.1	2,170	1,584	83.9	303	16.1	1,887

¹⁾ Remuneration for financial year 2021 due according to Section 162 AktG, paid in January 2022.

²⁾ Remuneration for financial year 2020 due according to Section 162 AktG, paid in January 2021. Considering the voluntary waiver of 25% of remuneration for April to September 2020 and of 25% of the attendance fees for the meeting in March 2020 as well as all other meetings between April and September 2020.

Other remuneration, mainly attendance fees, amounted to EUR 29k (previous year: EUR 23k). The Deutsche Lufthansa AG Supervisory Board members were also paid EUR 26k for work on supervisory boards of Group companies (previous year: EUR 16k).

Disclosures on the relative changes in Executive Board and Supervisory Board remuneration, the remuneration of the rest of the workforce and the Company's profitability

The following table shows the annual change in remuneration for the members of the Executive Board and the Supervisory Board, the average remuneration of the remaining workforce and year-on-year changes in selected earnings indicators for the Lufthansa Group. The remuneration of Executive Board members and Supervisory Board members shown in the tables [T192](#), p. 279f., and [T196](#), p. 285, represent the remuneration paid and due within the meaning of Section 162 Paragraph 1 Sentence 1 AktG.

Profitability is partly shown by reference to revenue and Adjusted EBIT for the Lufthansa Group. The latter is a key performance indicator for the Group and forms the basis for the financial targets in the variable remuneration of the Executive Board. In addition, the development of the annual financial statements of Deutsche Lufthansa AG is presented.

The presentation of average remuneration for FTE employees is based on the employees of the German companies in the Lufthansa collective bargaining group (without Lufthansa CityLine GmbH and Germanwings GmbH). A further distinction is made between the total workforce and those covered by collective bargaining agreements. The decline in the remuneration of employees compared with 2020 is largely due to contributions to overcome the crisis and structural changes.

T197 COMPARATIVE PRESENTATION OF CHANGES IN THE REMUNERATION OF THE EXECUTIVE BOARD, THE SUPERVISORY BOARD AND THE WORKFORCE, AS WELL AS THE DEVELOPMENT OF PROFITABILITY¹⁾

in %	Change 2020 to 2019	Change 2021 to 2020
I. Executive Board		
Active Executive Board members²⁾		
Carsten Spohr	-22.9	-56.2
Christina Foerster (since 1 Jan 2020)	-	+16.6
Harry Hohmeister	-26.2	-59.6
Detlef Kayser	+11.9	-15.1
Michael Niggemann (since 1 Jan 2020)	-	+16.4
Former Executive Board members³⁾		
Ulrik Svensson (until 30 Apr 2020)	-35.6	-67.7
Stefan Lauer (until 6 May 2013)	+2.2	+/-0
II. Workforce		
Overall workforce in Germany	-14.5	-5.4
Pay-scale staff in Germany	-13.5	-3.2
III. Earnings indicators		
Net profit/loss for the year Deutsche Lufthansa AG	-231.1	-196.2
Adjusted EBIT Lufthansa Group	-369.1	+56.9
Revenue Lufthansa Group in €m	-62.7	+23.7
IV. Remuneration Supervisory Board⁴⁾		
Karl-Ludwig Kley	-12.3	+14.1
Christine Behle	-12.1	+13.8
Alexander Behrens	-12.7	+14.6
Jörg Cebulla	-12.7	+14.6
Erich Clementi (since 5 May 2020)	-	+81.8
Thomas Enders (since 5 May 2020)	-	+118.2
Jürgen Jennerke (since 8 Dec 2020)	-	+1,500
Michael Kerkloh (since 2 Sep 2020)	-	+233.3
Carsten Knobel	-12.7	+14.6
Holger Benjamin Koch	-12.5	+14.3
Harald Krüger (since 5 May 2020)	-	+218.2
Birgit Rohleder	-12.5	+14.3
Miriam Sapiro	-12.5	+14.3
Ilja Schulz	-13.0	+14.9
Astrid Stange (since 5 May 2020)	-	+81.8
Olivia Stelz	-12.5	+14.3
Stephan Sturm (until 4 May 2021)	-12.1	-61.8
Angela Titzrath (since 2 Sep 2020)	-	+220
Klaus Winkler	-12.5	+57.1

¹⁾ Figures for Executive Board members, the Supervisory Board members and the workforce are based on remuneration paid and due in 2020 within the meaning of Section 162 Paragraph 1 Sentence 1 AktG. The transitional rule defined in Section 26 of the Introductory Act to the German Stock Corporation Act was applied.

²⁾ Disclosures do not include Remco Steenbergen, who has only been an Executive Board member since 1 January 2021 and therefore received no Executive Board remuneration prior to this date.

³⁾ Disclosures do not include Christoph Franz, who received no remuneration in the 2019 and 2020 financial years.

⁴⁾ Disclosures do not include Britta Seeger and Birgit Spineux, since they have only been Supervisory Board members since 2021 and therefore received no Supervisory Board remuneration in 2020 and 2019.

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GRI Content Index

T198 GRI CONTENT INDEX



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Fighting corruption and bribery	GRI 103-1, 103-2, 103-3	Management approach	➤ p. 127ff.
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Sustainable Development Goals (SDG) Index


T199 SUSTAINABLE DEVELOPMENT GOALS (SDG)

SDG	Sub-target	Aspect/issue	Lufthansa Group's contribution to achieving the global SDGs as defined in the 2030 Agenda of the United Nations	Page		
	3.3	Employee concerns/ Health and safety at work	Vaccination against influenza was offered to employees of Lufthansa German Airlines, SWISS and Austrian Airlines in 2021	p. 123		
			Diverse measures create the conditions for ongoing prevention of coronavirus infections	p. 124f.		
			One special development in the reporting year was the establishment of three vaccination centres in Hamburg, Frankfurt and Munich for the coronavirus vaccination by the Medical Services of Deutsche Lufthansa	p. 125		
			More than 14,000 employees of the Lufthansa Group in Germany were vaccinated between June and August 2021	p. 125		
			In December 2021, the Lufthansa Group also offered a booster vaccination to its employees in Germany	p. 125		
			Social concerns	Lufthansa Cargo supports global vaccine distribution by UNICEF	p. 127	
			3.4	Employee concerns/ Health and safety at work	Psychosocial counselling and occupational health management strengthen managers and employees in the crisis	p. 125
					3.8	Employee concerns/ Health and safety at work
			The Medical Services act as a comprehensive centre of excellence at the three sites in Hamburg, Frankfurt and Munich in close cooperation with the Medical Services of the Lufthansa Group companies of SWISS and Austrian Airlines	p. 123ff.		
			The Medical Services at Lufthansa German Airlines, SWISS and Austrian Airlines offer the full range of services for aviation and occupational medicine, vaccinations and travel medicine, outpatient care, a comprehensive social and medical advisory service and other preventive and healthcare treatments	p. 123		
Both the Medical Services and the Psychosocial Centre have a certified quality management system in accordance with DIN EN ISO 9001:2015	p. 123					
In the reporting year, the Health Index was again tracked through the "involve me!" employee survey. The rating is 2.3 on a scale from 1 (best) to 5 (worst)	p. 125					
The occupational safety function consistently implements preventive measures to avoid accidents, health risks and occupational illnesses	p. 123					
The occupational safety programme is developed continuously. Extensive training materials and several web-based training courses were developed and introduced on a large scale in the reporting year to ensure a high standard of occupational safety and health instruction	p. 125					
Accident figures allow the effectiveness of training to be monitored: 48% of the worldwide employees of the Lufthansa Group and 83% of the employees in Germany were included. All events that resulted in downtime of at least one calendar day are included in this indicator. This translates into 3.7 work-related injuries per one million hours worked. Other companies will be included in the figures over time	p. 125					
	4.5	Social concerns	A contribution to sustainable social development	p. 126f.		
			The main objective of help alliance is to provide disadvantaged young people access to education and empower them to lead self-sufficient lives	p. 126		
			In 2021, help alliance carried out 48 aid projects in around 20 countries with a project volume of EUR 2.7m, of which 87% were used to fund education. Approximately 40,000 disadvantaged people around the world received support through these projects	p. 127		



T199 SUSTAINABLE DEVELOPMENT GOALS (SDG) (continued)

SDG	Sub-target	Aspect/issue	Lufthansa Group's contribution to achieving the global SDGs as defined in the 2030 Agenda of the United Nations	Page
	7.2	Environmental concerns/ Climate protection	In the past decade, the Lufthansa Group has paid close attention to the research, testing and use of sustainable aviation fuel (SAF), i.e. synthetic kerosene made using renewable energy sources. Since then, the Lufthansa Group has worked in partnerships to drive key technologies for producing sustainable aircraft fuels	➤ p. 101
			In developing SAF, the Lufthansa Group focuses on synthetic kerosene based on waste materials, ligneous biomass and renewable electrical energy (power-to-liquid – PtL) as well as research into the direct use of sunlight for fuel synthesis	➤ p. 103
			The partnership with the Swiss Federal Institute of Technology (ETH) Zurich and its two spin-offs Synhelion and Climeworks was intensified in the reporting year	➤ p. 103
			SWISS signed a letter of intent expressing its interest in becoming the launch customer for Synhelion's solar aviation fuel	➤ p. 103
			In 2021, the Lufthansa Group became a launching customer for synthetic kerosene from the world's first industrial production facility for PtL fuel in Werlte	➤ p. 103
			The Lufthansa Group is taking part in the HySupply initiative launched by the BDI and acatech. The aim is to develop a supply chain for green hydrogen from Australia	➤ p. 103
			In order to safeguard the supply of SAF in the long term, the Lufthansa Group has developed a three-pronged strategy	➤ p. 103
				8.2
The impact of the Company on non-financial aspects is taken into account in the Group risk management system of the Lufthansa Group	➤ p. 95			
Variable management remuneration is also linked to non-financial factors such as specific CO ₂ emissions	➤ p. 96			
Employee concerns/ transformation capability	Transformation support and training established as routine processes	➤ p. 121		
	Continuous development of transformation capability	➤ p. 122		
	Apprenticeship as Service Management Professional continues. In 2021, 581 employees successfully completed the qualification programme. Since the start of the programme, 1,170 employees have successfully completed the training to become Service Management Professionals	➤ p. 122		
8.5	Employee concerns/ Attractiveness as an employer	Working and employment conditions for employees and managers are flexible and are adapted continually		➤ p. 117
		Salary cuts and redundancies to be organised in a socially responsible way		➤ p. 118
		The Engagement Index also provides information about the Company's attractiveness as an employer and has been tracked by the voluntary annual employee survey, "involve me!" since 2015. In 2021, the value of the Engagement Index was 2.3		➤ p. 118
8.7	Business ethics and compliance/Respect for human rights	Respect for human rights is a key issue for the Lufthansa Group. This is also reflected in working conditions at the Group companies, the guarantee of freedom of association and assembly, rules to ensure gender equality, and the inclusion of minorities as a matter of course. It is also demonstrated in the expectation expressed in the Supplier Code of Conduct that the business partners included in the value chain should also adhere to the same principles		➤ p. 129ff.
		The German National Action Plan on Business and Human Rights (NAP) provides the framework for measures related to human rights	➤ p. 130	
		The Lufthansa Group develops management approach for addressing human trafficking	➤ p. 130	
		Target group focused awareness programmes for managers and employees	➤ p. 130f.	
		Procedures for reporting human rights violations have been implemented	➤ p. 131	
		"Zero tolerance" for cases of sexual harassment	➤ p. 131	
		Preparations for the German Corporate Due Diligence in Supply Chains Act are being made	➤ p. 131	

T199 SUSTAINABLE DEVELOPMENT GOALS (SDG) (continued)

SDG	Sub-target	Aspect/issue	Lufthansa Group's contribution to achieving the global SDGs as defined in the 2030 Agenda of the United Nations	Page	
	8.8	Responsible supply chain management/ Procurement practices	The Group procurement policy includes the obligation to assume social and environmental responsibility	➤ p. 133	
			A project was launched in 2021 for the Group-wide, uniform and timely implementation of the requirements for the upstream supply chain under the German Corporate Due Diligence in Supply Chains Act	➤ p. 134	
			Detailed concept for expansion of the established risk management system is being developed	➤ p. 134	
		Employee concerns/ Attractiveness as an employer	Unrestricted freedom of association is an established feature of the Lufthansa Group	➤ p. 117	
			Labour union partners are firmly established at the Lufthansa Group	➤ p. 119	
	9.1	About this combined non-financial declaration	Employee concerns/ Health and safety at work	Of 60,517 Lufthansa Group employees in Germany (as of 31 December 2021), 83% benefit directly from collective bargaining arrangements. The remaining 17% are largely managers and non-payscale employees in senior positions. However, many of the regulations for these non-payscale employees are also based on the collective bargaining agreements	➤ p. 119
				See SDG 3.3, 3.4 and 3.8	
				Contribution to containing the coronavirus pandemic and upholding global supply chains. The Lufthansa Group and in particular its logistics subsidiary Lufthansa Cargo often have a particularly important role to play in responding to crises and natural disasters, because it is only by air that aid workers and equipment can be transported over great distances. Airfreight is also vital for maintaining global supply chains and helps to strengthen global trade. For these reasons, the airlines in the Lufthansa Group also decided in 2021 to maintain relevant flight connections for the transport of passengers and freight despite wide-ranging travel restrictions. This made it possible to deliver urgently needed goods	➤ p. 98
				The Lufthansa Group invests continuously in modern, fuel-efficient aircraft and engine technologies, which represent the most important element in reducing CO ₂ emissions from flight operations in this decade. Measures to technically modify the existing fleet are also constantly examined and implemented in cooperation with partners from research and industry where appropriate	➤ p. 100
				The CleanTech Hub was founded by the Lufthansa Group in 2021 and provided with financial resources to promote innovative projects in the field of sustainability	➤ p. 103
9.4	Environmental concerns/ Climate protection		Up to USD 250m has been released for the procurement of SAF on the spot market by decision of the Executive Board	➤ p. 103	
			Jointly with DFS, the Lufthansa Group is seeking new possibilities for flight track analysis based on artificial intelligence methods as part of a research and development project. The first-time application of this innovative concept is expected to allow for "greener flying" in the future through the development of new airspace structure measures	➤ p. 105	
			In 2021, Lufthansa Technik and its partners from industry and research initiated a project promoted by the Hanseatic City of Hamburg in which extensive maintenance and ground processes for handling hydrogen technology will be designed and tested	➤ p. 105	
			Lufthansa Group aircrafts collect data for climate research	➤ p. 106	
			Data that is freely and openly accessible for global research has been collected on more than 30,000 Lufthansa German Airlines flights. This data is currently used by some 300 organisations around the world		
9.5	Environmental concerns/ Climate protection		In 2021, the Lufthansa Group and partners designed a research project on the feasibility of climate-optimised flight routes and applied for funding from the German Federal Aviation Research Programme. The goal of the project is to identify ways to prevent contrails, whose climate impact was quantified for the first time in 2020	➤ p. 106	

T199 SUSTAINABLE DEVELOPMENT GOALS (SDG) (continued)

SDG	Sub-target	Aspect/issue	Lufthansa Group's contribution to achieving the global SDGs as defined in the 2030 Agenda of the United Nations	Page
	9.4/9.5	Environmental concerns/ Active noise abatement	Since 2001, the Lufthansa Group has played an active and continuous role in research projects and noise abatement activities	➤ p. 106
			Investments in modern and thus quieter aircraft	➤ p. 107
			Noise-reducing technologies for the existing fleet	➤ p. 107
			Participation in noise research	➤ p. 107
			Development of optimised flight procedures and flight routes in cooperation with system partners	➤ p. 108
			Dialogue with residents near airports and other stakeholders	➤ p. 108
			99.6% of the operational Group fleet meet standard for aircraft noise (ten-decibel criterion set by the ICAO Chapter 4 standard)	➤ p. 108
	10.2	Employee concerns/ Diversity and equal opportunities	Diversity and equal opportunities are key elements of the HR strategy	➤ p. 119ff.
			The Lufthansa Group's goal is to increase the proportion of women in management (senior executives at Leadership Circle Level) from 18.7% as of 31 December 2021 to 25% by 2025. The targets for the proportion of women at the two management levels below the Executive Board were set for Deutsche Lufthansa AG at 25.7% for the first management level and 30.6% for the second management level, both to be achieved by the end of 2025	➤ p. 120
			Within the framework of the German Act on Equal Participation of Women in Executive Positions in the Private and Public Sectors, Deutsche Lufthansa AG set itself the following targets in 2016 for the proportion of women at the senior executive level as of 31 December 2021: 20% at management level 1 and 30% at management level 2. The target was met for management level 1, with 20.5% women. At management level 2, Deutsche Lufthansa AG missed the target of 30%, with a current share of women at 26.9%	➤ p. 120 / p. 121
			Flexible working time models have been an important element in the Lufthansa Group for many years to support the reconciliation of work and family life in the best possible manner	➤ p. 117
			The Lufthansa Group supports work-life balance	➤ p. 119
			The Lufthansa Group uses a broad portfolio of activities to make it easier for employees to combine work and family and to care for relatives	
			Inclusion of people with disabilities is part of social responsibility	➤ p. 119
			Gender equality is promoted by a wide range of measures	➤ p. 120
			Support for LGBTI concerns	➤ p. 120
			Establishing new business networks to bring diversity to the fore	➤ p. 121
		People from 172 nations work for the Group today	➤ p. 121	
	12.2	Environmental concerns/ Climate protection	Fuel efficiency (see SDG 13.1)	
	12.4	Environmental concerns/ Waste management	Lufthansa Group airlines reduce plastic and food waste in line with international guidelines	➤ p. 108ff.
	12.5	Environmental concerns/ Waste management	The concept for comprehensive waste reduction follows the waste hierarchy of EU Directive 2008/98/EC: Reduce - Reuse - Recycle - Replace	➤ p. 108
Reduce: Lufthansa German Airlines, SWISS and Austrian Airlines changed the food and beverage selection on short-haul flights to purchase-only for Economy Class guests in the 2021 financial year. This has resulted in significantly fewer plastic items being loaded			➤ p. 109	
		Reuse: The provision of reusable in-flight products is a firmly established concept. The potential for switching to reusable products is examined regularly when products are modified and the load is adjusted if necessary. SWISS switched to reusable cutlery and plates on short-haul flights for Economy Class guests in the reporting year	➤ p. 109	

T199 SUSTAINABLE DEVELOPMENT GOALS (SDG) (continued)



SDG	Sub-target	Aspect/issue	Lufthansa Group's contribution to achieving the global SDGs as defined in the 2030 Agenda of the United Nations	Page
			Recycle: Processes for increasing the use of recyclable products are being developed and implemented in collaboration with suppliers, caterers, cleaning and disposal services – Since 2019, Austrian Airlines has been using single-use plastic cups that are recycled with other single-use packaging in a patented process that turns them back into synthetic crude oil. Up to 1 litre of crude oil can be extracted from 1 kilogram of plastic collected – In 2021, Lufthansa German Airlines conducted a field trial on incoming flights. In a closed-loop cycle, recycled PET water bottles that were left behind in the cabin were transferred to the food sector for reuse as water bottles. This meant that around 5 tonnes of recycled PET were reused for refilling each month. The outcomes will be analysed and reviewed to determine whether the process can be adopted permanently – In preparation for a future recycling loop, cups made of recycled PET, which were specially approved by German authorities to be included in a recycling process, were introduced at Lufthansa German Airlines in 2021. This will involve around 135 million cups per year	p. 109f.
			Replace: – Lufthansa German Airlines promotes the development of new types of materials for in-flight use. Single-use plastic items that today are essential to the Network Airlines' product and service concepts will be gradually replaced by those made from renewable resources (for example bamboo) or recycled raw materials (for example recycled PET) – When Lufthansa German Airlines and SWISS restructure their food and beverage offerings a significant share of the fresh food for Economy Class guests on short-haul flights will be offered in packaging made from agricultural waste material, which is produced with 100% renewable energy and is carbon-neutral.	p. 110
			The annual consumption of single-use plastic articles in the in-flight products of Lufthansa German Airlines, SWISS and Austrian Airlines was reduced by 71% in 2021	p. 110
			The Lufthansa Group launches measures to avoid in-flight food waste	p. 110
			Methodology for the collection of waste is being developed	p. 110
	12.6	Responsible supply chain management	Sustainability in the supply chain firmly established in the Company	p. 133f.
			The Lufthansa Group's expectations of its suppliers in terms of social, environmental and ethical responsibility are summarised in the Supplier Code of Conduct, which can be found on the Lufthansa Group website	p. 133
	12.8	Customer concerns/ Product and services	The Lufthansa Group is responding in various ways to customers' wishes for sustainability aspects to play a greater role in products and services, as expressed in surveys	p. 114f.
			Demand-oriented catering and responsible product selection are being expanded	p. 114f.
			Intermodal services offer sustainable alternative forms of travel to the hubs of the Lufthansa Group	p. 115
			Voluntary offsetting or reduction of CO ₂ emissions	p. 115
	13.1	Environmental concerns/ Climate protection	The Lufthansa Group expands its own emission reduction targets	p. 102
			Net emissions are expected to be halved in 2030 compared with 2019.	p. 102
			The Lufthansa Group aims to be carbon-neutral in 2050	p. 102
			The Group aims to switch to carbon-neutral mobility on the ground in its home markets by 2030	p. 102
			In November 2021, the Lufthansa Group further specified its emission reduction targets, made a commitment to science-based targets and submitted an application for validation of these reduction targets for 2030 in accordance with the Aviation Sector Guidance of the Science-based Targets Initiative (SBTI)	p. 102
			Sustainable aviation fuel to be increasingly usable (see SDG 7.2)	
			In addition to one used aircraft, ten new aircraft went into service with Lufthansa Group airlines in 2021	p. 102
			Technical measures are being developed for existing fleet	p. 102f.
			In addition to the use of efficiently sized aircraft and the optimisation of load factors, the Lufthansa Group's operational measures for climate protection include the review and introduction of new flight procedures and navigation technologies, determination of optimal routes and speeds, and monitoring of the numerous fuel-saving measures	p. 101



T199 SUSTAINABLE DEVELOPMENT GOALS (SDG) (continued)

SDG	Sub-target	Aspect/issue	Lufthansa Group's contribution to achieving the global SDGs as defined in the 2030 Agenda of the United Nations	Page
			In 2021, 22 fuel-saving projects were under way across the Group. These projects comprise activities relating to performance and procedures, weight reduction, flight route optimisation and technical developments. This allowed another 30.4 thousand tonnes of CO ₂ emissions to be permanently eliminated and saved about 9.6 thousand tonnes of kerosene	➤ p.104
			More efficient concepts for take-off and landing are being implemented and the digitalisation of approach technologies advanced	➤ p. 104f.
			Mandatory offsets of CO ₂ emissions (ICAO/CORSIA, EU-ETS, CH-EHS, UK ETS)	➤ p. 105
			The Lufthansa Group voluntarily offsets its employees' business travel. In 2021, 24,989 tonnes of CO ₂ were offset via the climate protection organisation myclimate, with which the Lufthansa Group has been partnering since 2008	➤ p. 105
			In 2021, the Lufthansa Group simplified the process for customers to voluntarily offset their carbon emissions during the booking process and expanded existing programmes with business customers	➤ p. 105
			Absolute CO ₂ emissions rose by 13.7 million tonnes in 2021; specific CO ₂ emissions per passenger-kilometre fell to 101.6 grams	➤ p. 106
13.2		Environmental concerns/ Climate protection	Single European airspace should reduce emissions	➤ p. 103f.
			The Lufthansa Group has supported SESAR (the Single European Sky ATM Research Program) for many years with the clear expectation that measurable operational improvements in air traffic management are implemented. The Lufthansa Group is currently participating in 17 projects and is also actively involved in SESAR research and demonstration projects with various airlines of the Lufthansa Group and Lufthansa Systems as an IT provider	➤ p. 104
13.3		About this combined non-financial declaration	In 2021, the Corporate Responsibility department, which reports directly to the Chief Customer Officer, was expanded significantly in terms of content and personnel in order to meet the growing requirements and aims of the Lufthansa Group	➤ p. 97
			In 2021, the Group Policy Committee (GPC) was established and is chaired by the Chief Executive Officer. The GPC discusses politically significant issues, also relevant to sustainability, and prepares decisions	➤ p. 97
			The Sustainability Circle, led by the Corporate Responsibility department, was established in 2021. Its objective is to promote a Group-wide exchange on sustainability topics	➤ p. 97
			The Lufthansa Group's sustainability management is rated above average by external agencies	➤ p. 98
		Environmental concerns/ Climate protection	The Corporate Responsibility department is responsible for the climate protection strategy and develops appropriate measures	➤ p. 101
			To address the growing importance of carbon accounting and environmental regulation and to provide relevant information to the affected areas and employees, the Corporate Responsibility and Group Controlling areas also established an Emissions Management Committee	➤ p. 101
			In acknowledgement of the importance of sustainable aviation fuels for the Lufthansa Group, the Corporate Responsibility department has established two SAF committees	➤ p. 101
13.1 – 13.3		Environmental concerns/ Climate protection	The Lufthansa Group supports the climate protection targets of the aviation sector (IATA, "Destination 2050", EU Green Deal)	➤ p. 101f.
			Intermodal transport to Lufthansa Group hubs is being expanded	➤ p. 104
			Three national destinations are connected by rail to the hubs in Vienna and Zurich, and the expanded cooperation with Deutsche Bahn will add seven more destinations to the Express Rail network in 2021. Passengers on Lufthansa German Airlines can now book an Express Rail connection as an alternative to their flights on almost all domestic German destinations from Frankfurt. More than 220 daily connections to and from Frankfurt have been offered since the end of 2021	
		EU Taxonomy	First-time applicability of the EU Taxonomy Regulation (EU) 2020/852 reported	➤ p. 134f.

T199 SUSTAINABLE DEVELOPMENT GOALS (SDG) (continued)

SDG	Sub-target	Aspect/issue	Lufthansa Group's contribution to achieving the global SDGs as defined in the 2030 Agenda of the United Nations	Page
	16.5	Business ethics and compliance/Compliance management and fighting corruption and bribery	The Code of Conduct provides a framework for acting with integrity	↗ p. 127
			Fighting corruption and bribery is an integral part of the Compliance Management System	↗ p. 128
			All Group companies worldwide were assessed for corruption risks	↗ p. 128
			Web-based compliance training increases risk awareness	↗ p. 128
			Risk-based business partner due diligence aims to ensure integrity of suppliers and service providers	↗ p. 128
	16.10	About this combined non-financial declaration	Deutsche Lufthansa AG is publishing a combined non-financial declaration for the 2021 financial year in accordance with Sections 315b and 315c of the German Commercial Code (HGB) in conjunction with Sections 289b to 289e HGB	↗ p. 95
			The results of the materiality analysis were reviewed by the management in August 2021 in accordance with Section 289c (3) HGB and again formed the basis for selecting the aspects and concerns to be covered in this combined non-financial declaration	↗ p. 96
			The Lufthansa Group reports according to TCFD and SASB standards and bases its reporting on GRI Standards 2016	↗ p. 95
			Business ethics and compliance/Compliance management and fighting corruption and bribery	↗ p. 128
			Electronic whistle-blower system complements the existing ombudsman system	↗ p. 129
Business ethics and compliance/Responsible political engagement		The Lufthansa Group also strives to voice its legitimate interests at the political level and to discuss them with representatives of the various national and international authorities and institutions, and to provide specific information on concrete issues	↗ p. 132	
		The Group's political engagement focuses on transport (market access and traffic rights), climate policy and fair competition	↗ p. 132	
		The Lufthansa Group attaches great importance to transparency in its political engagement, and it has been reported in the EU Transparency Register since 2008 under the number 0714344663-32. The Lufthansa Group regularly publishes its position on current political issues and upcoming decisions in its Policy Brief, which is addressed to political decision-makers but is also accessible to the general public. Six issues of the Policy Brief were published in 2021 and are available on the Company's website	↗ p. 132	
Customer concerns		The Lufthansa Group has a data protection management system that meets the requirements of the European General Data Protection Regulation (GDPR) in the Group companies. The Group has established an organisational structure for data protection that is dedicated to ensuring compliance with the rights of data subjects and the duties of controllers. This entailed creating easily reachable points of contact, both internally and externally	↗ p. 111	
	17.16	About this combined non-financial declaration	Since 2002, the Company has applied the principles of the UN Global Compact for sustainable and responsible corporate governance. In addition, it supports the Sustainable Development Goals (SDGs) of the 2030 Agenda, as adopted by the UN member states in 2015	↗ p. 95
		Environmental concerns	The Lufthansa Group actively participates in relevant national and international business and industry associations and their environmental and sustainability working groups. These include active memberships of the International Air Transport Association (IATA), Airlines for Europe (A4E), Federal Association of the German Aviation Industry (BDL), Federal Association of German Industry (BDI), German Lawyers Institute (DAI) and econsense	↗ p. 99
			Other partnerships and cooperation agreements (see SDG 9.4, 9.5 and 13.1 – 13.3)	

Independent auditor's report on a limited assurance engagement regarding the Non-Financial Declaration

To Deutsche Lufthansa Aktiengesellschaft, Köln,

We have performed a limited assurance engagement on the non-financial declaration of Deutsche Lufthansa Aktiengesellschaft (hereinafter the "Company") which is combined with the non-financial declaration of Deutsche Lufthansa Group as well as the "Principles of the Group" section of the group management report incorporated by reference, for the period from 1 January 2021 to 31 December 2021 (hereinafter the "non-financial declaration").

Not subject to our assurance engagement are other references to disclosures made outside the non-financial declaration.

Responsibilities of the executive directors

The executive directors of the Company are responsible for the preparation of the non-financial declaration in accordance with Sec. 315c in conjunction with Secs. 289c to 289e HGB ["Handelsgesetzbuch": German Commercial Code] and Art. 8 of Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (hereinafter the "EU Taxonomy Regulation") and the Delegated Acts adopted thereunder as well as in accordance with their own interpretation of the wording and terms contained in the EU Taxonomy Regulation and the Delegated Acts adopted thereunder as set out in section "First-time applicability of the EU Taxonomy Regulation (EU) 2020/852" of the non-financial declaration.

These responsibilities of the Company's executive directors include the selection and application of appropriate non-financial reporting methods and making assumptions and estimates about individual non-financial disclosures that are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal control as the executive directors consider necessary to enable the preparation of a non-financial declaration that is free from material misstatement, whether due to fraud (manipulation of the non-financial declaration) or error.

The EU Taxonomy Regulation and the Delegated Acts adopted thereunder contain wording and terms that are still subject to considerable interpretation uncertainties and for which clarifications have not yet been published in every case. Therefore, the executive directors have disclosed their interpretation of the EU Taxonomy Regulation and the Delegated Acts adopted thereunder in section "First-time applicability of the EU Taxonomy Regulation (EU) 2020/852" of the non-financial declaration. They are responsible for the defensibility of this interpretation. Due to the immanent risk that undefined

legal terms may be interpreted differently, the legal conformity of the interpretation is subject to uncertainties.

Independence and quality assurance of the auditor's firm

We have complied with the German professional requirements on independence as well as other professional conduct requirements.

Our audit firm applies the national legal requirements and professional pronouncements – in particular the BS WP/vBP ["Berufssatzung für Wirtschaftsprüfer/vereidigte Buchprüfer": Professional Charter for German Public Accountants/German Sworn Auditors] in the exercise of their Profession and the IDW Standard on Quality Management issued by the Institute of Public Auditors in Germany (IDW): Requirements for Quality Management in the Audit Firm (IDW QS 1) and accordingly maintains a comprehensive quality management system that includes documented policies and procedures with regard to compliance with professional ethical requirements, professional standards as well as relevant statutory and other legal requirements.

Responsibilities of the auditor

Our responsibility is to express a conclusion with limited assurance on the non-financial declaration based on our assurance engagement.

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" issued by the IAASB. This standard requires that we plan and perform the assurance engagement to obtain limited assurance about whether any matters have come to our attention that cause us to believe that the Company's non-financial declaration is not prepared, in all material respects, in accordance with Sec. 315c in conjunction with Secs. 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts adopted thereunder as well as the interpretation by the executive directors disclosed in section "First-time applicability of the EU Taxonomy Regulation (EU) 2020/852" of the non-financial declaration. Not subject to our assurance engagement are other references to disclosures made outside the non-financial declaration.

In a limited assurance engagement, the procedures performed are less extensive than in a reasonable assurance engagement, and accordingly, a substantially lower level of assurance is obtained. The selection of the assurance procedures is subject to the professional judgment of the auditor.

In the course of our assurance engagement we have, among other things, performed the following assurance procedures and other activities:

- Gain an understanding of the structure of the sustainability organization and stakeholder engagement,
- Inquiries of the relevant employees regarding the selection of topics for the non-financial declaration, the risk assessment and the policies of the Company and the Group for the topics identified as material,
- Inquiries of employees of the Company and the Group responsible for data capture and consolidation as well as the preparation of the non-financial declaration, to evaluate the reporting system, the data capture and compilation methods as well as internal controls to the extent relevant for the assurance of the disclosures in the non-financial declaration,
- Identification of likely risks of material misstatement in the non-financial declaration,
- Inspection of the relevant documentation of systems and processes relating to the collection and validation of selected data in the relevant departments during the reporting period,
- Analytical procedures on selected disclosures in the non-financial declaration at the level of the Company and the Group,
- Evaluation of the process to identify the taxonomy-eligible economic activities and the corresponding disclosures in the non-financial declaration,
- Evaluation of the presentation of the non-financial declaration.

In determining the disclosures in accordance with Art. 8 of the EU Taxonomy Regulation, the executive directors are required to interpret undefined legal terms. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of their interpretation and, accordingly, our assurance engagement thereon are subject to uncertainties.

Assurance conclusion

Based on the assurance procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the non-financial declaration of Deutsche Lufthansa Aktiengesellschaft and Deutsche Lufthansa Group for the period from 1 January 2021 to 31 December 2021 is not prepared, in all material respects,

in accordance with Sec. 315c in conjunction with Secs. 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts adopted thereunder as well as the interpretation by the executive directors as disclosed in section "First-time applicability of the EU Taxonomy Regulation (EU) 2020/852" of the non-financial declaration.

We do not express an assurance conclusion on the other references to disclosures made outside the non-financial declaration.

Restriction of use

We draw attention to the fact that the assurance engagement was conducted for the Company's purposes and that the report is intended solely to inform the Company about the result of the assurance engagement. As a result, it may not be suitable for another purpose than the aforementioned. Accordingly, the report is not intended to be used by third parties for making (financial) decisions based on it. Our responsibility is to the Company alone. We do not accept any responsibility to third parties. Our assurance conclusion is not modified in this respect.

General Engagement Terms and Liability

The "General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften [German Public Auditors and Public Audit Firms]" dated 1 January 2017 are applicable to this engagement and also govern our relations with third parties in the context of this engagement (www.de.ey.com/general-engagement-terms). In addition, please refer to the liability provisions contained there in no. 9 and to the exclusion of liability towards third parties. We accept no responsibility, liability or other obligations towards third parties unless we have concluded a written agreement to the contrary with the respective third party or liability cannot effectively be precluded.

We make express reference to the fact that we will not update the report to reflect events or circumstances arising after it was issued, unless required to do so by law. It is the sole responsibility of anyone taking note of the summarized result of our work contained in this report to decide whether and in what way this information is useful or suitable for their purposes and to supplement, verify or update it by means of their own review procedures.

Munich, 1 March 2022

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Nicole Richter	Yvonne Meyer
Wirtschaftsprüferin	Wirtschaftsprüferin
[German Public Auditor]	[German Public Auditor]

Report of the independent auditor on the audit of the remuneration report pursuant to Sec. 162 (3) AktG [“Aktiengesetz”: German Stock Corporation Act]

To Deutsche Lufthansa Aktiengesellschaft

Opinion

We have audited the remuneration report of Deutsche Lufthansa Aktiengesellschaft, Cologne, for the fiscal year from 1 January to 31 December 2021 to formally verify whether the disclosures required by Sec. 162 (1) and (2) AktG [“Aktiengesetz”: German Stock Corporation Act] have been made. In accordance with Sec. 162 (3) AktG, we have not audited the content of the remuneration report.

In our opinion, the disclosures required by Sec. 162 (1) and (2) have been made in the attached remuneration report in all material respects. Our opinion does not cover the content of the remuneration report.

Basis for the opinion

We conducted our audit of the remuneration report in accordance with Sec. 162 (3) AktG with due regard to the IDW Auditing Standard: Audit of the Remuneration Report in Accordance with Sec. 162 (3) AktG (IDW AsS 870). Our responsibilities under this provision and standard are further described in the “Auditor’s responsibilities” section of our report. As an audit firm, we applied the standards set forth in IDW Standard on Quality Control: Requirements for Quality Control in Audit Firms (IDW QS 1). We have complied with the German professional responsibilities in accordance with the WPO [“Wirtschaftsprüferordnung”: German Law Regulating the Profession of Wirtschaftsprüfer (German Public Auditors)] and the BS WP/vBP [“Berufssatzung für Wirtschaftsprüfer/vereidigte Buchprüfer”: Professional Charter for German Public Accountants/German sworn auditors], including the independence requirements.

Responsibility of the Executive Board and Supervisory Board

The Executive Board and Supervisory Board are responsible for the preparation of the remuneration report and the related disclosures in compliance with the requirements of Sec. 162 AktG. In addition, they are responsible for such internal control as they determine is necessary to enable the preparation of a remuneration report and the related disclosures that are free from material misstatement, whether due to fraud or error.

Auditor’s responsibilities

Our objective is to obtain reasonable assurance about whether the disclosures required by Sec. 162 (1) and (2) AktG are made in the remuneration report in all material respects and express an opinion on this in a report.

We planned and performed our audit so as to determine the formal completeness of the remuneration report by comparing the disclosures made in the remuneration report with the disclosures required by Sec. 162 (1) and (2) AktG. In accordance with Sec. 162 (3) AktG, we have not audited the accuracy of the content of the disclosures, the completeness of the content of the individual disclosures or the appropriate presentation of the remuneration report.

Consideration of misrepresentations

In connection with our audit, our responsibility is to read the remuneration report taking into account the knowledge obtained from the audit of the financial statements and, in so doing, remain alert for indications of whether the remuneration report contains misrepresentations in relation to the accuracy of the content of the disclosures, the completeness of the content of the individual disclosures or the appropriate presentation of the remuneration report.

If, based on the work we have performed, we conclude that there is a misrepresentation, we are required to report that fact. We have nothing to report in this regard.

Eschborn/Frankfurt am Main, 1 March 2022

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Prof. Dr. Sven Hayn
Wirtschaftsprüfer
[German Public Auditor]

Siegfried Keller
Wirtschaftsprüfer
[German Public Auditor]

Ten-year overview

T200 TEN-YEAR OVERVIEW

		2021	2020	2019	2018 ⁷⁾	2017 ⁶⁾	2016	2015	2014 ⁵⁾	2013 ⁴⁾	2012 ³⁾
Income statement											
Lufthansa Group											
Revenue	€m	16,811	13,589	36,424	35,542	35,579	31,660	32,056	30,011	30,027	30,135
Result											
Adjusted EBITDA	€m	-90	-2,890	4,718	5,016	5,009	3,338				
Adjusted EBIT (since 2014)/ Operating result (until 2013)	€m	-2,349	-5,451	2,026	2,836	2,969	1,752	1,817	1,171	699	839
Adjusted EBIT margin (since 2014)/ Operating margin (until 2013)	%	-14.0	-40.1	5.6	8	8.3	5.5	5.7	3.9	2.3	2.8
EBIT	€m	-2,316	-7,353	1,857	2,974	3,297	2,275	1,676	1,000	936	1,668
Profit/loss before income taxes	€m	-2,606	-8,631	1,860	2,784	3,158	2,248	2,026	180	546	1,296
Income taxes	€m	413	1,865	-615	-588	-784	-445	-304	-105	-220	-91
Net profit/loss attributable to shareholders of Deutsche Lufthansa AG	€m	-2,191	-6,725	1,213	2,163	2,340	1,776	1,698	55	313	1,228
Main cost items											
Staff costs	€m	6,328	6,436	9,121	8,811	8,172	7,354	8,075	7,335	7,356	6,741
Fees and charges	€m	2,155	1,796	4,523	4,457	6,357	5,736	5,651	5,265	5,167	5,167
Fuel for aircraft	€m	2,409	1,875	6,715	6,087	5,232	4,885	5,784	6,751	7,115	7,392
Depreciation, amortisation and impairment	€m	2,351	4,389	2,776	2,205	2,383	1,769	1,715	1,528	1,767	1,839
Net interest	€m	-441	-334	-315	-144	-195	-218	-170	-256	-346	-372
Balance sheet Lufthansa Group											
Asset structure											
Non-current assets	€m	29,063	29,444	31,374	27,559	24,749	24,504	23,526	22,227	19,419	18,782
Current assets	€m	13,475	10,040	11,285	10,654	11,029	10,193	8,936	8,247	9,689	9,777
of which liquid assets	€m	7,666	5,460	3,385	3,235	3,948	3,937	3,093	2,738	4,698	4,966
Capital structure											
Shareholders' equity	€m	4,490	1,387	10,256	9,573	9,110	7,149	5,845	4,031	6,108	4,839
of which issued capital	€m	3,060	1,530	1,224	1,217	1,206	1,200	1,189	1,185	1,180	1,177
of which reserves	€m	3,581	6,542	7,710	6,083	5,461	4,084	2,881	2,728	4,563	2,374
Liabilities	€m	38,048	38,097	32,403	28,640	26,668	27,548	26,617	26,443	23,000	23,720
of which pension provisions	€m	6,676	9,531	6,659	5,865	5,116	8,364	6,626	7,231	4,718	5,844
of which borrowing	€m	16,670	15,368	10,030	6,685	6,814	6,575	6,370	5,958	6,337	6,910
Total assets	€m	42,538	39,484	42,659	38,213	35,778	34,697	32,462	30,474	29,108	28,559
Other financial data											
Lufthansa Group											
Capital expenditure	€m	1,356	1,312	3,666	3,805	3,529	2,231	2,568	2,773	2,499	2,358
of which on tangible and intangible assets	€m	1,318	1,249	3,486	3,709	3,338	2,160	2,454	2,699	2,444	2,291
of which on financial investments	€m	38	63	180	96	191	71	114	74	55	67
Cash flow from operating activities	€m	618	-2,328	4,030	4,109	5,368	3,246	3,393	1,977	3,290	2,842
(Adjusted) Free cash flow ¹⁾	€m	-855	-3,669	203	288	2,117	1,138	834	-297	1,307	1,397
Indebtedness											
gross	€m	16,689	15,382	10,047	6,724	6,832	6,638	6,440	6,156	6,393	6,919
net	€m	9,023	9,922	6,662	3,489	2,884	2,701	3,347	3,418	1,695	1,953
Lufthansa share											
Share price ²⁾	€	6.18	7.72	11.71	14.06	21.92	8.76	10.39	9.87	11	10.16
Dividends proposed/paid	€m	-	-	-	380	377	234	232	-	207	-
Dividend per share proposed/ paid	€	-	-	-	0.80	0.80	0.50	0.50	-	0.45	-

T200 TEN-YEAR OVERVIEW (continued)

		2021	2020	2019	2018 ¹⁾	2017 ⁶⁾	2016	2015	2014 ⁵⁾	2013 ⁴⁾	2012 ³⁾
Operational ratios											
Lufthansa Group											
Return on sales (Profit/loss before income taxes /revenue)	%	-15.5	-63.5	5.1	7.8	8.9	7.1	6.3	0.6	1.8	4.3
Return on capital employed (Profit/loss before income taxes plus interest on liabilities/ total assets)	%	-5.1	-20.8	5.3	7.8	9.9	7.3	7.3	2	3.6	6.4
Return on equity (Profit/loss after income taxes/ shareholders' equity)	%	-48.8	-487.8	12.1	22.9	26.1	25.2	29.5	1.9	5.3	25.6
Return on equity (Profit/loss before income taxes /shareholders' equity)	%	-58.0	-622.3	18.1	29.1	34.7	31.4	34.7	4.5	8.9	26.8
Equity ratio (Shareholders' equity /total assets)	%	10.6	3.5	24	25.1	25.5	20.6	18.0	13.2	21	16.9
Gearing (Net indebtedness plus pension provisions/ shareholders' equity)	%	349.6	1,402.5	129.9	97.7	87.8	154.8	170.6	264.2	105	161.1
Leverage (Net indebtedness/ total assets)	%	21.2	25.1	15.6	9.1	8.1	7.8	10.3	11.2	5.8	6.8
Internal financing ratio (Cash flow/capital expenditure)	%	45.6	-177.4	109.9	108	152.1	145.5	132.1	71.3	131.7	120.5
Adjusted net debt/Adjusted EBITDA (since 2017) Debt repayment ratio (until 2016)	%	-	-	2.8	1.8	1.5	28.7	30.7	20.8	37	34.4
Revenue efficiency (Cash flow/revenue)	%	3.7	-17.1	11.1	11.6	15.1	10.3	10.6	6.6	11	9.7
Adjusted ROCE (Adjusted EBIT plus interest on liquidity less 25% taxes)/average capital employed	%	-7.5	-16.7	6.6	10.6	11.9	7.0	8.3	5.4		
Net working capital (Current assets less current liabilities)	€bn	-1.2	-4.6	-4.7	-5.6	1.6	-0.8	-3.5	-2.7	-1.3	0.0
Non-current asset ratio (Non-current assets/total assets)	%	68.3	74.6	73.5	72.1	69.2	70.6	72.5	72.9	66.7	65.8
Depreciation ratio for aircraft/reserve engines (Accumulated depreciation/ accumulated acquisition costs)	%	58.8	55.9	50.7	51.7	52.5	49.7	51.6	51.4	52.6	54.2
Staff ratios											
Average number of employees	number	107,643	125,207	137,784	134,330	128,856	123,287	119,559	118,973	117,414	118,368
Revenue/employee	€	156,174	108,532	264,356	264,587	276,114	256,799	268,119	252,251	255,736	254,587
Staff costs/revenue	%	37.6	47.4	25.0	24.8	23	23.2	25.2	24.4	24.5	22.4
Traffic figures Lufthansa Group											
Passengers	millions	46.9	36.4	145.3	141.9	129.3	109.7	107.7	106	104.6	103.6
Available seat-kilometres	millions	145,139	109,828	358,803	349,391	322,875	286,555	273,975	268,104	262,682	260,169
Revenue seat-kilometres	millions	89,397	69,462	296,217	284,639	261,149	226,639	220,396	214,643	209,649	205,015
Passenger load factor	%	61.6	63.2	82.6	81.5	80.9	79.1	80.4	80.1	79.8	78.8
Available cargo tonne-kilometres	millions	11,867	10,560	17,379	16,349	15,754	15,117	14,971	14,659	14,893	14,749
Revenue cargo tonne-kilometres	millions	8,477	7,373	10,664	10,896	10,819	10,071	9,930	10,249	10,285	10,240
Cargo load factor	%	71.4	69.8	61.4	66.6	68.7	66.6	66.3	69.9	69.1	69.4
Number of flights	number	460,029	390,263	1,187,728	1,163,565	1,128,745	1,021,919	1,003,660	1,001,961	1,028,260	1,067,362
Aircraft in service	number	713	757	763	763	728	617	600	615	622	627

¹⁾ Since 2018: Adjusted free cash flow, adjusted for the IFRS 16 effect.

²⁾ Previous year's figures adjusted for effects of the new shares issued as part of the capital increase in September 2021.

³⁾ The figures for the financial year 2012 were adjusted retrospectively due to the application of the revised IAS 19.

⁴⁾ The figures for the financial year 2013 were adjusted retrospectively due to IFRS 11.

⁵⁾ The figures for the financial year 2014 were adjusted retrospectively due to the new reporting method.

⁶⁾ The figures for the financial year 2017 were adjusted retrospectively to reflect the restated capitalisation of engine maintenance events and IFRS 9.

⁷⁾ The figures for the financial year 2018 were adjusted retrospectively to reflect the restated compensation payments for flight cancellations and delays.

Glossary

Aviation terminology

Hub In air traffic a hub refers to an airline's transfer airport, a central connecting point for different routes. Passengers and goods are transported from the original starting point to the airport's hub. From there they are carried to their destination by a second flight alongside passengers and goods from other departure points.

IATA International Air Transport Association – the international trade association for the airline industry.

Low-cost carrier Low-cost carrier are airlines which offer largely low ticket prices but with reduced service levels and sometimes additional charges on board and on the ground. Flights are mostly from secondary airports outside the major cities (e.g. Hahn in the Hunsrück area outside Frankfurt).

MRO Short for maintenance, repair and overhaul of aircraft.

Network Airlines In contrast to low-cost carriers these airlines offer a wide-ranging, normally global route network via one or more hubs, with synchronised connecting flights.

Passenger-kilometre/tonne-kilometre Standard output units for air transport. An available seat-kilometre (ASK) denotes one seat offered flown for one kilometre; a revenue passenger-kilometre (RPK) denotes one paying passenger transported for one kilometre. An offered tonne-kilometre (TKO) denotes the offered capacity equivalent of one tonne of load (passengers and/or cargo) for one kilometre; a revenue tonne-kilometre (RTK) denotes one tonne of load (passengers and/or cargo) transported one kilometre.

Passenger load factor/cargo load factor Measure of capacity utilisation in per cent. The cargo load factor expresses the ratio of capacity sold to available capacity. The passenger load factor refers to passenger transportation and the cargo load factor to freight transport or total traffic.

Unit costs/unit revenues Key performance indicator for air transport. Unit costs (CASK) denote the operating expenses divided by offered seat kilometres. Unit revenue (RASK) denotes the revenue divided by offered seat kilometres.

Yields Average traffic revenue earned per unit of output; normally based on total passenger-kilometres or tonne-kilometres sold, but they can also be calculated per unit of traffic volume, e.g. per passenger carried or per kilometre flown.

Financial terminology

Adjusted EBIT Main earnings metric for the Company's forecast. This relates to EBIT adjusted for asset valuations and disposals and for the measurement of pension provisions.

Adjusted net debt/Adjusted EBITDA Measure of the Group's debt-servicing capacity. By using adjusted net debt, it also includes pension provisions as well as classic net indebtedness.

Call option The right to purchase a specific underlying security within a specified period of time at an agreed price.

Cash flow Measure of a company's financial and earnings potential. It is calculated as the difference between the inflow and outflow of cash and cash equivalents generated from ongoing business activities during the financial year.

Compliance Institutionalised arrangements for ensuring that a company's management and staff duly comply with all statutory provisions and prohibitions.

Deferred taxes A balance sheet item used to show taxable and deductible temporary differences. Deferred taxes reflect the temporary differences between assets and liabilities recognised for financial reporting purposes and such amounts recognised for income tax purposes.

Directors' dealings Transactions by members of a company's supervisory, executive or divisional boards, or their family members, involving shares in "their" company.

Dividend yield Indicator for assessing the profitability of an investment in shares. It is determined by dividing the dividend by the share price at the close of the reporting year and then multiplying it by 100.

EBIT Financial indicator denoting earnings before interest and taxes. From financial year 2015 main earnings indicator. This is calculated from total operating income less operating expenses plus the result from equity investments.

EBITDA Financial indicator denoting earnings before interest, taxes, depreciation and amortisation. Depreciation relates to items of property, plant and equipment and amortisation to intangible assets – both terms apply equally to non-current and current assets. The figure also includes impairment losses on equity investments accounted for under the equity method and on assets held for sale.

Equity method Accounting method for measuring income derived from a company's investments in associated companies and joint ventures. Under this method, investment income equals a share of net income proportional to the size of the equity investment.

Equity ratio Financial indicator expressing the ratio of shareholders' equity to total assets.

Free cash flow Financial indicator expressing the cash flow from operating activities remaining in the reporting period after deducting net cash used for investing activities.

Free float Shares of a company that are widely held and can be traded on the stock exchange without restrictions

Group of consolidated companies Group of subsidiaries included in a company's consolidated financial statements.

Impairment Losses recognised on the carrying amount of assets. Impairment charges are recognised when an asset's "recoverable value" (the higher of fair value less costs to sell and value in use) is below its carrying amount. By contrast, depreciation or amortisation is the systematic allocation of the depreciable amount of an asset over its useful life.

Jet fuel crack Price difference between crude oil and kerosene.

Net indebtedness/net liquidity Financial indicator denoting non-current borrowing less cash, cash equivalents and current securities.

Rating A standardised measure used on international financial markets to judge and categorise a company's creditworthiness. A rating can enable conclusions to be drawn about whether an issuer is capable of meeting in full its obligations under the terms of the issue.

Registered shares with transfer restrictions Registered shares that may only be transferred with the approval of the company.

Return On Capital Employed – ROCE Indicator of value creation. EBIT, to which interest income on liquidity has been added and taxes of 25% subtracted, is divided by the average capital employed. The resulting value reflects the relative return on the capital employed.

Return on sales Financial indicator expressing the net profit before taxes in relation to sales revenue.

Total shareholder return Financial indicator expressing the overall return that an investor earns from the increase in the market capitalisation or share price, plus the dividend payment. The total shareholder return is calculated from the share price at the close of the reporting year plus the dividend paid in respect of the previous year, multiplied by 100 and divided by the share price at the close of the previous year.

Trade working capital Financial indicator for assessing a company's liquidity, measured as the difference between its current assets and its current liabilities.

Traffic revenue Revenue generated solely from flight operations. It comprises revenue from transporting passengers and cargo as well as related ancillary services.

Weighted Average Cost of Capital – WACC The average return required on the capital employed at a company. The return on capital is calculated using the weighted average return required for both debt and equity.

Wet lease Lease of an aircraft from another airline, including its cockpit and cabin crew as well as maintenance and insurance.

Chart and table overview

Chart

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- 3 Mar** Release of Annual Report 2021
- 5 May** Release of 1st Interim Report January – March 2022
- 4 Aug** Release of 2nd Interim Report January – June 2022
- 27 Oct** Release of 3rd Interim Report January – September 2022

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Information published in the Annual Report 2021, with regard to the future development of the Lufthansa Group and its subsidiaries consists purely of forecasts and assessments and not of definitive facts. Its purpose is exclusively informational, and can be identified by the use of such cautionary terms as “believe”, “expect”, “forecast”, “intend”, “project”, “plan”, “estimate”, “anticipate”, “can”, “could”, “should” or “endeavour”. These forward-looking statements are based on discernible information, facts and expectations available at the time that the statements were made. They are therefore subject to a number of risks, uncertainties and factors, including, but not limited to, those described in disclosures, in particular in the Opportunities and risk report in the Annual Report. Should one or more of these risks occur, or should the underlying expectations or assumptions fail to materialise, this could have a significant effect (either positive or negative) on the actual results.

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Note

Unless stated otherwise, all change figures refer to the corresponding period from the previous year. Due to rounding, some of the figures may not add up precisely to the stated totals, and percentages may not precisely reflect the absolute figures.

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